Fall 2016

The Impacts of a Pre-College Outdoor Adventure Trip on the College Experience at the University of Colorado Boulder

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THE IMPACTS OF A PRE-COLLEGE OUTDOOR ADVENTURE TRIP ON THE COLLEGE EXPERIENCE AT THE UNIVERSITY OF COLORADO BOULDER

By
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University of Colorado at Boulder

A thesis submitted to the
University of Colorado at Boulder
in partial fulfillment
of the requirements to receive
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Abstract

This paper looks at the impact of adventure and outdoor education on the college experience through a specific focus on a trip conducted by the CU Outdoor Program. The focus is an examination of the positive effects of the incoming student backpacking trips led by the CU Outdoor Program, specifically CU in the Rockies, on participants’ college experiences and life beyond college. This project will look at how this trip impacts participants’ environmental activities and values, adventure activities, and overall college experiences. CU in the Rockies (‘CUIR’) is a seven-day orientation trip that takes place the week before school starts in August for first time freshman or transfer students. The trip is designed to orient students to CU and help the adjustment process between high school and college. The author looks at the themes of student retention, the value of a wilderness setting, and the short-term and long-term positive experiences resulting from the trip; results are found that support the ideas that students who participate in CUIR are more likely to have a positive adjustment to college, perform better in college, and incorporate the outdoors as part of their lives long after their program has ended.
Preface

I have always been passionate about nature and wilderness. Ever since a young age, I have loved exploring. I became involved with the Boy Scouts of America at an early age, and worked my way up to earning my Eagle Scout Award. Throughout my time before and throughout high school, I was continually excited about helping to get people outside and exploring the wild areas I hold so dear. For two summers, I worked as a backpacking guide at a large Boy Scout ranch in New Mexico. When it came time to go to college, I had no idea where I wanted to go. I applied to over 15 schools, and it wasn’t until I came to Boulder and spent the day exploring the campus and surrounding nature that I knew exactly where I wanted to be. I started working for the CU Outdoor Program in 2013, soon after my arrival on campus. I loved
the community I found at the Outdoor Program, and consider my time working there the highlight of my college career. Some of my best friends throughout college have been made through the Outdoor Program, and I can’t imagine what my college experience would have been without the Outdoor Program. I began staffing the Climbing Wall desk, and worked my way up the ranks to eventually manage over 30 student workers as the Rental Center and Trips manager. I began to lead many trips and teach classes myself, including backpacking, hiking, and climbing. I first led CU in the Rockies in 2015, and fell in love with the program and its focus. It has been a thought-provoking experience to watch the group I led develop, mature, and find their place at CU. I was able to see first-hand how impactful the trip was for the participants. I plan to lead the trip again in 2016.

Introduction

This paper looks at the impact of adventure and outdoor education through a specific focus on a trip conducted by the CU Outdoor Program. The focus is an examination of the effects of the incoming student backpacking trips led by the CU Outdoor Program, specifically CU in the Rockies, on participants’ college experiences. This project will look at how this trip impacts participants’ environmental values, adventure activities, and overall college experiences. This paper will analyze the results of a survey given to prior participants. Topics of focus include sense of place, student retention, sense of community, and environmental values. CU in the Rockies (‘CUIR’) is a seven-day orientation trip that takes place the week before school starts in August for first-time freshman or transfer students. Participants on CUIR are divided up into groups of six to twelve and placed with two trip leaders. The trip leaders are generally upper-class students. In its present form, the trip begins in Boulder, and travels up to Kremmling, Colorado for a day of rafting. After the rafting, the participants begin a 5-day backpacking loop
in State Forest State Park including a day of outdoor rock climbing. CU in the Rockies has existed in one form or another at CU since 1992.

Picture 2. Students at the top of the peak attempt. Photo Credit: Author

Beginning college can be an extremely stressful and tumultuous time for new students. Outdoor orientation programs are an important part of outdoor education and college adjustment for students in the United States; more than 191 unique programs exist in the United States and Canada, consisting of over 25,000 participants annually (Bell, Gass, Nafziger, et al, 2014, pg. 1). Even back in 1989, Upcraft and Gardner write that, “there is overwhelming evidence that student
success is largely determined by experiences during the first-year” (pg. 8). Clearly, as will be shown in this paper, these programs have the potential to have monumental impacts on the students they cater to and their respective college experiences.

**Background**

**Literature Review**

**Outdoor Orientation Programs (OOPS)**

Outdoor orientation programs are systematized programs that includes outdoor adventure activities in which participants, organized into small groups, spend at least one night away from campus. These outdoor orientation programs (a term used synonymously with wilderness orientation or adventure orientation in some cases) are a form of adventure programming; goals can either be educational or developmental in their design (Austin, Martin, et al, 2010). There have been numerous studies that measure both short and long term effects of outdoor orientation programs. Previous studies have found that students who participated in such programs are likely to have increased environmental attitudes, (Austin et. al., 2010) retention rates, (Gass, 1990) self-confidence, (Devlin, 1996), self-efficacy and confidence (Hilton, Twilley, and Mitelstaedt, 2007), autonomy (Vlamis, Bell, Gass, et al 2011), personal growth (Jones & Hinton, 2007), life effectiveness (Frauman & Waryold, 2009), personal/emotional adjustment and goal commitment (Bobilya, Akey, & Mitchell, Jr., 2008), as well as decreased anxiety (quoted in Austin, Martin, Yoshino et al, 2010, pg. 1). Studies have shown that the physical challenge of such wilderness orientation programs assists with developing these changed attitudes and increased skills (Vlamis, 2011).

The first outdoor orientation program in the United States was held at Dartmouth College in 1935. Another 33 years followed before a second college implemented a wilderness
orientation program. Over the next decade, the popularity of these programs started to rise; each program runs independently of each other, and their goals, design, and curriculum were left up to each school rather than a national set of standards. As of 2007, there were 164 such wilderness orientation programs in the United States (Bell, 2008). While the main goal of these programs is to “ease the transition of first-year students into college,” (Bell, 2010) they also train peer leaders in backcountry and interpersonal skills. Bell’s 2010 census also found that there has been an average of ten new outdoor orientation programs each year; this is a surprising fact given the increasingly risk-adverse nature within higher education (Cortez, 2014). Even given the increasing popularity of outdoor orientation programs, there has been surprisingly little research on their impacts or efficacy.

The research literature [on adventure education]…has been uni-dimensional; it has focused on outcome issues (self-concept, locus of control, etc.) and has held a blind eye to their relationship to programmatic types of issues (…activity mix, instructional staff).

In essence, we have discovered an educational black box; we know something works but we don’t know why or how (Ewert, 1983, p. 27).

Even though the Ewert paper was written over three decades ago, this so-called “black box” of research still exists. Researchers and universities both know that these outdoor orientation programs provide positive results, but aren’t sure why, or how, these programs have such impacts. If universities want to look more deeply at the effect of these outdoor orientation programs, they need to look beyond just the value of the singular experience, and look at the change in student outcomes that come as a result of these trips. Despite the fact that these programs are extremely under-researched, such outdoor orientation programs continue to spread,
clearly showing the fact that there is a growing need for research and assessment of the effects of these programs.

**Outdoor & Adventure Education**

Adventure education (also sometimes called ‘experiential education’) refers to the process of learning through experiences that involve an element of adventure or risk. The common themes that adventure education programs share include a wilderness, small group setting, a variety of difficult and challenging opportunities or obstacles, and intense interactions involving both group and individual problem solving (Hattie et al, 1997). One of the tenets of adventure education is that when people learn to overcome physical challenges in the wilderness or out-of-doors, they can take these experiences and use them to overcome challenges in other areas of their lives (Frauman & Wrayold, 2009, pg. 354).

Outdoor education, on the other hand, is a broader term used to describe any sort of education "in, about, and or, the out of doors." Outdoor education can include anything from recreation to curriculum that covers the natural environment. (Phyllis, 1986) Outdoor education has been shown to have a plethora of benefits, including developing leadership, creating self-concept, raising academic performance, creating and identifying ones’ personality, and increased levels of interpersonal skills, relationships, and adventuresomeness (Neill & Richards, 1998). There have been many studies about the effects of outdoor and environmental education on college classes and student success; focusing on getting students outside and applying environmental education to institutions of higher learning has been an increased area of focus for many universities (Neill & Richards, 1998).
Retention

Colleges place student retention high up on their list of priorities. Retention rate is the percentage of first-year undergraduate students that continue past their freshman year at the same institution. Graduation rate refers to students who began at the institution and complete their selected degree program within 150% of the expected time for the program; for example, a 4 year-degree program student would be counted in the graduation rate for CU as long as they finished their degree within six years. Tinto stated that, “one thing we know about persistence is that involvement matters. The more academically and socially involved individuals are … the more likely they are to persist” (Tinto 1998, quoted in Wolf & Kay, 2011, pg. 2). According to Beil, Reisen, Zea, and Caplan (1999) students who are integrated into academic and social aspects of a university are more likely to become committed to that university (Wolfe & Kay, 2011). Outdoor orientation programs are one way to start this involvement and create this connection to the university right at the beginning of one’s college experience.

Prospective college students often look at colleges based on their overall retention or graduation rates; these numbers are critical benchmarks for prospective students, their families, and the higher education community when looking at the differences and strengths among different institutions.

The average retention rate between freshman and sophomore year for students at CU has changed over the last few decades; in the early 1990s, it ranged from 86% to 82%; between 2000 and 2010, the rates fluctuated between 82% and eventually rising up to 86% by 2014. (CU-Boulder graduation & freshman retention rates by residency at entry) Graduation rates remained more or less steady around 66% between 1990 and 2000, and have risen slightly, to around 70% by 2010. The University of Colorado has stated that they wish to raise this six-year graduation
rate to 80% by 2020, and maintain that increasing this first to second-year retention rate is one of the key factors to raising the graduation rate. "We're hoping that our graduation rate by 2020 is 80 percent, so that's going to require that we have a retention rate up in the 90s," said Bob Boswell, CU's vice-chancellor for diversity, equity and community engagement (Kuta, 2014). Although CU has set these lofty goals, they haven't mentioned how the campus is planning to achieve this. Michael Grant, the CU vice chancellor for undergraduate education, has said that "The principal reason [retention] numbers are important is if you don't make it from the first to the second year, you're not going to make it to graduation, which is our principal mission, graduating students." He has also said that the largest single year of attrition has been proven to be between the first and second year (Kuta, 2014). As a comparison, the national average for first-year student retention has been declining over the last decade, and is currently around 58% (National Student Clearinghouse Research Center). The graduation rate from four-year colleges nationally is 60% (National Center for Education Statistics).

In a 1989 study by Gass at a four-year college on the East Coast, significant retention differences between students who participated in an outdoor orientation program were found at the 12-month period (p<.05) while marginal significant difference was found at 42 months (p<.061). Results found no effect of sex, program instructor, high school rank, college test scores, in state/out of state classification, financial aid needs, clarity of career goals, or years of high school (Gass, 1989). Gass also completed a follow up study in 2003, expressing again that

Very little research has been conducted to examine the influence of orientation programs on students’ lives following graduation. [This] investigation of student development after college has provided further insight into the potent influence and richness of how college affects students in later life (Gass et al, 2003, pg. 30).
This study found that after 3.5 years, students who went through an outdoor orientation program had a 12% higher retention rate than students who went through a normal orientation program, and a 20% higher retention rate than the control group (Gass et al, 2003, pg. 35). After 17 years, Gass et al again contacted all 50 participants, as he has found from prior research that that “their [the participants] current understandings of its [the previous trip] possible significance has proven to be a valuable research technique in identifying the long term meanings participants place on prior experiences.”

Gass et al found that 17 years later these same participants represented a very diverse group of people. This was an expected albeit interesting finding, because these group of people were very similar 17 years earlier. They were all beginning college freshman who had just graduated high school, and starting a new phase in their lives. Choices of professions, life experiences, and good and bad luck contributed to the researchers’ assessment that these initial participants had evolved into very different people.

Many other researchers have also found this link between the connections students make in the first year and both the retention and graduation rates of students (Bell, 2011, Gass et al, 2003). However, the research on the specific effect of orientation programs has been lacking on their direct relation to retention rates. One researcher writes that, “The evidence that orientation programs increase retention is scarce and often methodologically flawed” (Cortez, 2014) which clearly shows the fact that additional research is needed to grasp and understand the effectiveness of these programs.
Social Integration

Galloway, in 2000, identified that the primary focus of outdoor orientation programs at 57 separate institutions was surrounding socially-related themes, such as peer adjustment and making sure participant social networks were secure and large enough. Social adjustment is a critical part of overall student adjustment to college; researchers have found that students adjusting from high school to a university often fear a lack of social integration more than any academic related concerns (Vlamis, 2011). For many of these incoming students, the fear of lacking social integration is greater than any other fear including academics, safety, and health. As a result, it’s not surprising that so many of these outdoor orientation programs emphasize this social integration and the aid of using the wilderness to do so.

Sense of Community

One common theme in rating the effectiveness of outdoor orientation programs is looking at participants' sense of community, and how their outdoor orientation experiences have affected this belongingness. Individuals, social beings at their root, strive to find opportunities that give them direction and add meaning to their lives (Austin, Martin et al, 2010). Previous studies have found that a strong sense of community has been linked to effects such as increased personal development, decreased student burnout, and increased positive classroom attitudes, learning, and performance (Austin, Martin et al, 2010). Given that college freshmen are especially vulnerable to stress (D’Zurilla & Sheedy, 1991), it seems especially important to develop this sense of community early in a student’s college academic career. This concept of sense of community is difficult to define, but various researchers agree that sense of community incorporates a supportive network of relationships, a feeling of inclusiveness, and a feeling of
strength and attachment to groups and other members of the group. Researchers agree that this sense of community development is a critical goal of many outdoor orientation programs. There has been criticism over the lack of empirical evidence regarding this aspect of programs. Previous studies, including by Todd, Young, Anderson, O’Connel, and Bruenig (2008) have found that this sense of community was found to “significantly” increase over a two-week outdoor group experience. They also found that the most important factors in developing this sense included camaraderie, sharing meals together, and discovering shared interests (Austin, Martin, et al, 2010).
Another important theme of outdoor education discovered by previous research is a sense of place, or a connection with the environment, community, and history of a certain specific area. To look at people’s sense of place, researchers measure the belief that the land has value and that
the individual has a connection to the land. Development of sense of place has also been linked to creating self-identity (Austin, Martin, et al, 2010). Sense of place is the focus of increasing study in higher education as researchers hypothesize that by building a connection and sense of one’s community and surroundings, students will focus, do better, and develop and attachment to the community. This is particularly relevant in terms of the environment, as researchers have found that exposure to natural environments in childhood can greatly affect environmental values later on in life (Bixer et al, 2002, pg. 795). Thus, college is a particularly unique period of time in which to instill strong sense of places and values of environmental stewardship in students.

**Theoretical Frameworks**

There are a few preexisting theoretical frameworks that provide interesting lenses through which to analyze outdoor educational programs such as CUIR. The first framework is Astin’s Theory of Involvement, which “describes involvement and engagement with higher education” (Astin, 1984). It values involvement in terms of both physical and mental energy dedicated to one’s higher education experience, including both social and academic related activities. As an example, a high level of involvement according to Astin would signify a large amount of energy spent on campus participating in both academic and social activities. Students with a high level of involvement are much more likely to be academically and socially successful at their chosen institution. Another interesting theoretical framework is Tinto’s Theory of Retention. For Tinto, looking at how and why institutions retain students boils down to academic and social integration, although there are certainly some other important factors. He clearly identifies orientation program as one of the most definitive ways to strengthen this
academic and social integration as the beginning of student’s undergraduate studies (Tinto, 1975).

**Figure 1.** Tinto’s Theory of Retention, adapted by Stephen W. Draper.

CUIR

The University of Colorado Boulder has run outdoor orientation programs for upwards of 50 years. When CU first became a university, outdoors-oriented students used to get together during the 1st week of school for a barbeque at Chautauqua. Before CU in the Rockies there was a program called “Wilderness Welcome” that was focused on high stress, difficult outdoors trips, similar to the National Outdoor Leadership School (NOLS) or Outward Bound. These trips became too challenging for the existing support structure as more and more students began to
become injured or sick. Following Wilderness Welcome, no orientation trips existed for a few years as the Housing and Dining Services ran the outdoor program. Tim Jorgensen was hired in 1992 as Director of Outdoor Services, and the first CU in the Rockies trip began the following summer. The focus of this newly designed program was different than it had been in the past, as it focused on “building connections” and being outdoors (Jorgensen, 2016).

The first stage of CU in the Rockies is the signup process. Signup begins in February or March of the year that students are participating in the program. The current director of the Outdoor Program, Levi Dexel, estimates 90-95% of parents register their kids and ask questions; over 85% are pushed by their parents to join or find out about the program through their parents (Dexel, 2016). Although CU in the Rockies has changed locations, activities and, slightly in form over the past 14 years, it has been more or less the same general concept. The program has been nearly identical the last five years. Participation has ranged from around 40 participants to over 100 throughout the history of the program. In its present form, CU in the Rockies begins at the Recreation Center on campus. Students are dropped off, typically by their parents, seven days before they are able to move into the dorms. The participants are assembled in a large room and “big picture” topics such as safety and rules are discussed. After this, the participants are divided up into predetermined groups of 10-12 students plus their trip leaders — one male and one female. The group then splits up into vans and drives to Kremmling, Colorado. The following day consists of river rafting. After rafting, a 5-day loop of backpacking begins at State Forest State Park, in Granby, Colorado. During this trip, many topics are discussed and activities are
planned such as a day of alpine rock climbing and a peak attempt on a mountain.

On the first day of the course, the students are taken via van to a campsite called Radium. Participants sleep under tarps, 5-6 per tarp. The first night is spent setting up the tarps and getting acquainted with their groupmates and the larger CUIR community as a whole. The next day, the participants spend a day on the Colorado River rafting in blue inflatable boats called duckies. The rapids range from Class I to Class II. Following rafting, the participants rest and begin learning some backcountry skills such as seen below in a skills handout.

**Picture 4.** Students learning how to raft. Photo Credit: Steffen Myers
Figure 2. An instructor handout of the skills participants are expected to learn over the course of the trip.

The goals of the program have changed in form over the course of the program. Tim Jorgensen is the founder and original creator behind the beginning of CUIR. He says that he has always thought that the first six weeks of freshman year is critical to success, and thus, after the difficulties of previous programs, decided to start the unique program of CUIR. Tim started working at the Outdoor Program in the fall of 1992; and the first summer following his start,
around 4 groups started on CUIR. At the start, there wasn't any rock climbing or rafting. A day of rafting and climbing were subsequently added, and for a few years, there was mountain biking, which added "excitement" and "speed" but "wasn't as controlled for safety" (Jorgensen, 2016). The focus of these years of CUIR was simply about "building connections" and "being in the outdoors" (Jorgensen, 2016). At first, the program began its backpacking and peak attempts in the Bear's Ears, near Steamboat. Next, they moved to Leadville, in the White River National Forest. For Jorgensen, who admits that "students who come to Colorado want an alpine [above tree line] experience", the peak attempt day was one of the most important of the program.

Levi, the current director, says that, “in my mind, the goals are to get to know other people, and start school with friends with common interests.” He jokingly adds that for trip leaders, the “high dollar paycheck” isn’t too much of a deciding factor, but it certainly is incentive. He thinks that a lot of trip leaders love being the first people to share details about CU with new students, and that the fact there are so many return leaders “says a lot” (Dexel, 2016).

For the trip leaders, CUIR can be an extremely transformative experience. For many trip leaders, this is one of their first jobs and first time guiding a trip. For as little research that has been on outdoor orientation programs in general, there has been almost zero on the trip leaders. Past instructor feedback has shown the effects of the trip on both participants and the instructors themselves. One instructor, on a written survey sent out by the Outdoor Program said that, “Every single freshman I have had for the past 2 years does not regret it and loved the trip. Despite feeling as if we do not get paid or recognized enough for our hard work and time put into these trips, I have enjoyed leading the trips for the sake of the new freshmen and getting them excited about the outdoors and CU” (Outdoor Program Guidebook). Another commented that the “trip was great for the students to meet people, learn more about college, and prepare for the
upcoming year. As an instructor, I had a great time with the incoming freshman and I look forward to continuing a relationship with them” (*Outdoor Program Guidebook*). Another person wrote,

> After speaking with most of the students after the course, I think this trip has really changed some of the freshmen's college experience. They have been meeting up together at events and eating meals together, and have said they are so happy they went even though their parents may have signed them up for it! It has also made a lot of the students more eager to pursue the outdoors and they are really excited to be in CO (*Outdoor Program Guidebook*).

Another wrote that,

> Through these tremendous and stimulating activities, I believe that all core values of the trip were met. All students received new and exciting knowledge pertaining to the CO backcountry, established a solid basis of reliable and likeable friends, and received a new immeasurable amount of confidence over the once previously daunting task of successfully assimilating into the freshman environment.

Finally, a different instructor wrote that, “I learned a lot about how to instruct this age group, I think that my leadership skills improved” (*Outdoor Program Guidebook*). These outdoor orientation programs are reliant upon the instructors to create this supportive atmosphere of growth and adventure. Clearly, the instructors are able to see the positive effects that participants gain from CU in the Rockies. Also, the leaders gained many skills regarding outdoor education, guiding trips, and associated interpersonal relationships.
Methods

For this project, I conducted both a qualitative and quantitative analysis of the effects of CU in the Rockies.

Sample and Recruitment

The first step of data collection was to send online surveys to prior participants and leaders. The survey was modelled on themes of experiential learning and outdoor education, and included both quantitative analysis questions and open-ended, qualitative sections. There were two separate surveys sent out. The first survey was sent to prior participants (available as Appendix A) and the second survey was sent out to trip leaders (Appendix B). Research questions for the participant survey looked at the overall effect of CUIR on that participants’
college experiences, and investigated the correlation between trip participation and retention rate, environmental values, adventure experiences, experiences at CU, and collected some demographic information.

There was expected to be a qualitative interview component to this project, however, during survey data collection, it quickly became apparent that this data set would be a large enough, and the quality of the data rich enough, to develop conclusions from without the addition of qualitative interviews. Also, it was determined that interviews would likely be redundant to these surveys, which is discussed later in the analysis section.

Data collection began in mid-June 2016 and continued until the first week of July. Recruitment emails (attached as Appendix C, D) were sent out over a period of two days from the researchers’ @colorado.edu email address. Reminder emails were sent out one week later.

A database search of previous Rockies participants was conducted within the CU Outdoor Program. From 2000-2013, the CUOP used software called Rec Trac, to which archived access is still available. From 2013-2015, the CUOP used software called Fusion, and records of participation were easily obtained. Unfortunately, there were no participant files available prior to 2000. There were 819 participant names available from these databases, however, only an estimated 10% of these had personal, non-school related emails available. The rest had standard firstname.lastname@colorado.edu emails available. Of these 819 emails, 266 bounced back leading leaving a maximum of 553 usable emails (67.52% sent). Of these 533 emails, 74 Surveys were returned for a response rate of 13.38%. Prior trip leader emails were gathered from an employee database from the CUOP available on a Google Document, as well as from the memory of OP directors Levi Dexel and Tim Jorgensen. 31 trip leader emails were gathered. Of these 31 emails, 0 bounced back leading to a total of 31, or 100%, being distributed.
There were three unique survey analyses used to look at this data. The first method is called open coding. Responses to many of the survey questions were open ended, leading to many multiple sentence long responses. Key words or phrases were counted in these responses, divided into categories, and summarized. In axial coding, relationships between these open codes are identified. Pearson correlations were also used to look at the relationship between two linear variables.

Outline

Data & Results

74 completed surveys were collected from the participants of CU in the Rockies, leading to a response rate of 13.38%. 2 declined to participate in the survey upon reading the consent form, which led to 72 surveys available for analysis. Of the participants who completed the survey, 4 were from 2000, 5 from 2001, 4 from 2002, 4 from 2003, 2 from 2004, 3 from 2005, 2 from 2006, 4 from 2007, 5 from 2008, 2 from 2009, 6 from 2010, 4 from 2011, 5 from 2012, 3 from 2013, 7 from 2014, and 13 from 2015. This data can be viewed below in Table 1.
Table 1.

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1 response didn’t report a year of participation. These numbers are in all actuality estimated because participants self-reported the year that they participated in CUIR. Respondent ages ranged from 18 to 35. 98.51% reported themselves as White or Caucasian, with only 1.49% reporting themselves as American Indian or Alaska Native. No other races were reported. 8.96% were from Colorado, while 91.04% were from outside Colorado.
The first question of the survey asked about motivations for participating in CU in the Rockies. In open coding responses based on common themes, key words and phrases were shown to be “friends” (26%), to “meet people” (22%), backpacking (24%), “outdoors” (19%), and “adventure” (7%). Some responses noted that they wished, “To connect with like-minded students and start off my time at CU with a positive and healthy beginning,” or that they “…did it to meet people before school started. I was an incoming freshman from out of state and I did not know a single person going to CU. I also like to backpack and hike so it was perfect.” One response noted that,

The summer before I had just done an Outward Bound experience. I was interested in getting involved in groups who enjoyed the outdoors and was excited to see that there was this trip that was just a small group of people. I was really nervous about starting school at CU with so many people and this trip helped to break CU down into a smaller group who I could connect with. I could also ask lots of questions of the leaders and felt like I was getting an ‘inside look’ at CU.

Although motivations for joining the trip were varied, there were clearly some commonalities between the responses.

Backpacking was participants’ favorite activity (59.72%), followed by the peak attempt, rafting, rock climbing, and the BBQ.
Participants in the survey were subsequently asked a list of questions about their experience of CUIR. Answers were on a six-point Likert scale from Strongly Agree to Strongly Disagree. 93% of respondents either agreed or strongly agreed that CUIR was an enjoyable experience for them, and 83% agreed or strongly agreed that CUIR helped them to feel more welcome when they arrived at CU. 76% agreed or strongly agreed that they developed a community while on CUIR; 49% said that CUIR helped them to make lasting friendships. 67% agreed or strongly agreed that CUIR helped them to adjust to school; 78% said CUIR helped to develop their interests in outdoor activities. 97% of respondents felt safe on CUIR (meaning they rated Agree - Strongly Agree); 67% strongly agreed that their trip leaders helped shape their experience, and 70% felt as if their trip leaders helped to shape their college experience (rated between Agree-Strongly Agree). 48% of people strongly agreed that CUIR was a lasting impact on their college career; 38% strongly agreed it was a lasting impact on their life.
Among these first six questions listed above (CUIR was an enjoyable experience for me, CUIR helped me to feel more welcome when I arrived at CU, I developed a community while on CUIR, CUIR helped me to make lasting friendships, CUIR helped me to adjust to school at CU) analyzing participants’ experience on CUIR, a Pearson Correlation was run which found that all items were significantly correlated with each other ranging from .53 to .68. This correlation table can be viewed below in Table 2. Again, responses to these six questions were on a six point Likert scale; the responses to these questions were averaged together numerically to make them easier to analyze (so that 1= strongly agree, 6= strongly disagree). These compiled responses can be viewed as ‘CUIR Attitude’ in Figure 4 below.
Table 2.

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Figure 4. Averaged responses to questions about participants’ attitudes towards CUIR.

Retention & CU Performance

Academic majors of survey respondents varied widely, comprising a total of 37 different majors; including Business, Mechanical Engineering, Environmental Studies and English Literature. Respondent's high school GPA ranged between 3.0 to 4.0 (74.2%) and 4.0 and above (24.29 percent). College GPA, including in-progress students, ranged from 2.0-3.0 (11.43%), 3.0-4.0 (85.71%), and 4.0 and above (2.76%). 30% of respondents are still enrolled at CU; of the remaining 70% of respondents, only 8.88% did not graduate from CU, while 91.12% did. Of these 8.88% that did not graduate from CU, 75% of them didn't graduate because they
transferred to another university, rather than due to academics (0%) or other reasons (15%).

From the respondents, again including in-progress students, it took (or is planned to take) them an average of around 4 years to graduate. 6.67% expected to or graduated in 3 years, 66.67% in 4, 17.78% in 5, and 8.89% more than five.

![Bar graph showing the number of years participants took or are planned to take to graduate CU](image)

**Figure 5.** Bar graph showing the number of years participants took or are planned to take to graduate CU

34.21% of respondents went on to receive an additional degree from CU or another institution; of these, 8.83% an additional bachelor's, 66.67% a Master’s degree, 4.17% a medical degree, and 16.67% another unlisted degree. Unfortunately, university-wide statistics are not available to compare these numbers to.

**Social Integration & Sense of Community**

A few questions on the survey were analyzed for participants’ sense of their social integration as well as sense of community. Participants were asked on a 6-point Likert scale questions about connection, belonging, and inclusiveness. Adding up normalized percentage responses from Somewhat Agree to Strongly Agree, 88.23% felt as if they belonged at CU-
Boulder, 91.27% said that CU-Boulder was a good fit for them, and 91.19% said they had the right amount of friends while at CU. 63.24% of people are still in contact with someone else from their trip, with the majority (62%) of these people still being in contact with 2-5 people.

Participants were also asked what sort of relationships came out of their experience on CUIR. Responses were coded and divided into three categories — short friendships, long friendships and lifelong experiences. Many noted establishing friendships, (86%); lasting close friendships, (31%); and lifelong experiences (15%). As discussed later, these responses seemed dependent on how recently participants had gone on CUIR. Some highlighted responses about developing friendships included:

- “The whole group stayed close in the months after the trip. Even without leaders. As time went on we lost touch but I still remember everyone to this day.”
- “Directly after the trip, two of my trip mates introduced me to a couple of people from their dorm. We decided to go on a hike the next day. They brought along another friend who I began dating two years later and am now married to. We have been married 4 years and a friend from CUIR was a groomsman for my husband. I also spent a summer skiing in New Zealand with a girlfriend from CUIR. It was an incredible life building experience!”
- “I really bonded with my group and my leaders. We stayed good friends throughout the four years at college.”
- “The ones I kept in touch with have become some of my closest friends. I am forever grateful for that experience.”
- “I made some of my best friends from CUIR, people from my group, other groups, and trip leaders.”
Many also noted the friendships or people they met, but not the lasting impact from these relationships.

- “None other than a recognized face or two in passing in following years.”
- “Sadly, I didn't have long lasting friendships from the experience, however over the next 4 years I would see my fellow CUIR peers in passing and say hello which was always nice to see a friendly face.”
- “While many friendships did fizzle when we got back to campus, the ones that lasted were some of my best. One girl who I met there was one of my closest friends for much of my time at CU. We have stayed in contact for the past two years after graduating as well.”
- “Numerous loose friendships and a few extremely close. Great exposure to students with a variety of backgrounds and different academic pursuits.”
- “While I didn't maintain contact with people from the trip I felt like it was a good introduction to the types of people I'd meet in the CU community.”

When asked in which ways CUIR shaped their experience at CU, many people highlighted the ability to make friends. One participant wrote, “I did not know anyone else from my town going to CU so I was very worried and scared about making new friends. CUIR not only gave me a good base of friends, but also gave me confidence in making more friends,” while another wrote “It was a great way to start college and helped to ease the transition (as an out of state student a long ways from home). Additionally, it was a wonderful experience that I often still think about.” Only 3% of all responses said there was no impact resulting from the trip on their college experience.
Sense of Place

Sense of place was examined in terms of participants’ connection to CU and Colorado as a whole. On a Likert scale, between Agree-Strongly agree, participants said that: I know this region of Colorado (95.59%), I feel connected to this region of Colorado, (95.58%) and that I am concerned about the environmental issues in this region of Colorado (94.09%). Of participants from Colorado, 50% chose to stay in Colorado after they graduated and/or left CU; 47% of participants from outside Colorado chose to stay after graduation, compared to 53% that did not.
Figure 6. Bar graph of six-point Likert scale showing participants’ sense of place in terms of connection to CU and Colorado as a whole.

Questions 1-3 (I felt as if I belonged at CU Boulder, CU Boulder was a good fit for me, I had the right amount of friends while a student at CU.) were averaged to create an overall score for sense of place. Correlations were mostly strongly correlated between sense of place questions, from .266 to .705. This can be viewed in Q26_1, Q26_2, and Q26_3 of Table 3 below. Similarly, connection to Colorado was examined by looking at an additional three questions (I know this region of Colorado, I feel connected to this region of Colorado, I feel concerned about the environmental issues in this region of Colorado.) Correlations varied on sense of place in Colorado, from .002 to .530. This can be viewed in Q26_4, Q26_5, and Q25_6 of Table 3 below.
Figure 7. Averaged responses to questions about Sense of Place at CU.
Table 3.

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Figure 8. Averaged responses to questions about sense of place in Colorado.

Outdoor Activities

Over half (57%) of respondents were involved in organized outdoor activities as a teenager or young adult before CUIR, whether it be NOLS, Outward Bound, Boy Scouts, Girl Scouts, or another group. 39% would have considered themselves very active in the outdoors before CUIR, with 47% marking themselves as a moderate amount of outdoor interest and activity, and 13% only a little active. After CUIR, these percentages were 38%, 27%, and 2%, respectively. Respondents marked that they are presently active in rock climbing (38%), hiking (97%), or water sports (49%).
Figure 9. Bar Graph showing percentage of survey respondents who identified as participating in organized outdoor activities before CUIR

When asked in which ways CUIR helped to shape their experience while at CU, many highlighted the outdoor skills and wilderness ethics that it taught them. One wrote that CUIR “gave me the confidence to go out and explore the mountains. I no longer felt that I was too inexperienced to go out and give it a try,” while another wrote that “it shaped the desire to be engaged in outdoor activities and removed some of the fears I had previously.” Another commented that CUIR “Taught me resilience, faith in myself, [and] love for the outdoors.”

CU in the Rockies

When respondents were asked what was the most important thing they learned on the trip, open coding for key words highlighted “backpacking” (18%), “friendships” (15%), “leave no trace” (8%), and “Colorado” (8%). One student wrote that they learned how to “be prepared and open your mind to others,” while another replied that they learned “that individuals create a
strong bond through working together backpacking, rafting, eating, and simply spending time together in the outdoors.” Other respondents noted they learned, “that Colorado is a big and beautiful place that I could explore” and that “I figured out which degree I wanted to pursue after talking about it at length with one of the leaders.” Another participant wrote that “there are a lot of different types of people who enjoy backpacking. I learned how to get along with and enjoy people who I might not choose as friends outside of CUIR.” Many students also highlighted the importance of spending time in the wilderness, admitting that “I had never really been backpacking before so I learned about myself and how much I love the outdoors. Today I am an avid hiker and I attribute that to this trip.” Other strong life lessons were learned, including “to keep an open mind about things,” that “you can do more than you are capable of,” and learning about “the joy that the mountains inspire in me.” “Be prepared to open your mind to others,” and “... a life dedicated to the outdoors is quite awesome,” one student wrote.

Participants’ most memorable experience or memory from the trip varied widely. Axial coding for selected responses showed such commonalities as the peak attempt (30%), friends (17%), and backpacking (8%). Many participants highlighted the interpersonal relationships they were developing, such as, “I made friends that I’m still close with today.” One wrote that, “One night we stayed up late, somehow cramming 6 people into a tiny 2 person tent and just talked for hours. I loved that at that point we were such good friends that we could share our backgrounds and really get to know each other.” Another commented that “…I really enjoyed the feeling that everyone was having such a genuinely good time and wanted to be on the trip. I made connections with people that I would never expect.” The wilderness experience of mountaineering and backpacking was also extremely memorable for many participants. One wrote that, “My most memorable experience was the peak attempt. It was such a long and
grueling climb ... I felt like I was on top of the world,” while another said that, “The peak attempt was huge for me. I had never experienced that level of altitude ... It was freezing, we were all tired, but then the sun rose and it was one of the most incredible things I had ever seen.” Yet another participant wrote that, “Hiking the peak before sunrise was a life changing experience ... I have yet to experience beauty like that since and it was unbelievably rewarding.”

Some other highlighted responses included:

- “I was in awe of the beauty of the Rockies the entire trip. Being from California, I had never seen the Rockies, let alone experienced a thunderstorm and rain storm in the middle of the day. It left me completely in love with this state.”
- “It gave me a more diverse college experience. I met other people and had many other friends other than the business students I studied with.”
- “Not a specific experience but I remember the trip as one of the best times of my life. I was happiest while out in the backcountry camping with friends. I cannot remember a period of time where I have ever smiled more than while on my trip.”
- “The summit at sunrise was an unbelievable experience ... I will never forget that view and the people I shared it with.”
- “I remember sharing a tent with someone I thought was really strange and thinking about how rare it was to be in such an intimate setting with someone you barely know.”

When asked in which ways CUIR had affected their career path, 48% said that CUIR had little to no impact (coded from responses) while 52% said that it had an impact. Many of these impacts were related to the outdoor skills learned on the trip. Respondents said that it “solidified
that I want to be in the outdoor tech industry;” “It oriented me towards the outdoors;”” It reinforced [my] interest in nature which is what pushed me to eventually do a PhD in a biology-related field”; and that “It just helped me fall even more in love with the environment.” For participants who noted the trip did not have long term impacts on their career, they still noted the small impacts down the line, expressing that “It didn’t [have an impact on my career]— But it gave me confidence at CU which then allowed me to have the confidence to change my major…” and that “It didn’t really, but I found I’m more environmentally conscious than before.”
Trip Leaders

Of the 12 responders to the trip leader survey, 20% participated in CUIR as a participant, while 80% were new to the program. Years they led ranged from 1995-2015, and current ages ranged from 21 to 39.

Trip leader demographics varied. There were 12 different majors listed, from Geography to Civil Engineering. Of the trip leaders, 17% reported high school GPA was 2.0 to 3.0, 25% was 3.0 to 4.0, and 58% was 4.0 or above. In College, GPAs ranged from 2.0 to 3.0 (16%), 3.0 to 4.0 (83%). 90.90% have already graduated from CU; 8.33% are still enrolled and 8.33% did not
graduate from CU, and 50% graduated in 4 years. 41% of leaders did not or have not yet gone on
to complete another degree.

![Bar Graph of Trip Leader high school GPAs](image)

**Figure 10. Bar Graph of Trip Leader high school GPAs**

Regarding interpersonal relationships, 100% of trip leaders reported they were still in contact with other trip leaders, with the average number of people being 2.33. 66% of leaders reported being still in contact with participants, the average being 2.

Trip leader motivations for guiding included love for guiding, leading, and the wilderness. One leader wrote that they hoped "to pass on the great experiences I had the privilege of having to others who are entering CU Boulder as well as further develop my leadership and outdoor education skills," while another wrote that “I loved leading outdoor trips and saw this as an opportunity to help incoming freshmen connect and make friends as well as feel a bit more prepared to start their college careers.” When asked their favorite activities, Leaders marked backpacking (58%), the peak attempt (25%) and rafting (17%).
Some highlighted responses for what trip leaders thought the most important thing they learned included:

- “There isn't a specific 'thing' so much as there is just the experience of learning more about the individuals that I am traveling with. We become a tight knit group of friends, and everyone brings new tidbits to the table.”
- "As a student: that I am completely in love with backpacking. As a leader: not to be a guide but an outdoor instructor."
- “How to balance professionalism, approachability, [and] responsibility”
- “I think the most important thing I learned on the trip was learning to manage the personalities of the participants. It was fascinating to see how the students changed—or more accurately, let their true personalities—come through as the trip went on.”

Trip leaders’ favorite parts of the trip included helping create "safe and open places for meaningful friendships and connections to grow, as well as taking the trip day to day and enjoying the company." One commented that they “…enjoyed building friendships with my co-leaders, learning about new people, seeing freshmen open up and begin to experience the new chapter of their lives.” Many highlighted such things as “meeting some great friends, from both staff and participants … Getting incoming freshman excited about starting an amazing journey at CU.”

Memorable experiences ranged from overall experiences, such as “Talking to students one on one about personal vulnerabilities and ways to overcome future obstacles when entering their college career” or “…the backpacking portion … I just remember feeling so happy and alive
and thankful to be able to do the work I was doing.” Memorable experiences also included specific, impactful experiences, such as when “[we watched] while the girls snuck away. After about 20 minutes, the girls returned covered in mud and laughing; one girl said it was the dirtiest she'd ever been (she'd never been camping). It was a really cool thing to be a part of.”

CUIR helped to shape participants’ CU experiences and career paths in different ways. 92% of leaders strongly agreed that CUIR was an enjoyable experience for them, 58% strongly agreed that they developed a community while on CUIR, and 92% strongly agreed or agreed that CUIR helped them to make lasting friendships. 58% either agreed or strongly agreed that CUIR was a lasting experience of their college career, and 75% agreed or strongly agreed that CUIR was a lasting impact on their lives.

![Bar Graph of participant responses to questions on 6-point Likert scale. Normalized to percentages.](image)

**Figure 11.** Bar Graph of participant responses to questions on 6-point Likert scale. Normalized to percentages.
When asked how CUIR shaped participants’ experiences, replies included that leaders recognized it helped participants to “build self-esteem, confidence and community.” In terms of the trips impacts on trip leaders, replies included:

- “I built a wonderful community of friends - many of whom I'm still in touch with today. It provided me with a comfortable place to go to school!”

- “Being involved as a trip leader provided me with an awesome friend group of fellow outdoor trip instructors, and was a great start to every fall semester. It brought out my confidence, developed my leadership skills, fulfilled my desire to teach and watch people grow, and gave me an ever increasing hunger for nature and the outdoors. CUIR was my favorite trip of the year every time I led it.”

- “[It] really epitomized that a college education is not just about the grades and the piece of paper at the end…”

- “It was something to look forward to every year to brace myself against the coming academic year. It was also a great way to end my summer, so I made sure I could make it as often as I could.”
Figure 12. Line Chart of participant responses to questions on 6-point Likert scale. Normalized to percentages.

Leaders were also asked in which ways CUIR shaped or affected their career path.

- “I stayed in the outdoor education business and have worked in the industry my entire career (over 20 years!)”.
- “CUIR helped me develop my teaching skills and my leadership skills.”
- “Meaningful work is the best work.”
- “After college I went on to work for [Adventure Travel Company]. I then went on to Spain to work in a remote village teaching English. Finally, I ended up in Israel where I obtained a master's degree in environmental studies and water conservation. All of my experiences have been great adventures and I can say that CUIR helped me gain the confidence I needed to go abroad alone. I continue to come back to Colorado every year…”
A few trip leaders left additional comments:

- “I can never express to people how valuable the trip is for all who are involved, and I wish more incoming students were able to take this opportunity to start off college in such a profound and impactful way.”
- “It was, to this day, one of the best experiences of my life. It formed the foundation of my experience at CU. I cannot imagine my college experience without it. I would recommend the trip to any incoming freshman!”

Discussion & Analysis

Through this large amount of data collected, there were a few issues identified within the results. The first, and largest limitation in terms of this project’s analysis, is that there is no control group to compare these results to. Although CU offers (and has recently required) incoming students to participate in non-outdoor orientation programs, they are not in similar formats to CU in the Rockies. Also, data is not available on these programs; as a result, it is difficult to say whether the positive results found from CU in the Rockies are statistically significant compared with other orientation programs. The second limitation is there is no way to prove causation and correlation. From the data listed above, there is a clear and positive correlation between the impact of CU in the Rockies and one’s college experience and life path; again, this can’t be attributed to causation. However, long-form participant responses seem to strongly imply this causation. Additional research, including more participant questionnaires, and comparison to a control group, could further support finding the causation of this specific program.
There are also a variety of confounding variables within this research, such as post course euphoria. Participants who completed the trip in the past few years may recollect more positive memories than participants who participated more than a decade ago. This could have been accounted for by looking at the relationship between the responses and the year that participants completed the trip, however, this was not a part of this particular study. Also, there may have been a form of non-response bias because people who had a negative experience on the trip chose not to complete the survey. The response rate could also have been affected by the fact that only school emails were available; people may not have been checking their @colorado.edu email address if they graduated more than a few years ago, and it is possible that students who were more engaged in the university are more likely to check their @colorado.edu e-mail address, therefore further biasing the sample.

There were also a few limitations in regards to how this data set was collected. Program evaluations are a type of self-reported data, and like post course euphoria and response bias, can lead to respondents answering questions in a way they believe the researcher wishes to hear. Another source of possible error could be the confounding variable of gender. Gender was not asked during this survey, thus it is impossible to know the percentage of responses by gender that responded; anecdotal evidence from prior trip leaders seem to express about a 50/50 mix of male and female participants, however.
On a positive note, it was surprising how much participants retained from their experience, even a decade or more later. In a study by Gass et al, the researchers were surprised at this as well, admitting that they couldn’t believe these “participants, 17 years removed from their OOP [Outdoor Orientation Program], identified positive and life changing effects from their experience” (Wolfe & Kay, 2011, pg. 28). It was not anticipated that any consistencies in memories would be found, but many participants in this study, even 15 years later, recalled strikingly similar memories of their backpacking, rock climbing, and peak bagging experiences. Gass et al found in his and his fellow researchers’ studies that specific “learnings” often occur.
for each individual, but through a process of reflection and “standing back” from powerful individual experiences, researchers can uncover “patterns of change that cut across the specifics of person and circumstance” (Campbell & Patton, 2001, pg. 449 quoted in Gass et al, 2003).

There were clear patterns of change noted in the participants’ CU in the Rockies experiences; their recollections differed but were nearly unilaterally and consistently positive. Participants not only recalled vivid and accurate recollections of their experience and the long term, lasting influences on their lives, but also specific memories and exciting moments that happened on their trips. Gass et al found that,

Participants in the study were consistent in their praise regarding how the program assisted them in taking advantage of their new university experience as well as how it oriented them in a positive direction for the rest of their lives. Long term influences described by participants included direction in their careers, direction in their personal lives, development of personal values and skills, and development of lifelong friendships … It is our belief as researchers that the changes expressed by the OOP participants were not the result of merely recreating in a group in the outdoors prior to school, but the interaction of challenging yet supportive outdoor learning experiences. (Gass et al, 2003, pg. 49)

This is a strikingly similar finding to what can be gathered from this data regarding CU in the Rockies.

A few themes that were uncovered in participants’ responses were the influence of peer friendships as a support network. Motivations for the trip were clearly along one of two lines — to experience the outdoors, or to develop friendships and interpersonal relationships. One of the largest motivations for joining the trip was clearly to make friendships or meet people, as nearly
48% of respondents noted this in their motivations. Seeing the outdoors, backpacking, and finding adventure netted another 50%. It’s interesting that these two themes of participant values align exactly with the goals of CU in the Rockies set by the Outdoor Program — to help people to make friends while also getting outside and exploring the wilderness. These friendships created directly play into the student’s sense of place and sense of community, and were one of the strongest things participants recollected many years later.

Another theme was the influence on timing. As discussed earlier, the transition time to college is a critical time in an undergraduate student’s career. “The first year of the college experience can be a ‘make or break’ proposition. According to the National Center for Education Statistics, “nearly half of all freshman students do not complete college and a majority of those drop out before their second year” (Waryold, 2010, pg. 1). Many respondents noted their fear or uncertainty about entering college; CUIR felt to them a powerful adjustment tool to not only ease the adjustment but to set up friendships and lessons that were useful throughout participants’ college experiences and beyond.

Another overt theme was the focus on the Outdoors, and the natural world. The wilderness setting of CUIR is what allows the program to be successful, and what allows participants to grow, mature, and have positive experiences. The principles of outdoor education and adventure education help to show how this this unfamiliar wilderness environment helps participants to learn about themselves and what they can achieve by being challenged in these outdoor arenas. Participants reported developing an appreciation for the outdoors as well as hard outdoor skills that inspired their future outdoor endeavors, and in some cases, even inspired outdoors-related careers.
Yet another theme of note was retention. CUIR participants graduated CU at a much higher rate than average; the six-year graduation rate as of 2010 is around 70% for the entirety of CU; for CUIR participants, 91.12% graduated within six years, the average being 3.29 years. Clearly, participants of this program also excel academically. It can be hypothesized that this program attracts a certain kind of person, and these kinds of people are more likely to persevere. Tinto found through his research that individuals are more likely to stay enrolled if they are involved academically and socially; CUIR attracts students to CU and instantly brings them in and requires them to be active and get involved. This could be a reason why the graduation rate of CUIR participants is so much higher than the CU average.

One concept that emerged through studying the data collected from the survey is that unlike a traditional educational experience, CU in the Rockies appears to be more along the lines of a community of learners. This concept, developed by Barbara Rogoff, states that “the idea of a community of learners is based on the premise that learning occurs as people participate in shared endeavors with others, with all playing active but often asymmetrical roles” (Rogoff, 1994, pg. 1) which contrasts with so called “one sided” models of learning, with the learner in a passive role. It can be presented that each individual group on CUIR is a community of learners; both mature and less mature members of the community are active, share information, and learn from each other. The group is adult run, but in some places, the trip leaders are merely facilitators. In the one sided model of education, with students learning from a teacher, students simply need to demonstrate acquisition of information or knowledge; but in communities of learning, students’ identities can change. The “emphasis is on the process of learning” (Rogoff, 1994, pg. 221) rather than just the information; CU in the Rockies presents this process and allows participants to grow physically, emotionally, and in many other ways. By creating small,
tight knit groups, participants and trip leaders alike seem to learn from one another and truly
develop into a community.

On another note, the theme of the outdoor & natural world is a unique opportunity for CU Boulder to take on in its education of students. Boulder is located in an incredibly rich ecological location, where the Rocky Mountains meet the plains. Colorado as a whole is one of the richest states in terms of outdoor adventures. Educating participants on the incredible beauty and outdoor wilderness that Colorado has to offer is a great way to engage people with the land and create a sense of place.

**Recommendations**

Etienne Wenger, one of the foremost researchers on educational theory, writes that "learning is not just acquiring skills and information; it is becoming a certain person." Learning, he adds, leads to the production of ones' identity, which is a constantly changing trajectory (Wenger, 2009). CU in the Rockies is an intensive, life changing, transitional orientation program with impacts that last for decades after students’ participation. The trip helps to produce identities by creating connections in a ruggedly gorgeous wilderness setting.

A strong recommendation would be to find ways to increase the diversity of the program. Although the places people come from to attend this program are varied, their races are not; adding some diversity could only benefit the program. One participant wrote that, “In my opinion, it's definitely a certain type of kid who takes advantage of CUIR. It's someone who is outdoorsy, probably upper middle class, and I think almost all the kids on my trip were out of state students.” One recommendation would be to find ways to continually work on this diversity, and also offer scholarships or other forms of financial aid to make sure the program is
accessible to all who wish to participate. CU in the Rockies is an expensive program, costing participants between $700-800.

Another recommendation would be to collect more data on the quality of the programming offered and the long term effects it has on students who participate. This paper is the first comprehensive look at this program; having more comprehensive analysis after each year CUIR happens, as well as long term follow up, would be a great way to continually examine the impacts of the program, and find ways to improve.

Appendices

Appendix A - Qualtrics Survey for Participants

- Demographic
  - Age
  - Race
  - Where are you from?
  - Grade at CU (if still in school)
  - What year did you participate in CUIR? You can estimate if you don't remember.
- Retention
  - What was your undergraduate major?
  - High School GPA
  - College GPA
  - Did you graduate from CU?
  - If not, why?
  - If yes, How many years did it take you to graduate?
  - Did you go on to receive another degree from another institute or additional degree from CU? If so, what?
  - How long did you stay in Colorado after graduation?
- Outdoor Activities
  - Were you involved in outdoor activities as a teenager, before CUIR, such as NOLS, Outward Bound, Boy Scouts, or Girl Scouts? If yes, which ones?
  - Would you have considered yourself active in the outdoors before CUIR? (Not at all → Very much)
  - Do you consider yourself active in the outdoors after CUIR? (Not at all → Very much)
  - What outdoor pursuits do you presently take part in?
- CUIR
Why did you decide to participate in CUIR?
What activities did you enjoy the most?
- Backpacking, Rock Climbing, Rafting, Peak Attempt, BBQ
To what extent do you agree with the following statements? (not at all → very much)
- CUIR was an enjoyable experience for me.
- CUIR helped me to feel more welcome when I arrived at CU
- CUIR helped me to make lasting friendships
- CUIR helped me to adjust to school at CU
- CUIR helped to develop my interest in outdoor activities
- CUIR was a lasting impact on my college career
- CUIR was a lasting impact on my life
- I felt safe while on CUIR
- My trip leaders helped shape my experience.
- My trip leaders helped shape my college experience.
- I know this region (Colorado)
  I feel connected to this region (of Colorado)
  I am concerned about environmental issues in the region. (Colorado)
What was the most important thing you learned on the trip? (Freewrite)
- Experience at CU
  To what extent do you agree with the following statements? (not at all → very much)
  - I felt as if I belonged at CU-Boulder
  - CU-Boulder was a good fit for me
  - I had the right amount of friends while a student at CU.
- Other
  - Are you still in contact with anyone from your trip? If so, how many people?
  - What sort of relationships came out of your trip experience?
  - In what ways help shape your CU experience/career path?
  - Is there an experience that stands out for you from the trip?
- Freewrite section

Appendix B – Qualtrics Survey for Trip Leaders
- Demographic
  - Age
  - Race
  - Where are you from?
  - Grade at CU (if still in school)
- Retention
  - What was your undergraduate major?
  - High School GPA
  - College GPA
  - Did you graduate from CU?
  - If not, why?
  - If yes, How many years did it take you to graduate?
Did you go on to receive another degree from another institute or additional degree from CU? If so, what?

How long did you stay in Colorado after graduation?

### Outdoor Activities

- Were you involved in outdoor activities as a teenager, before CUIR, such as NOLS, Outward Bound, Boy Scouts, or Girl Scouts? If yes, which ones?
- Would you have considered yourself active in the outdoors before CUIR? (Not at all → Very much)
- Do you consider yourself active in the outdoors after CUIR? (Not at all → Very much)
- What outdoor pursuits do you presently take part in?

### CUIR

- What years did you lead CUIR?
- Did you go on CUIR as a participant before leading?
- Did leading this trip help to shape your career path?
- Did leading this trip help shape who you are?
- Did you enjoy leading?
- What was your favorite part of leading?
- Did your participants affect your enjoyment of the trip?
- How important was the monetary compensation in your decision to lead this trip?
- Have you kept in contact with your participants after the trip? If so, how many?
- Have you kept in contact with coleaders? If so, how many?
- I felt safe in my abilities to lead this trip
- I felt confident in my abilities to lead this trip
- I learned new interpersonal skills as a leader on this trip
- I learned new outdoor skills as a leader on this trip
- Why did you decide to participate in CUIR?
- To what extent do you agree with the following statements? (not at all → very much)
  - CUIR was an enjoyable experience for me.
  - CUIR helped me to make lasting friendships
  - CUIR helped to develop my interest in outdoor activities
  - CUIR was a lasting impact on my college career
  - CUIR was a lasting impact on my life
- What was the most important thing you learned on the trip? (Freewrite)

### Experience at CU

- To what extent do you agree with the following statements? (not at all → very much)
  - I felt as if I belonged at CU-Boulder
  - CU-Boulder was a good fit for me
  - I had the right amount of friends while a student at CU.

### Other

- Are you still in contact with any trip leaders from your trip? If so, how many people?
- Are you still in contact with any participants from your trip? If so, how many people?
What sort of relationships came out of your trip experience?
In what ways did this trip help shape your CU experience/career path?
Is there an experience that stands out for you from the trip?

Freewrite section

Appendix C – Recruitment Email for Participant Survey

You are receiving this email because you participated on an incoming student trip called CU in the Rockies between 1993 and 2016. My name is Josh Temes; I am a senior at CU-Boulder and have worked for the CU Outdoor Program for the last three years. I am developing an honors thesis focused on looking at the effects of CU in the Rockies.

I am writing to you to request your participation in a brief online survey. The survey is brief and will only take about 15 minutes of your time to complete. Your participation in the survey is completely voluntary and all of your responses will be kept confidential. No personally identifiable information will be associated with your responses to any questions. The CU Institutional Review Board has approved this survey. Should you have any questions, feel free to contact me at joshua.temes@colorado.edu or at (650) 862-8844.

Appendix D – Recruitment Email for Trip Leader Survey

You are receiving this email because you participated as a trip leader on an incoming student trip called CU in the Rockies between 1993 and 2016. My name is Josh Temes; I am a senior at CU-Boulder and have worked for the CU Outdoor Program for the last three years. I am developing an honors thesis focused on looking at the effects of CU in the Rockies.

I am writing to you to request your participation in a brief online survey. The survey is brief and will only take about 15 minutes of your time to complete. Your participation in the survey is completely voluntary and all of your responses will be kept confidential. No personally identifiable information will be associated with your responses to any questions. The CU Institutional Review Board has approved this survey. Should you have any questions, feel free to contact me at joshua.temes@colorado.edu or at (650) 862-8844.

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