

Urban Wilderness Canoe Adventures Evaluation

2012 Summary of Findings

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Urban Wilderness Canoe Adventures Evaluation Report

“I think the students really got to know each other well and got to know me better. I’ll never forget the bus ride home. I felt like there was almost peace or sadness because, I think out in the woods, they felt really amazing and confident, almost like they were in a team of winners. And I don’t think they often feel that way. They felt really positive and they don’t always feel that way here in school.”

Teacher, Minneapolis Public Schools

Executive Summary

The Urban Wilderness Canoe Adventures (UWCA) Program provides a continuum of experiences for youth and families that are designed to engage all participants in a life-long relationship with the outdoors and also encourages environmental awareness and leadership development. The UWCA seeks to fill a gap in the outdoor industry by reaching, engaging, and serving underserved, low and middle income urban youth and families.

According to UWCA staff, the program served 22,412 youth and families on 351 events in Minnesota in 2011-2012. The UWCA provides programming in communities throughout the United States, as a way to demonstrate the UWCA model and promote the Twin Cities program to national audiences.

Researchers from the University of Minnesota’s Center for Applied Research and Educational Improvement (CAREI) have collaborated with Wilderness Inquiry and its partners since spring 2010 to evaluate the UWCA.

CAREI evaluators collected data from an array of sources in 2012. We reviewed more than 50 peer-reviewed journal articles, conducted in-depth interviews with young adults with long term involvement, and analyzed the responses of more than 1,100 students, teachers, and youth leaders to prepare this report.

Key Evaluation Findings

Introductory Outdoor Experiences are the point of entry for most young people in the UWCA program. The experiences vary in length, but usually last about six hours. The goal of the introductory experiences is to expose a large number of students to the outdoors. In most instances, this first exposure is a trip in a voyager canoe down a

segment of the Mississippi National River and Recreation Area.

An important finding of our evaluations of the introductory outdoor experiences shows how few young people have regular experiences in nature. Three of every ten students had no prior experiences on the Mississippi River and one in four had never visited a state or national park.

3 in 10 Students had no prior experience related to the Mississippi River. One-quarter of the 669 students had never visited a state or national park.

92% Of the teachers agreed or strongly agreed that the river trip was a valuable experience for the students.

88% Of the students *agreed or strongly agreed* that they “worked with others as a team”

92% Of the teachers believed that the outdoor experience supported academic learning.

The evaluation also revealed that high percentages of the students learned new skills, made connections to the environment, enjoyed the experiences, and wanted to return to the River.

The highest survey ratings related to **relationship building among peers and trip leaders**, with 91% of students *Agreeing* or *Strongly Agreeing* that the “trip leaders were friendly to all students” and that “the trip leaders were knowledgeable.” Eighty-eight percent of students *Agreed* or *Strongly Agreed* that they “worked with others as a team” and 84% indicated that they “had opportunities to participate in small groups” on the trip.

“It really brought students together. They had been bickering in the canoe, but after a while spontaneously began to work as a team to paddle faster and they were laughing a lot.”

Teacher, Summer Session

The evaluation also highlighted how teachers value these experiences for academic learning. For example, one teacher stated,

“The trip fit with our teaching theme of aquatic ecosystems and the netting was the closest connection to studying organisms.”

Teachers indicated that they highly valued these experiences, based on their responses:

- 96% of the teachers *Agreed* that **students acquired new skills** while on the trip.
- 87% of the teachers *Agreed* that **students learned about environmental issues**.
- 87% of the teachers *Agreed* that **students were highly engaged throughout the trip**.

Overnight Experiences are the second level of engagement in the UWCA program. Overnight experiences are designed to increase independence and exposure to outdoor activities, and at the same time, reduce fears and misconceptions. Two examples of student perspectives are:

“One highlight was when I caught a fish on the ice fishing trip because it was my first time catching a fish ever.”

“The team building and seeing the wildlife, like the eagles and a coyote.”

The evaluation findings also show that overnight and multi-day experiences foster deeper connections among peers and adults and may provide an important reconnection to school. The excerpts below are from a teacher who accompanied students on an overnight trip.

“I think the students really got to know each other well and got to know me better. I’ll never forget the bus ride home. I felt like there was almost peace or sadness because, I think out in the woods, they felt really amazing and confident, almost like they were in a team of winners. And I don’t think

they often feel that way. They felt really positive and they don’t always feel that way here in school.”

“I had one student who didn’t come to school at all one semester. Then we met with her and she joined my class. Her attendance was ok, it did improve, but not excellent. After the trip, she’s been at school almost every day which is huge. I really think attendance is why a lot of these students are failing. She’s one I saw huge improvements with. I think the class felt like a community to her after the trip. She belonged more.”

Teacher, Minneapolis Public Schools

Multi-Day Experiences are the UWCA program’s third level. It is hoped that as students pass from introductory and overnight experiences to multi-day experiences, they will solidify connections to nature and their interest in outdoor jobs and careers will grow.

The evaluation found that students’ initial concerns about weather, lack of water services, coming [too] close to wildlife (e.g., bears), and not getting along with their peers ultimately became some of the most memorable aspects of the trips. For example, a survey given to students after a trip found that the most common themes expressed were about connecting to nature (42%), making or strengthening friendships (30%), and enjoyment and having fun (30%)

When students were asked if they would attend additional trips through UWCA, 100% of the students responded, “yes.”

Growing connections with nature. Students were also asked to share what they valued about the experience afterwards.

“I learned that what we put in the earth is what we get out and so--by being a part of this outdoor experience I know how to treat my earth a little bit better than before.”

Student, Saint Paul

“Urban Wilderness Canoe Adventures has impacted my life by showing me a side of nature that I’ve never seen, and giving me the chance to enjoy the beauty of nature...I pay closer attention than I have before by picking up litter and watering dried trees, grass and other plants.”

Student, Saint Paul

Students also supplied several examples of new skills they had acquired and other things they learned about themselves. Below are some representative examples.

“The experiences I have had camping with my classmates and the Urban Wilderness Canoe Adventures gave me confidence and I was able to be myself.”

“(UWCA trips) helped me grow by having me be more open to myself and to others. For example, I took the lead in several group activities.”

“Three days of straight hiking-I now know that I can push myself through being tired, sore, and injuries.”

I gained the skills of knowing how to canoe and how to use a GPS.

“If you put your mind to something, you will reach it.”

“Hiking may become a new hobby of mine.”

“I learned more about my race and others and therefore myself. I am more open-minded because of it.” The last student commented on the group in general. The student said, “We are just all closer and I feel like I know them so much better.”

“I am physically stronger.”

“I will live in the moment more because of this trip.”

Internships and Jobs are a long term objective of UWCA. The goal is to encourage young people, who possess a diversity of skills and come from all backgrounds, to consider careers and work in environmental fields.

CAREI Evaluators conducted interviews with young people who were former participants. The objective of the interviews was to explore whether participation at all levels of the Pyramid of Engagement resulted in any long term effects on the individuals. *Building relationships, diversity, and program influences* were three recurrent themes of our interviews.

Interviewees discussed how their outdoor experiences helped them learn to lead and how to build relationships with others. Some excerpts from the interviews include,

“Leaders have to learn to be selfless. They consider their needs last. They eat last and they give their jackets up when someone’s cold. That’s how you need to be. If you have one piece of gum you split it in half.”

“My level of confidence is higher. For me, it was that I stopped seeing barriers. I can see other people’s barriers, and my own too, but you can take steps to address them.”

Former participant

Interviewees also spoke about the influence the program has had on them.

“I don’t think I’d be anywhere if I had not gained that independence from WI. I came to the program with some street skills, but the skill of figuring out how to think things through, until you can’t think it through anymore, is what WI is good at.”

“I’ve learned that I wanted to do something outdoors.”

The interviews with former participants underscored that important life skills (i.e., persistence, cooperation, planning, physical endurance, and problem-solving) are learned and practiced in the context of the wilderness setting.

Recommendations

Evaluation findings from 2012 point to numerous youth benefits derived from UWCA programming. We offer these six recommendations based on our findings from our evaluations as well as points revealed in the literature review for UWCA staff's consideration.

1. The literature review identified the need for all outdoor and wilderness programs to provide more detailed descriptions of their activities. We recommend that UWCA consider detailing field activities and educational objectives for two reasons (1) to explicitly state the goals and objectives of the activities and (2) to describe the activities with sufficient detail so that the relationship between participant outcomes and program elements can be understood.
2. We recommend that UWCA staff incorporate a version of the General Wilderness Program Assessment Instrument into the UWCA program for the purpose of collecting participant data over time. This 36-item multiple choice instrument was designed by CAREI evaluators to collect information about students' prior knowledge, attitudes, and experience (before a trip) and their attitudes, personal, social, and academic growth after a trip. We think these data would help inform UWCA programming in important ways.
3. We recommend that UWCA staff continue to incorporate some form of evaluation in programming for program improvement and to understand and document the impact of the program on its participants.
4. The literature review and student survey responses signal the critical role trip leaders play in student growth and the overall success of the program. This finding underscores the importance of training and developing trip leaders who must possess a variety of skills including safety, wilderness craft, youth development, interpersonal relations, and to a degree, teaching abilities. We recommend that UWCA devote the time and resources necessary to ensure they provide adequate and outstanding training to its trip leaders.
5. The evaluation findings found that teachers often provide little or no pre-trip or post-trip teaching as a means to extend the

environmental learning experience to promote further personal reflection. For example, Minneapolis Public Schools' summer session students and teachers reported that fewer than half the students studied the Mississippi River prior to participating on the field trip. Similarly, AVID teachers in Saint Paul Public Schools did not use available materials that were provided by the National Park Service staff or evaluators. We recommend that UWCA staff explore the barriers teachers encounter in incorporating enrichment materials into the regular classroom setting. For example, during one of our teacher interviews, a teacher stated, *"I'd like to see if students could use it [a trip] for credit. Having systems in place where trips are aligned with standards would be great too."* We recommend the exploration of how teachers might be supported to incorporate supporting materials. Would aligning lessons to national or state science standards or district goals promote curricular integration in classrooms?

6. We recommend that UWCA staff follow-up with participants who have had an ongoing relationship with the outdoors through UWCA programming. Research has shown that very few programs follow changes that occur among participants over extended periods of time. Since the impact of outdoor experiences is likely cumulative and may not be in evidence in the shorter term, these efforts may show important participant gains.

Urban Wilderness Canoe Adventures Evaluation Report

Program Overview

The Urban Wilderness Canoe Adventures (UWCA) Program provides a continuum of experiences for youth and families that are designed to engage participants in a lifelong relationship with the outdoors, encourage environmental awareness, and foster leadership development, according to UWCA staff. The goal of the UWCA is to:

- Cultivate an ethic of environmental stewardship in a new generation;
- Motivate participants to explore, learn about, and protect these special places;
- Empower participants to improve school performance; and,
- Create pathways to pursue deeper educational and career opportunities in the outdoors.

The UWCA seeks to fill a gap in the outdoor industry by reaching, engaging, and serving underserved, low and middle income urban youth and families. The UWCA is a partnership of committed organizations including Wilderness Inquiry, the National Park Service, Mississippi National River and Recreation Area, and the Mississippi River Fund. Together, these organizations set the standards for program safety, quality, and educational content.

Core Elements and Key Strategies

Core elements and key strategies of the program provide a range of engaging outdoor educational experiences that use an innovative classroom and fieldwork curriculum. The program is designed to forge a strong connection between youth and the natural environment. UWCA activities include:

- Introductory outdoor experiences (day trips on the Mississippi River in voyageur canoes and paddling events for the general public);
- Teacher professional development in an outdoor educational content that is tied to Minnesota graduation standards;
- Overnight and multi-day outdoor experiences for youth and families; and,
- An exploration of outdoor education activities, internships, and careers.

These progressively deeper exposures to the outdoors are intended to increase interest in the natural environment. It is hoped that by offering a series of engaging outdoor education experiences, youth will make personal discoveries that energize their learning and lead to improved academic outcomes. Interpersonal skills and teamwork are also important elements of the UWCA. Students working together in teams learn to value their own contributions and the contributions of others. Trips also provide an opportunity for youth to get to know their teachers and peers in different ways, which may in turn result in strengthening their bonds to school.

Urban Wilderness Canoe Adventures' Pyramid of Engagement

The UWCA framework is depicted in Figure 1, *The Pyramid of Engagement*. The figure describes the UWCA strategy of exposing thousands of youth to introductory outdoor experiences (base of pyramid). The outdoor experiences deepen as one travels up the levels of the pyramid. Ultimately, the program hopes to place young people in internship positions and have them consider pursuing further education and careers in environmental fields.

FIGURE 1. PYRAMID OF ENGAGEMENT



According to UWCA staff, the program served 22,412 youth and families on 351 events in Minnesota in 2011-2012. The UWCA also provides programming in communities throughout the United States, as a way to demonstrate the UWCA model and promote the Twin Cities program to national audiences.¹

The 2012 Program Evaluation

The 2012 UWCA evaluation was conducted by the Center for Applied Research and Educational Improvement (CAREI) at the University of Minnesota. The evaluation was designed to answer specific evaluation questions around changes in participants' attitudes and behaviors about the outdoors. The 2012 report is organized around the levels of the *Pyramid of Engagement* that include: Introductory Outdoor Experiences; Overnight Experiences and Multi-day Experiences; and, Internships and Jobs. In the section below, we revisit some of the findings from 2010 and 2011 evaluations and describe 2012 evaluation activities.

Looking Back to the 2010 and 2011 Evaluations

The Center for Applied Research and Educational Improvement began evaluating the UWCA in spring 2010. The main purpose of the 2010 evaluation was to assess the UWCA's impact on students' attitudes and behaviors, on teachers' perspectives and attitudes, and to provide staff and funders with specific

¹ These services currently make-up less than 10% of all UWCA program activities.

information about the benefits of participation in UWCA programming.

The 2010 and 2011 evaluation findings documented the program's reach, the populations it served, and the benefits derived from participation. For example, the Minneapolis Public Schools' summer program alone has involved over 4,000 students in outdoor activities over the last three years. Our findings showed that majority of the program participants come from traditionally underserved populations. These findings revealed that UWCA participants in Minneapolis were from ethnically-diverse families and that more than 80 percent were eligible for free or reduced lunch—an indicator of lower socio-economic status.

Surveys that we administered to students prior to the introductory trips indicated that many students had only limited knowledge of the Mississippi River. We also found that most students had very few personal experiences in the wilderness. And yet, student responses after the trip suggested that these initial interactions with the natural world, deepened students' interest in the environment, the sciences, and their desire to participate on future trips to the outdoors. The majority of teacher-participants in the 2010 evaluation reported that UWCA activities were both age and content appropriate and teachers stated that *they* were equally engaged by UWCA activities. The findings from the 2011 evaluation corroborated the findings from the 2010 evaluation.

Our earlier evaluations also highlighted the need for us to conduct a more extensive literature review related to outdoor and wilderness programming for middle school students and underscored the need for the evaluators to collect more information about the participant experience for the 2012 evaluation.

Research Activities Initiated Prior to the 2012 Evaluation

In winter 2011-2012, evaluators conducted a comprehensive review of literature on wilderness education programs. Over 50 peer-reviewed journal articles and research studies pertaining to outdoor adventure were examined. We reviewed the evaluation methods used to study outdoor programs, the effects of outdoor programming on participants, and the variables used to assess program effectiveness.

Summary of Major Findings of the Literature Review

The review identified program elements and participant characteristics that should be considered in evaluations of outdoor programs. The review found that children and adolescents benefit from participating in wilderness and outdoor experiences. It also found that outdoor adventure programs, such as the UWCA, affect participants across a wide variety of personal, social, and academic attributes. The literature also revealed that interpersonal skills such as cooperation and conflict resolution also improved and environmental attitudes and behaviors were positively impacted. Some studies revealed that the environmental awareness gained through wilderness experiences resulted in improving children's and adolescents' interest and mastery of science concepts. The following is a summary of major findings that we identified during the literature review.

Meta-analysis is an analytical approach that looks across multiple research studies to identify the most influential factors of a program approach. During the literature review, we found two meta-analysis studies that were especially useful as we considered the 2012 UWCA evaluation: Cason and Gillis's (1994) and Hattie, Marsh, Neill and Richards (1997). Cason and Gillis's (1994) meta-analysis examined 147 program effects among 11,238 adolescents in 43 studies. Hattie, Marsh, Neill and Richards' (1997) meta-analysis was based on 151 individual samples located within 96 studies published between 1968 and 1994. The Hattie analysis included 12,057 participants, between 11 years to 42 years of age.

Both studies found that adventure programming can have an effect on academic measures (i.e., grades, school attendance, and attitudes), motivation, self-concept, and interpersonal skills. Both meta-analyses, for example, showed that grades in math, reading, and overall GPA increased as a result of participating in outdoor programs. In follow-up studies, Hattie found that attributes of self-concept, such as independence and confidence were influenced positively even after program involvement ended. This result suggests that effects on self-concept may begin to develop during a program, but continue to increase after the program ends.

Cason and Gillis (1994) noted a wide variation of effect sizes in their study.² To explain the variations in effect size, the researchers speculated that important variables may have been hidden or overlooked in many evaluations. For example, they noted that leadership training and leadership styles were rarely discussed in study descriptions, so it was impossible to determine the extent to which leadership contributes to program outcomes. They also noted that program activities were rarely described in sufficient detail. The authors recommended that researchers and evaluators attempt to provide more descriptive details of program activities. More complete descriptions of program activities could increase the likelihood of identifying the factors that contribute most to the desired outcomes. These improvements might also make it possible to replicate successful programs.

Both meta-analyses also found that younger adolescents benefitted more from programming than did older adolescents and that programs of longer duration showed higher effects than programs of shorter duration (Cason & Gillis, 1994). For example, the meta-analyses studied the impact of programs that ranged from one day to ten months with a median program length of three weeks. Statistical analyses demonstrated that as the length of the program increased, the effects on participants became stronger. The analysis also found that studies that incorporated control groups and more rigorous measures of effectiveness tended to result in lower effects than studies using less rigorous research designs. Based on this finding, the authors concluded that studies having less empirical rigor were more likely to result in positive findings.

Hattie's meta-analysis identified many of the same program elements that influenced program outcomes. Their analysis also found that programs of longer duration usually produced higher effect sizes. Participant characteristics such as academic background, socio-economic status, and age also accounted for effect size variance. The Hattie analysis also found that the type of program influenced effect results. For example, higher effect sizes were noted for participants with behavioral and/or emotional problems enrolled in residential treatment centers. The authors attributed this difference to the intensity and duration (usually 30 days) of the outdoor educational component of their treatment.

Based on the two studies, we have identified seven important factors that UWCA program staff should consider for their programming and evaluation.

- Leadership training and leadership styles may impact program effects
- Expect younger participants to display greater effects
- Activity type (physically active, experiential, team building, etc.) influences participants' level of engagement
- Program characteristics (large group, one-on-one, intensity/risk level, setting type) influence program impact

² Effect size is an indicator of the power or contribution of a particular factor on a measureable outcome.

- Programs that last days will likely be more effective than programs that last hours
- Programs that promote independence, confidence, self-efficacy, and self-understanding may result in the most significant and lasting effects on participants
- Program outcomes are affected by participant characteristics (e.g., academic background, socioeconomic status, and age). These characteristics determine the extent of program success on any given participant

The literature review underscored what little research exists on the study of outdoor programs and its influence on levels of knowledge, attitudes, and beliefs about the environment (Gunderson, Barns, Hendricks & McAvoy, 2000). Although it is commonly believed among practitioners that wilderness education increases participants' awareness and appreciation of the wilderness, few studies have documented those beliefs.

The review also highlighted several important issues that should be considered when evaluating of outdoor programs. Outdoor program evaluations should strive to:

1. Track variables that relate to: (a) the type of activities; (b) the size of groups (and whether the evaluator is studying the group as a unit or studying separate individuals within the group); (c) the qualifications and characteristics of leaders; (d) descriptive qualitative data; and, e) regression data that can help predict who is more likely to be successful in adventure programming (Gillis, 1992).
2. Look at the long-term effects of wilderness programs.
3. Assess the extent to which program benefits persist beyond the immediate aftermath of activities—and if present, what those benefits might be (Neill & Richards, 1998).
4. Develop purposeful, multidimensional evaluation tools that use the best available psychometric techniques ((Neil, 2006).
5. Conduct systematic, rigorous studies that use standardized testing instruments. Too many evaluations rely only on end-of-the program evaluator constructed surveys (Hattie et al., 1997).

The information collected from literature review helped inform our approach the 2012 UWCA program evaluation. The survey and interview protocol we developed focused on assessing characteristics that mentioned in the meta-analyses. As a result, we designed instruments and methods that collect more information about program variables (Recommendation 1); long-term effects on outdoor programming on participants (Recommendation 2); program benefits beyond the immediate outcomes of the experience (Recommendation 3); and, to a lesser degree, the development and testing of a standardized testing instrument (Recommendation 4).

2012 Evaluation Activities

For the 2012 evaluation, CAREI staff collected data from 11 different sources of data. From surveying students participating in introductory outdoor experiences to extensive interviews with young adults who had participated in multi-day experiences, and who ultimately led those programs. We surveyed summer school teachers and interviewed teacher who led a winter camping trip for marginalized youth. We collected and analyzed the responses of more than 1,100 students, teachers, and youth leaders to prepare this report. In Figure 2, on the next page, we summarize all of the evaluation activities including the questions we attempted to answer, the sources we drew from, the methods we used, and the size of the data source. The Table organized evaluation activities around levels identified in the *Pyramid of Engagement* described in the Introduction.

FIGURE 2. SUMMARY OF ALL METHODS AND SOURCES

Research Question	Collection Method	Brief Description	Data Source	Sample Size
<u>PRIOR RESEARCH ACTIVITIES</u>				
How do outdoor programs impact participants and what variables affect those outcomes?	Literature Review	<i>Extensive examination of outdoor adventure programming literature</i>	Published research studies and articles	50+ documents
<u>INTRODUCTORY OUTDOOR EXPERIENCES</u>				
What are changes in student perceptions after an initial exposure such as the Mississippi River trip?	2012 Pre-/Post General Assessment for UWCA Trips	<i>Pre-Assessment: 24 multiple choice items, 4 open-ended response Post Assessment: 36 multiple choice items</i>	Minneapolis Summer School Students Grades 5-12	<i>Pre-Survey = 669 Students Post-Survey = 413 Students</i>
What is the impact of the Mississippi River trip on students?	2012 Post General Assessment for UWCA Trips	<i>36 multiple choice items</i>	Minneapolis Summer School Students Grades 5-12	<i>413 Students</i>
What are teachers' attitudes and perceptions related to a whole day experience like the Mississippi River trip?	2012 Post Trip Online Survey	<i>18 multiple choice items, 2 open-ended responses</i>	Minneapolis Public School Teachers/Staff	<i>22 Teachers</i>
What are AVID students' perceptions of the UWCA Speaker's Bureau?	AVID Post UWCA Speaker's Bureau Evaluation	<i>2 open-ended responses, 1 multiple choice item</i>	AVID Students	<i>39 Students</i>
<u>MULTI-DAY EXPERIENCES</u>				
What is the impact of UWCA overnight experiences on at-risk high school students?	Interview Protocol	<i>11 open-ended interview questions</i>	Washburn High School Teacher	<i>1 Teacher</i>
What is the impact of UWCA overnight experiences like the Baker Near Wilderness trip on AVID high school students?	AVID Pre and Post Trip Evaluation	<i>4 open-ended responses</i>	AVID Grade 11	<i>17 Students</i>
What is the impact of UWCA multi-day experiences, such as the Apostle Island trip, on AVID students?	AVID Trip Applications AVID Post Trip Evaluation	<i>2 open-ended responses 4 open-ended responses</i>	AVID Grade 11	<i>17 Students</i>
What is the impact of other UWCA multi-day experiences, including the 2012 Glacier National Park trip, on AVID students?	AVID Trip Applications Interview Protocol AVID Yearend Student Survey	<i>2 open-ended responses 7 open-ended interview questions 20 multiple choice items, 8 open-ended responses</i>	AVID Grade 11 AVID Grades 7-12	<i>15 Students 12 Students 479 Students</i>
<u>INTERNSHIPS & JOBS</u>				
What are important characteristics of WI programs and how does programming impact youth who participate overtime?	Interview Protocol	<i>7 open-ended interview questions</i>	Wilderness Inquiry Former youth participants	<i>3 Former youth participants</i>

Introductory Outdoor Experiences

Introductory experiences are the point of entry for most young people in the UWCA program. The experiences vary in length, but usually last about six hours. The goal of the introductory experiences is to expose a large number of students to the outdoors. In most instances, this first exposure is a trip in a voyager canoe down a segment of the Mississippi National River and Recreation Area.

Minneapolis Public Schools, Summer Session

Our evaluation of the introductory outdoor experiences focused primarily on students who were enrolled in Minneapolis Public School's summer program and to a lesser extent on some activities in Saint Paul Public Schools, AVID program. The majority of Minneapolis students who participated in the day-long UWCA Mississippi River trips were in grades 5-8. About 30 teachers and other school staff accompanied students on those trips.

This introductory river experience took place in the heart of the Twin Cities at the Mississippi National River and Recreation Area. The Mississippi National River and Recreation Area is an "urban wilderness" corridor providing the opportunity to experience nature in an urban setting. Canoeing beneath limestone bluffs, beaches, and cottonwood trees, the river is a habitat for hundreds of species of birds, fish, endangered mussels, and river otters. UWCA trip leaders facilitated the six-hour Mississippi trip for the summer school students, teachers, and staff. Groups paddled in 24-foot voyageur canoes past landmarks like Fort Snelling, as well as ruins of the fur trade and the milling industry.³

Methods and Instruments

General Assessment Survey for UWCA trips

Evaluators used the knowledge collected from the literature review to develop the UWCA General Assessment Survey.

The survey was designed to assess how students perceived this introductory experience and determine whether changes in attitudes and perceptions occurred after the trips. The survey was made up of four sections: 1) *Views on the Urban Wilderness Canoe Adventures Trip*; 2) *Personal Views*; 3) *Outdoor Experiences*; and, 4) *Demographic Questions*. Four additional open-ended questions on the pre-survey were used to collect data on the prior knowledge, attitudes, and environmental interests of the trip participants. Participants were asked to complete the UWCA General Assessment Survey during the first week of the summer session and soon after the trip.

The *Views on the Urban Wilderness Canoe Adventures Trip* section asked students to respond to 15 items related to their trip experience using a four-point scale (*Strongly Disagree to Strongly Agree*). The items sampled outcome effects associated with environmental attitudes and concerns, school engagement (specifically in Science), and social and personal growth. Other items solicited responses to general impressions of the trip and its impact on participants. For example, one question asked students to rate the likelihood of doing more outside activities as a result of trip participation. Based on the literature review, the survey also asked participants to answer three items about trip leaders.

The *Personal Views* section was used to determine whether personal perceptions were influenced or changed as a result of an Urban Wilderness Canoe Adventures trip using the same four-point scale.

³ Weather conditions forced trip leaders to use an alternate trip comprised of spending the day on the chain of lakes in Minneapolis in a few cases.

Students reported their views on environmental issues, connections, and concerns, understanding of self, personal school behaviors, and how well they worked with others.

The third section of the survey, *Outdoor Experiences*, asked students to share their previous participation in other outdoor experiences that were not related to Urban Wilderness Canoe Adventures. The *Demographic* section asked students to supply basic background information such as grade level, gender, ethnicity, and about prior UWCA experiences.

Minneapolis Summer School Online Teacher Survey

During the summer of 2012 an online survey was also developed for and administered to Minneapolis summer school teachers and staff who accompanied students on the river trip. The purpose of the survey was to collect teachers' perspectives, attitudes, and observations on this introductory outdoor experience and the trip's perceived effect on students.

The survey was comprised of three sections, which asked teachers to rate items on a six-point scale (*Strongly Disagree to Strongly Agree*). The first section focused on general trip perceptions. Statements ranged from attitudes about on UWCA trip leaders to the degree in which students learned about environmental issues. The second section concentrated on teacher beliefs regarding how students benefitted from the UWCA Mississippi trip. Teachers rated student engagement during the experience, the trip's academic contribution, and the overall value of such an event for students. The third section emphasized teacher attitudes towards the trip as it related to student learning. For example, teachers were asked to what degree the trip influenced environmental awareness and interest in science subject matter among the students.

The teacher survey also included two open-ended questions. The first question asked teachers what surprised them the most about the introductory river experience. The second question asked teachers to identify the greatest benefit that the UWCA Mississippi trip offered students.

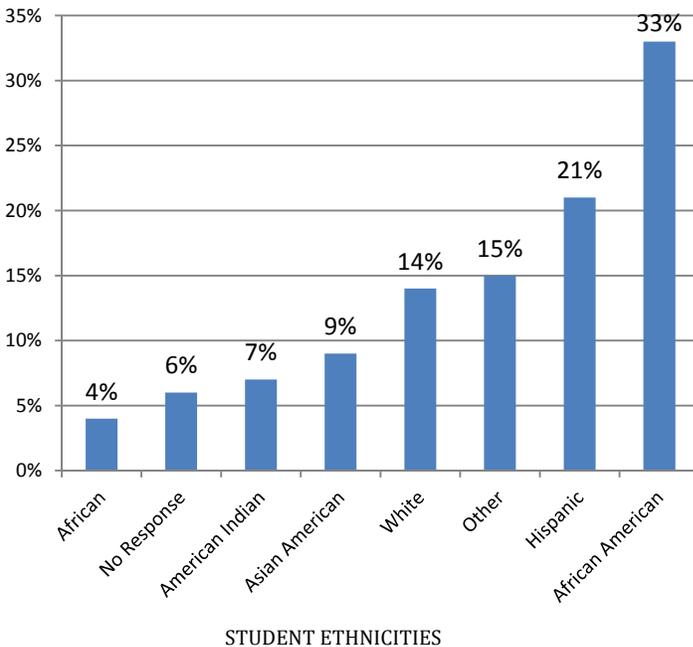
The online teacher survey was administered to teachers in early August during the last week of summer school. Twenty-two of the thirty staff who accompanied the students on these introductory outdoor experiences completed the survey (73%).

Mississippi River Survey Results

Student Demographics

Six-hundred and sixty-nine summer school students completed the General Assessment for UWCA Trips prior to the trip. Demographic information on the students was gathered through the survey. Figure 3 displays ethnicity information on the sample.

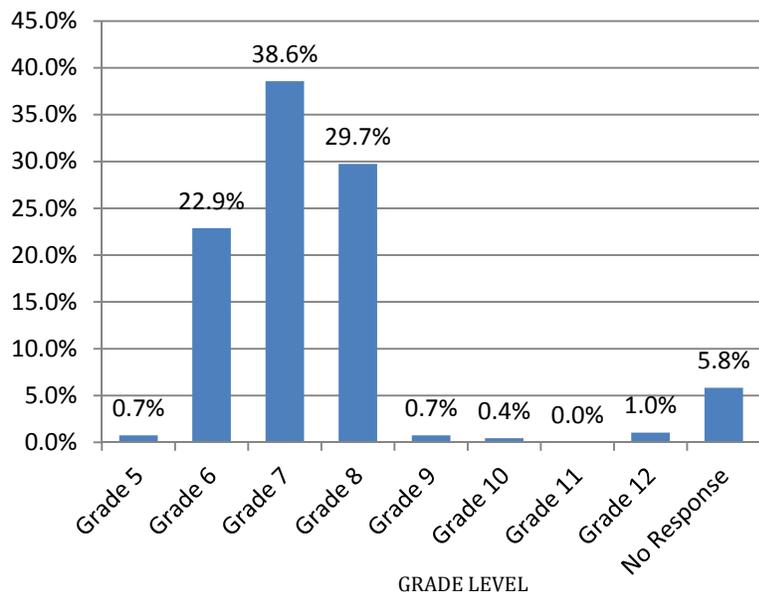
FIGURE 3. ETHNICITY OF MINNEAPOLIS SUMMER SCHOOL STUDENTS WHO COMPLETED THE UWCA MISSISSIPPI RIVER TRIP PRE-SURVEY (N = 669)



Approximately 33% of the students were African American, 21% Hispanic, and 14% white. Fifteen percent (15%) of the students responding identified their ethnicity as *Other*. Students were asked to record their ethnicity on a blank line if they checked the “other” category. Most of the students recorded biracial or multi-racial combinations so the total number of responses exceeds 100%.

Based on student responses, 91% of the students who went on the trip were in grades 6, 7, or 8, however, a small percentage of students were enrolled in grades 5 through 12. Figure 4 shows the distribution of students by grade level.

FIGURE 4. GRADE LEVEL DISTRIBUTION OF MINNEAPOLIS SUMMER SCHOOL STUDENTS WHO COMPLETED THE UWCA MISSISSIPPI RIVER TRIP PRE-SURVEY (N = 669)



The gender profile of the students who completed the survey was 51% female and 49% male.

Outdoor Experiences

Students were asked on the pre-survey about any previous outdoor experiences not related to UWCA. These questions were included to assess involvement with family or friends in prior outdoor-related activities. Figure 5 shows the results of this section of the survey.

FIGURE 5. OUTDOOR EXPERIENCES PRIOR TO THE UWCA SUMMER SCHOOL MISSISSIPPI TRIP (N = 669)

How often have you ...	NEVER	1 or 2 TIMES IN MY LIFE	3 to 5 TIMES IN MY LIFE	6 OR MORE TIMES
Visited a STATE or NATIONAL Park.	25%	32%	19%	24%
Visited the Mississippi River (swimming, boating, fishing, camped)	31%	26%	20%	22%
Camped at a campground.	36%	27%	15%	19%
Canoed, fished, or played other water sports.	15%	20%	21%	44%
Biked or hiked on a trail.	20%	23%	17%	40%

The most notable result of this survey section was the number of students who had not previously participated in any listed outdoor experience. Approximately one-third (36%) of the 669 students had never been camping at a campground. Thirty-one percent of the students had no prior experience related to the Mississippi River. One-quarter of the 669 students had never visited a state or national park. Similar percentages were identified in the second column that asked students if they had experienced 1-2 activities in their lives with each of the listed activities. The findings indicated that over 50% of the students had only limited experiences with parks, the Mississippi River, and camping.

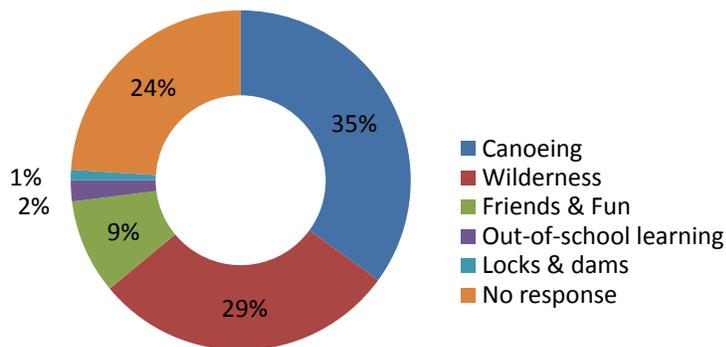
Pre-Trip Views on the UWCA Trip

Students were asked four open-ended questions on the pre-trip questionnaire. The qualitative responses were recorded in an Excel file and coded for common themes. The responses that emerged are reported by question.

What are you most excited about canoeing on the Mississippi?

The first question asked, “What are you most excited about canoeing on the Mississippi?” The highest number of responses (35%) related to some aspect of canoeing. For example, some responses just said “canoeing” while others elaborated that they “wanted to learn to canoe” or “it will be my first time canoeing.” About 29% of the student responses were categorized under “Wilderness.” These responses pertained to nature, animals, or the river itself. Students commented on “seeing loons,” “seeing wildlife and the river,” “seeing different fish,” or “seeing the Mississippi for the first time.” Nine percent of the students mentioned that they were excited about being with “Friends” and “Having Fun.” Two percent of students wrote responses that we classified as “Out-of-school learning.” For example, one student commented, “experience new things and see new things” while another student said, “learning outside of school.” Finally, about one-percent of the students identified an interest in the locks and dams on the River. For example, one student said, “Finding new things and going to the lock and dam” while another student wrote, “The locks. I want to go down the falls.”

FIGURE 6. WHAT ARE YOU MOST EXCITED ABOUT CANOEING THE MISSISSIPPI?



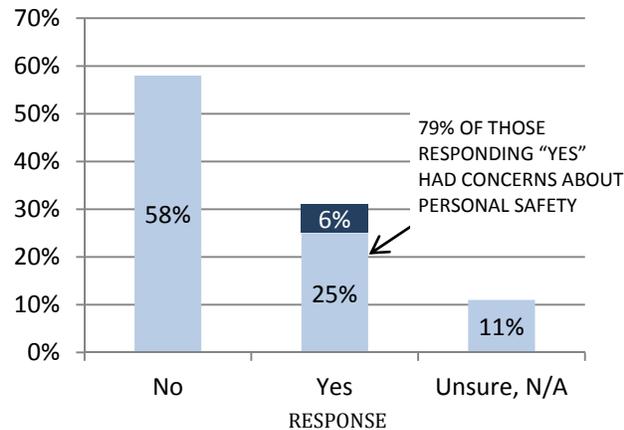
What are two things that you hope to learn from the Mississippi River trip?

The second question asked students “What are two things that you hope to learn from the Mississippi River trip?” Responses varied for this question. Most answers (25%) pertained to learning to canoe. Other students (10%) were interested in learning more about animals. A typical response in this category was, “What kind of animals live near the Mississippi?” Some students (6%) wanted to know more about the “origin” of the River. For example, students asked “What is the history of the Mississippi?” or “How was the River formed?” A few students (5%) wanted to learn more about “the fish” in the River. A common question in this category was “How many different types of fish are in the Mississippi?” A smaller percentage of students, about 3%, expressed concerns related to being safe on the trip. For example, one student wrote, “How do you help people when they tip the canoe over?” while another said, “Are there fish that eat people?”

Do you have any concerns about canoeing on the Mississippi River?

The third question asked if students had any concerns about canoeing on the Mississippi River. And, if they did, what those concerns were. Fifty-eight percent (58%) reported they had no concerns. Thirty-one percent of the students (31%) indicated that they did have some concerns. Of those students who reported they had concerns, 79% related to health and personal safety. Most of the comments related to drowning, falling out of the canoe, and not being able to swim. About 11% of the students did not respond to the question or said they were unsure if they had concerns.

FIGURE 7. DO YOU HAVE ANY CONCERNS ABOUT CANOEING ON THE MISSISSIPPI RIVER? IF SO, WHAT?



The thing I care most about the environment is...

The final open-ended question asked students to discuss environmental concerns. About one fifth of student responses (19%) related to pollution concerns. Responses for this category ranged from "keeping the water clean" to "keeping it healthy to live around" and "stopping pollution." Fourteen percent of students identified the preservation of habitat as a primary concern. For example, one student wrote, "the trees getting cut down and then the animals have nowhere to live." Another student responded, "Helping animals and their habitats." About 13% of the concerns related to "Personal Action." These answers mainly addressed the need to "stop littering" and to "recycle." Twelve percent of students wrote about "Animal Protection." Common responses were "keeping animals safe," "protecting animals," and "people killing animals." Finally, ten percent of students wrote about preserving the environment. For example, one student commented "taking care of the earth" while another student wrote, "Making sure animals don't go extinct."

Personal Views

The Personal Views category of statements was incorporated in both the pre and post survey. This section was designed to determine if personal perceptions were influenced or changed as a result of the UWCA Mississippi River trip. Students rated their views on environmental issues, understanding of self, personal school behaviors, and how well they work with others on a four-point scale (*Strongly Disagree* (1) to *Strongly Agree* (4)). These items were included in the surveys based on literature findings that indicated personal growth and environmental awareness can be impacted by outdoor adventure programs. Figure 8 presents the mean ratings by students prior to the trip and after the trip for each of the statements (For example, a rating of 3.0 means that the mean response is *Agree*. For example, a mean response of 3.5 is halfway between *Agree* and *Strongly Agree*).

FIGURE 8. PRE AND POST PERSONAL VIEWS' AVERAGE OR MEAN SURVEY RESPONSES BY STATEMENTS
(PRE N = 669, POST N = 413)

	PRE-TRIP AVERAGE	POST-TRIP AVERAGE
1. I am interested in environmental issues.	3.08	2.93
2. I enjoy spending time in nature (parks, wilderness areas, camping).	3.25	3.21
3. I have many opportunities to visit parks and other natural settings.	3.03	3.03
4. I would do more activities outside if I could.	3.19	3.17
5. My friends like the outdoors.	3.08	3.09
6. I get good grades in Science at school.	2.93	2.99
7. My family and I do outdoor activities together.	2.83	2.93
8. I think I have a role to play in protecting the environment.	2.91	3.03
9. It is important for me to get good grades.	3.56	3.48
10. When I am in school I feel like I belong.	3.09	3.07
11. I am not concerned about the environment.	2.75	2.62
12. I feel that I have a number of good qualities.	3.16	3.13
13. The thought of being in the wilderness is frightening to me.	2.80	2.26
14. When I make plans, I am certain I can make them work.	3.06	3.07
15. I work well in groups.	3.26	3.21

A *t*-test statistical comparison was performed to compare pre-trip and post-trip ratings for significant differences among personal views. The mean rating (scale = 1-4) for the statements prior to the trip was 3.06. The mean (scale 1-4) for the post trip statements was 3.01. The *t*-test revealed no statistically significant differences in pre and post personal views with a $t(df = 1080) = 1.96, p = .05$.

The literature on outdoor adventure programs suggests a number of reasons that personal views may not have changed as a result of the Mississippi River trip. First, research indicates that wilderness programs of longer duration have a greater impact on participants' personal, social and academic development. The Mississippi River trip was conducted in one day, less than eight hours of outdoor activity. Second, the intensity of the program, which includes types of activities, their risk level, and the program setting, influence effects on participants. The Mississippi River trip was designed to give students the opportunity to experience nature in a metropolitan area. The trip provided historical and environmental information about the river itself. The trip was not designed for high intensity activity that aimed at promoting significant personal change. Finally, although personal views did not show a significant change, perceptions of the trip (as noted in the next section) remained positive and showed that students gained environmental awareness and a greater interest in exploring future outdoor activities.

Post-Trip Views on the UWCA Mississippi River Trip

Four hundred-thirteen of the 669 students (62%) completed the post-trip survey. The first section of the post-trip survey consisted of 21 statements that sampled students' general impressions related to the trip. Students were asked to rate the trip's outcome effects associated with environmental attitudes and concerns, school engagement (specifically related to science), and social and personal growth on a 1-4 scale (*Strongly Disagree to Strongly Agree*). Other items asked students to rate the likelihood of their doing more outside activities as a result of participation. Additional statements asked students to assess trip activities, group dynamics, and trip leaders. Figure 9 presents the findings for this section of the survey.

FIGURE 9. STUDENT VIEWS ON THE UWCA MISSISSIPPI RIVER TRIP (N = 413)

	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE
1. I am more interested in the Mississippi River because of this trip.	8%	15%	50%	27%
2. Because of this trip, I would canoe on the Mississippi again.	8%	16%	43%	33%
3. I am more interested in science because of this trip.	14%	34%	37%	15%
4. We studied about the Mississippi River before coming on this trip.	19%	31%	36%	14%
5. I would like to do more outside activities.	6%	12%	43%	39%
6. My friends like the outdoors.	6%	13%	47%	34%
7. My teachers prepared me for what would happen on this trip.	7%	15%	47%	31%
8. The trip leaders were friendly to all students.	4%	5%	32%	59%
9. The trip leaders were knowledgeable.	4%	5%	47%	44%
10. I learned safety procedures for the trip.	4%	10%	44%	42%
11. Because of the trip, I know what I can do to protect the environment.	5%	13%	46%	36%
12. I learned new skills (paddling, water safety, setting up camp, reading maps, use of equipment and tools) on the trip.	9%	20%	37%	34%
13. On the trip, I learned about environmental issues that affect the River.	5%	11%	47%	37%
14. During the trip, I worked with others as a team.	7%	5%	43%	45%
15. On the trip, I had opportunities to participate in small groups.	7%	9%	52%	32%
16. Because of the trip, I feel closer to others—even people who weren't my friends.	10%	23%	45%	22%
17. On this trip I was challenged to try new things that were unfamiliar to me.	8%	17%	46%	29%
18. Trip leaders handled trip conflicts appropriately.	5%	9%	51%	35%
19. I am more interested in science because of this trip.	14%	27%	41%	18%
20. I would like to do more outside activities.	6%	10%	46%	38%
21. My friends like the outdoors.	6%	11%	51%	32%

Student views on the trip were overall very positive. More than 70% of the 413 students either *Agreed* or *Strongly Agreed* with 17 of the 21 statements. The highest ratings pertained to trip leaders. Ninety-one percent of students *Agreed* or *Strongly Agreed* that the “trip leaders were friendly to all students” and that “the trip leaders were knowledgeable.” And 86% of the students *Agreed* or *Strongly Agreed* that “the trip leaders handled conflict appropriately.” Participants also reported that they had “learned safety procedures for the trip.”

High ratings were also noted with survey items #14 and #15. Eighty-eight percent of students *Agreed* or *Strongly Agreed* that they “worked with others as a team” and 84% indicated that they “had opportunities to participate in small groups” on the trip. Additionally, 84% of the students *Agreed* that that “they learned about environmental issues that affect the River” while 82% learned “what I can do to protect the environment.” More than 70% of the students agreed that as a result of the trip, they:

- would canoe on the Mississippi again;
- had learned new skills; and,
- were challenged to try new things that were unfamiliar.

Finally, 77% of the students expressed more interest in the Mississippi River and indicated that they would like to go on similar trips in the future.

The lowest ratings of the survey were for survey items #3 and #4. These items asked students whether their interest in science had improved because of the trip, and if they had studied about the Mississippi River prior to coming on the trip. In both instances, more than half the students disagreed with the items. This suggests that attitudes toward science were not substantially affected by the trip. Responses to item #4 revealed that fewer than half the students had studied the Mississippi River prior to taking the trip.

Minneapolis Summer School Online Teacher Survey Results

Teachers and staff members who participated in the Mississippi River trip with their students were asked to complete an online survey during the last week of summer school. Twenty-two of the 30 teachers and staff members (76%) completed the survey. When asked the number of times they had “canoeed” prior to the River trip, 73% had canoeed more than six times. Eighty-six percent said that the weather on the day of the River trip was either “somewhat pleasant” or “very pleasant.” Many of the respondents were teachers at Barton Public School. Other teachers who completed the survey taught at Andersen, Nellie Stone Johnson, and the Hmong International Academy during the summer session.

River Trip Evaluation

The first section of the survey asked teachers/staff to rate on a scale of 1-6 (*Strongly Disagree* to *Strongly Agree*) statements related to the trip itself. The figure below provides the results of this section.

FIGURE 10. RIVER TRIP EVALUATION (N = 22)

	STRONGLY DISAGREE	DISAGREE	SLIGHTLY DISAGREE	SLIGHTLY AGREE	AGREE	STRONGLY AGREE
1. My class studied about the Mississippi River before going on the river trip.	19%	19%	0%	33%	24%	5%
2. The students learned a lot about environmental issues on the trip.	0%	9%	4%	41%	32%	14%
3. The students learned new skills on the trip.	0%	0%	4%	27%	32%	37%
4. The trip leaders were friendly to all students.	0%	0%	0%	4%	28%	68%
5. The trip leaders were knowledgeable.	0%	0%	0%	0%	36%	64%

In general, teachers rated the overall trip experience positively. Ninety-six percent of the teachers *Agreed* that students acquired new skills while on the trip. Eighty-seven percent of the teachers *Agreed* that students learned about environmental issues. Twenty-two teachers said they observed UWCA trip leaders as both friendly and knowledgeable, with strong agreement that trip leaders demonstrated these two attributes (64% and 68% respectively). The lowest rating was seen on survey item #1, which asked teachers whether their students had studied the Mississippi River in class prior to the trip. Twelve of the 22 teachers (62%) indicated that the river had been a class topic before the trip.

Students and the River Trip

This section of the survey asked teachers and staff to rate statements that pertained to their students and the River trip. Figure 11 summarizes the results of this information.

FIGURE 11. STUDENTS AND THE RIVER TRIP (N = 22)

	STRONGLY DISAGREE	DISAGREE	SLIGHTLY DISAGREE	SLIGHTLY AGREE	AGREE	STRONGLY AGREE
1. Overall I think the river trip was a valuable experience for the students.	0%	4%	0%	4%	42%	50%
2. I believe that the river trip was age appropriate for grades 5-8.	0%	0%	0%	4%	32%	64%
3. I believe that students with fewer outdoor experiences especially benefitted from the river trip.	0%	0%	4%	9%	14%	73%
4. I believe that students had fun on the trip.	0%	0%	4%	4%	28%	64%
5. After the trip, students talked about the river experience in class.	0%	5%	5%	24%	33%	33%
6. My students exhibited a high level of engagement on the trip (i.e., paid attention, respected others, participated enthusiastically).	4%	0%	9%	18%	46%	23%
7. I believe my students benefitted academically from going on the river trip.	0%	4%	4%	23%	37%	32%

Overall, teachers were positive about the Mississippi River trip and its impact on students. Most teachers believed that students were engaged and learning during the experience. Ninety-two percent of the teachers *Agreed* or *Strongly Agreed* that the river trip was a valuable experience for the students. Fifty percent *Strongly Agreed* with this statement. All 22 teachers believed that the trip experience was age appropriate for fifth through eighth graders. Sixteen teachers (73%) *Strongly Agreed* that students with fewer outdoor experiences especially benefitted from the river trip. Approximately 87% of the teachers *Agreed* that students were highly engaged throughout the trip. Additionally, teacher responses showed that the trip benefitted students academically with 92% of the teachers agreeing that the experience supported academic learning.

Attitudes Related to the River Trip

Section three of the survey asked teachers to rate attitudinal results of the introductory outdoor experience. Statements either pertained to teacher or student attitudes. 20 of 22 teachers (92%) agreed that, as a result of the trip, students would be more interested in science. Ninety-six percent of the teachers responded that students would have more positive attitudes towards the environment based on the Mississippi River experience. The same number of teachers also indicated that they were glad that they participated with the River trip. Additionally, approximately 87% of the teachers believed that an outcome of the trip was a deeper engagement of learning among students. These data are summarized below in Figure 12.

FIGURE 12. ATTITUDES RELATED TO THE RIVER TRIP (N = 22)

	STRONGLY DISAGREE	DISAGREE	SLIGHTLY DISAGREE	SLIGHTLY AGREE	AGREE	STRONGLY AGREE
1. As a result of the trip, I think my students will be more interested in science.	0%	4%	4%	33%	55%	4%
2. As a result of the trip, I believe students will have more positive attitudes about the environment.	0%	4%	0%	32%	50%	14%
3. I am glad that I participated on the river trip.	0%	4%	0%	9%	23%	64%
4. The river trip was the highlight of my summer teaching experience.	0%	14%	14%	14%	29%	29%
5. I am more likely to teach summer school next year because of the river trip.	0%	19%	9%	29%	10%	33%
6. I believe that one outcome of the river trip was a deeper engagement in learning.	4%	0%	9%	32%	28%	27%

What surprised me the most...

Teachers and staff were asked to complete two open-ended statements on the survey. The first statement asked them “What surprised me the most about the River trip was.....” Eighteen teachers responded to the item. Their responses were analyzed qualitatively which consisted of coding and clustering responses into common themes. Teachers’ responses fell into four categories:

- Nature and the Environment;
- Student Interactions;
- Student Challenges; and,
- Trip Characteristics.

Five teachers responded with trip observations of nature and the environment. For example, one teacher completed the statement with “the existence of outdoor adventure venues in the city” while another teacher noted “the bluffs and how secluded we were in nature.” Two teachers commented on learning about “the Mississippi” and “the connections of Lake Calhoun, Lake Harriett and the secret beach.” The last teacher wrote about “the coolness of the river on such a hot day....” Other teachers commented on student interactions and group dynamics on the trip. One of these teachers wrote, “It really brought students together. They had been bickering in the canoe but after a while spontaneously began to work as a team to paddle faster and they were laughing a lot.” Another teacher commented, “How well the students cooperated in the canoes. They really had to work together to make it work, and every team did a great job.” Still another noted, “How well the students from grades 5-8 worked together.”

Some teachers wrote about specific challenges that their students faced both before and during the trip. A challenge before the trip was expressed by one teacher who said, “I was surprised by how many students did not want to attend because of the fear of water or the river.” A variety of challenges were identified during the trip. For example, one teacher wrote “how hard it was to canoe” while another one said, “Students were not offered much water or methods of cooling themselves until after they arrived at the destination.” Still another teacher noted, “The reluctance of some of my older students to paddle their own canoe.”

A few teachers mentioned specific trip characteristics as a major surprise. One said, “How well planned it (the trip) was and how students were taught to canoe.” Another commented on the UWCA staff and wrote, “How well organized the WI staff was for all our groups.” Three teachers mentioned that they were not able to go on the Mississippi because “the river was too high.” They participated in an alternative trip on a chain of lakes around and within Minneapolis. One of these teachers commented, “We were not on the river.....still a good trip though. Good plan B.”

Greatest Benefit to Students

Teachers were also asked to complete the statement, “I believe that the greatest benefit to students that a trip like this offers is.....” Nineteen teachers completed the statement with comments. As with previous sections, responses were analyzed qualitatively and coded into categories. We identified four data clusters:

- Learning about Nature and the Environment;
- New Experiences for Students;
- Connections to Academic Learning; and,
- Social and Personal Benefits.

Seven of the 19 teachers wrote that the trip’s greatest benefit to students related to learning about nature and the environment. For example, one teacher said, “We got an education about the lakes, access to the lakes, the impact of lakes on Minneapolis, and the impact of people on the lakes.”

One teacher commented, “Students learned that the ecosystem is right in their backyard. They learned the importance of keeping the water clean.” Two teachers mentioned that “interacting with nature” and “a chance to experience nature” were beneficial to students. Finally, one teacher wrote, “an opportunity to really engage in hands-on learning and something physical in nature...as well as learning about wildlife in its natural environment.”

Some teachers commented that the trip allowed students new experiences. For example, one teacher wrote, "(the trip) gave them a new experience that they may never have." Another teacher said, "The opportunity to engage with the river in ways that most families will not be able to do on their own." Two teachers wrote that the trip allowed students to experience "something important in their own backyards." For example, one teacher commented that students benefitted by learning, "There are many outdoor learning opportunities available right in our own city." Another teacher commented, "The experience they get interacting with real outdoors, and the learning of the existence of outdoor recreational facilities or venues in their proximity in the city."

Teachers noted that the river experience was connected to the academic learning conducted in their classrooms. For example, one teacher wrote, "The trip fit with our teaching theme of aquatic ecosystems and the netting was the closest connection to studying organisms." Another teacher stated, "(the trip) was a chance to put classroom learning into real life context." One teacher wrote about possible future river trips and connections that can be made to school. The teacher said, "I would love to take students to the beginning of the river and come down to the cities over time. I think using the river as a way of educating students would be great for the summer school program."

Other teachers wrote about the personal and social benefits that students gained from the trip. One teacher said, "Experience in the outdoors and an opportunity for community building. It was really nice to have it in the beginning of summer school." Another teacher commented that self-development was an important component of the trip. She commented, "(the trip) was a chance to reach a part of them that is outside their comfort zone."

Speaker's Bureau in Saint Paul Public Schools

The Urban Wilderness Canoe Adventures Speakers Bureau is another UWCA activity to introduce youth to outdoor experiences and knowledge. The Speaker's Bureau focuses on introducing youth to outdoor careers. Students read excerpts from the text "*Black and Brown Faces in America's Wild Places*," by Dudley Edmondson to learn about different jobs in the outdoors. Park Ranger Mary Blitzer presents primarily about positions in the National Park Service and how students can prepare themselves for these types of jobs.

Fifteen AVID attended a Speaker's Bureau presentation in February 2012. This session mostly addressed learning about geography, map reading, and nature. Another group of 24 AVID students attended a Speaker's Bureau presentation in March 2012. This session focused on information about National Parks and jobs related to them.

After the presentations, students were questioned about the usefulness of the information, how the presentation might be improved, and to rate the presentation in general. Thirteen of the students (87%) rated the session as *Good* (9) or *Very Good* (4). Six of the 15 students in the February session found the information on maps most useful. Four students rated the history information as being useful. When asked how the session could be improved, nine students suggested having other rangers speak.

The students in the March session on National Parks found the information on places and animals most useful (nine out of 17 responses). Eight out of 12 students said that they "would go on trails or camp or hike." When asked how the session could be improved only seven students responded. Four students said that the students "could be more focused." Three students wanted "more focus on trade." When asked to rate the session, eighteen of the respondents (78%) rated the session as *Fantastic* (8) or *Very Good* (10).

Overnight Experiences

Overnight experiences are the second level of engagement in the UWCA program. At this level, activities are designed to increase independence and exposure to outdoor activities, and at the same time, reduce fears and misconceptions. In 2012, the UWCA served 153 youth on six overnight experiences.

Teacher Interview

During May of 2012 an evaluator interviewed a teacher at Washburn High School who had accompanied a group of students on a UWCA camping trip. The teacher works with the TRIO College Access Program at the school. She teaches at-risk senior level students who have difficulties succeeding in the high school environment. Most of her students will not graduate this year with other seniors. Their challenges ranged from poor achievement, lack of school engagement, to school absences.

During the winter of 2012 eight of her students participated in the UWCA Baker Winter Overnight trip. She accompanied them on the trip as a teacher chaperone. The group left on a Friday afternoon and returned from the trip on Sunday. The interview with their teacher describes what the students did on the trip and what they learned from it.

Methods and Instruments

Interview Protocol

The purpose of the interview was to explore the impact of a UWCA trip on at-risk adolescents. The evaluators developed an interview protocol that consisted of questions related to trip activities, UWCA facilitators and their role, and observations that the teacher had on the impact the trip had on her students.

The teacher interview lasted about 90 minutes. It was conducted in a classroom at Washburn High School. The interview was tape-recorded for accuracy and completeness. The teacher provided a rich, detailed description of the UWCA Baker Winter trip and how at-risk students benefitted from the experience. Responses to questions were transcribed and provided below.

Minneapolis Public School Teacher Interview Transcript

1. Can you describe the trip for me?

There were no showers or electricity. Not having showers was traumatic for the students! We did a host of amazing activities. We tapped for maple syrup, did star gazing, and took hikes. The students made all their own meals, if the girls made a meal, the boys cleaned up. We had an equal number of boys and girls so it was amazing that way. We did team building and did a survivor challenge where students had to make a fire and build a shelter. It was busy but we also had a lot of time to relax and chat with each other and chat with the leaders.

2. Some of the literature on outdoor experiences suggests that students who attend outdoor trips gain increased self-esteem, independence and confidence. Did you observe students displaying/growing with these characteristics? If so, have they continued to grow after the trip?

Definitely. It's actually a really amazing group. It's actually confusing to me that they are not on track because I think they can be really motivated. They were very independent and got a long very well on the trip. No discipline problems. It was an environment that gave them a lot of independence and I think they improved on their responsibility. And also when they came back it

was something they were really proud of. They talked with other students in class about their experience. It was a really positive thing for them. They almost felt like a club when they got back.

3. From your perspective, what is the value-added (what do students gain) by participating on a trip like this?

I think the students really got to know each other well and got to know me better. I'll never forget the bus ride home. I felt like there was almost peace or sadness because, I think out in the woods, they felt really amazing and confident, almost like they were in a team of winners. And I don't think they often feel that way. They felt really positive and they don't often feel that way here in school. It's just really hard. They are not on track so senior responsibilities don't really apply to them in a sense. They might not be able to walk (graduation) or even attend the ceremony. So I think the trip gave them something positive, boosted their confidence and definitely made my class better. They felt like they knew me better.

4. Tell me about the trip leaders. What did they do with the students? How did they interact with them? What did the students learn from them (connections to the environment, environmental awareness about issues/concerns)?

There were facilitators who did the survival activities and we had a really, really amazing guide. He did a good job with teaching but also gave the students the time to do things without much guidance. He really let them take the lead on making their shelter. The facilitators from Urban Wilderness Canoe Adventures read our group really well. They gave them freedom because they deserved it—they didn't complain. They loved the star gazing; they loved laying out on the tarps. The facilitators talked to them about how big the universe was. The facilitators were flexible and let them go star gazing 2 nights since the students loved it so much. We also had a facilitator who was really great at using down time to get to know the students. She played games a lot with them, played spoons with them, and she always had some trivia questions for them. The students wanted to hang out with the adults which was really nice.

Our male leader did a really good job with the boys initiating and making dinner a positive thing. The leaders gave the students independence, didn't make them feel like kids. I think they treated them with respect.

5. What did the students say that they enjoyed the most? How did they benefit?

One of the leaders told a ghost story, it was actually about an abandoned building built into a hill at the site. It's extremely creepy. And the story he told was extremely terrifying. But as a team we all walked out into the woods together with him leading us. We went into the shelter together and the students thought that was the coolest thing. And they talked so much about the star gazing, like sitting on a mountain, hill, in a field and looking at the stars that they don't get to see living in a big city.

6. Did the students describe any challenges?

Not showering. Also I think that they were really positive though. They were willing to do anything. But they were leaving all their friends for a weekend. And I know for a fact that most

of them lead adult lives more than they should. So for them to leave that all behind and go out in the woods instead of partying with their friends, I think that was a sacrifice and a challenge for them.

7. What kind of skills did they gain from the trip?

The survivor challenge, just to create something from nature, I think that was a skill. They had to create a shelter with only materials they found in the woods. That resourcefulness, that's a skill. I also think that simple things like putting on a meal for people, working as a team to do that. Our dinners depended on that participation. I think that's a skill. I also think that when we did maple sugar taping, just the skill of listening about the process, then doing the process. It was really like a scientific lab in a sense.

8. As a result of the trip, did the students express gaining knowledge about the environment, science-- what did they learn? How did what they learn support the content of your class?

Our naturalist talked a lot about environmental issues. But I'm not sure how much the students learned. I don't teach science so I can't really say.

9. How did the students work together as a group? Were there any conflicts and, if so, how were they handled? (Team building, working together setting up camp, learning skills)

No conflicts on this trip. I had been nervous about it. The shower—they were mad about that. But that quickly passed. They got a long really well. They were all Latino students except one—and they spoke a lot of Spanish. It was very familial, a very family like experience.

10. Do you feel the trip impacted grades, school attendance, school engagement, school attitude? If so, how?

I had one student who didn't come to school at all one semester. Then we met with her and she joined my class. Her attendance was ok, it did improve, but not excellent. After the trip, she's been at school almost every day which is huge. I really think attendance is why a lot of these students are failing. She's one I saw huge improvements with. I think the class felt like a community to her after the trip. She belonged more.

11. Do you want to add any information, perceptions, observations that I haven't covered?

I have a lot more faith in my students now. I want them to be motivated, to be good people. The trip reassured me that they have potential to be good, resourceful people. You don't always see that in school.

Teacher Comment

I would love it if all students could have this opportunity. They (UWCA) were extremely organized, and really cared about following through. I wish it would be less money. I think if my students could do more of it I think it could be really life changing. I'd like to see if students could use it [trips] for credit. Having systems in place where trips are aligned with standards would be great too.

Multi-day Experiences

Multi-day experiences are the UWCA program's third level. It is hoped that as students pass from introductory and overnight experiences to multi-day experiences, students will solidify connections to nature and their interest in outdoor jobs and careers will grow. The CAREI evaluation team used teacher interviews, surveys, and student responses to application essays and reflections to determine the extent to which multi-day activities affected students' connections with and perceptions of the outdoors. In 2012, the UWCA served 164 youth on eight multi-day experiences.

Saint Paul Public Schools AVID Program

Twelve AVID⁴ schools in Saint Paul Public Schools partnered with Wilderness Inquiry on UWCA activities. Student-participants were in grades 7-10 whose composition is similar to the overall SPPS population of about 39,000 students, for example:

- Students speak more than 100 languages and dialects
- Student ethnic composition in 2011 was: 31.2% Asian American, 29.4% African American, 24.4% White, 13.5% Hispanic, 1.7% American Indian
- Approximately 4,000 students are new to SPPS each year; 2,000 at the secondary level
- 8% of students require special education services
- 72% of students are eligible for free or reduced-price lunch
- Approximately 2,000 students experience homelessness during the school year

In April 2012 the evaluators interviewed a District Liaison for the Advancement via Individual Determination (AVID) program. The teacher-liaison told the evaluators that they have worked with Urban Wilderness Canoe Adventures for the past four years. AVID students participate in grade sequential Urban Wilderness Canoe Adventures trips. Seventh graders complete team building activities at state parks. Eighth and Ninth graders participate in river canoeing activities and the 11th graders have an extended overnight camping trip.

Evaluators also met with AVID staff in May 2012. The meeting took place at AVID's central office and lasted approximately two hours. The purpose of the meeting was to discuss ways in which the evaluation team and the AVID staff could collaboratively work together to study the impact of UWCA trips on students. Data sources, the development of survey, interview, and reflection prompts, and potential additional data were discussed. The evaluators agreed to develop and provide AVID with reflection prompts for students attending the summer Glacier trip. The AVID staff provided the evaluators with data they had collected from students who had attended UWCA activities during the school year.

Methods and Instruments

Evaluators analyzed AVID students' application essays and pre and post trip evaluations for two overnight extended UWCA camping trips: The Baker Near Wilderness Winter Camping Trip and the Apostle Island Three Night Camping Trip.

AVID staff also provided 15 application essays for the 2012 trip to Glacier National Park. Each student was asked to discuss previous Urban Wilderness Canoe Adventures trips and the impact of those trips in

⁴ Advancement via Individual Determination (AVID) Program is implemented in many school systems across the nation including Saint Paul Public Schools and Minneapolis Public Schools. AVID is an elementary through postsecondary college readiness system that is designed to increase school wide learning and performance. AVID is intended for all students and is implemented school-wide and district-wide. It targets students in the academic middle. The mission of AVID is to ensure that all students succeed in a rigorous college preparatory path.

the essays. The evaluators also provided AVID staff with reflection prompts that students were expected to use for journal entries before, during, and after the trip. The prompts were based on our review of the literature. We asked students to respond to questions that related to environmental awareness, observations, and wilderness connections, and topics that related to new self- and group-perceptions that occurred as a result of the trip.

Upon returning from the Glacier trip, AVID staff told evaluators that the students did not complete the reflections. However, an AVID staff member, who accompanied the students on the trip, used the prompts to interview students about the trip. For example, students were asked about what they learned about nature and the environment and if the trip had changed them personally in anyway. The interviews took place at the conclusion of the trip as they awaited the train back to Minnesota. These data were provided to the evaluators by the AVID staff.

AVID staff also provided the results of a survey that was administered to all AVID students near the end of the 2012 academic year.

All qualitative data provided by AVID were analyzed by the evaluators for patterns and themes among the responses. The responses were coded into like categories. Classifications of responses and examples to support each category are discussed. These data findings are presented below.

Findings of Multi-Day Experiences

The Baker Near-Wilderness Winter Settlement Adventure

This Near Wilderness Settlement is located 20 minutes west of downtown Minneapolis. Students spend two winter nights and three days at the camp site participating in skiing and snowshoeing adventure activities. Trip leaders guide the students through these activities and also show them how to build a snow shelter and how to dress comfortably in cold temperatures. Although the students can stay in cabins, they are invited to spend one night sleeping outdoors in the snow shelter. To protect the environment, WI uses "minimum impact" camping techniques.

Seventeen AVID high school students participated in the Baker Winter Settlement experience during the winter of 2012. Two Urban Wilderness Canoe Adventures trip leaders facilitated their experiences. The students were attending various high schools in Saint Paul.

Prior to the trip, the students were asked to complete a pre-trip survey. When asked why they choose to attend the trip, 47% of the students mentioned that they wanted to experience "nature," "winter wilderness" or "the outdoors." Approximately 30% of the students responded that they either "wanted to be with their friends" or "meet new people." When asked if they had previous camping experiences, 15 out of the 17 answered that they had. The students had a variety of responses when asked what they were looking forward to on the trip. Some of the remarks are listed below:

- Learning new things about nature, bonding and enjoying the field trip
- Having fun, meeting new people, exploring the wilderness
- Community building activities
- Learning more about survival things in the wild
- A great time with no electricity, just how camping should be
- Going snowshoeing---never done it before
- Eating food and getting to know people

Students were also asked what they were most concerned about with the trip. Nine students out of the 17 said that they had no concerns. The remaining students listed concerns related to the weather, the lack of water services, coming close to wildlife such as bears, and not getting along with their peers. After the trip, the students completed a survey comprised of 4 open-ended questions about their experiences. The first question asked if they enjoyed the winter trip and if so, why, and if not, why not. All 17 students responded yes, they enjoyed the trip. Reasons for their positive answers were:

<u>Theme</u>	<u>Percent responses</u>
Being with my peers and meeting new people	47%
Being around nature	30%
The Urban Wilderness Canoe Adventures trip leaders	24%
Learning new skills and more about the environment	24%
Learning more about myself	12%

When asked if their expectations for the weekend were met, 15 out of the 17 (88%) replied “yes.” Comments that supported their positive responses were:

- Yes, we were able to enjoy nature
- Of course, actually they exceeded my expectations
- Yes, because the staff did all that is possible to make us comfortable
- Yes, in the end I learned a lot about myself and the people around me
- I got to communicate and experience things outside my comfort zone, yes!

The third question asked students if their opinion towards the outdoors or outdoor experiences had changed as a result of the trip. Six of the 17 students said “yes” with most of their comments pertaining to an increased appreciation for nature and the environment. For example, one student said, “Yes. It’s really interesting to know you’re surrounded with animals and how they survive and live.” Most of the remaining 11 students responded “no.” These students remarked that they had always “loved camping,” and/or “loved nature and the outdoors” and the trip had not changed these opinions.

The final question asked students if they would choose to attend additional trips through Urban Wilderness Canoe Adventures. All 17 students (100%) responded “yes.” When asked “why” the following comments were made:

<u>Theme</u>	<u>Percent responses</u>
Fun and Enjoyment	53%
Experiencing nature and the environment	35%
Meeting new people	24%
The Urban Wilderness Canoe Adventures trip leaders	18%

Apostle Island Three Night Camping and Adventure Trip

Located on the south shore of Lake Superior between Cornucopia and Bayfield, the Apostle Islands are known for sea caves, sandy beaches, historic lighthouses, and sunken shipwrecks. Seventeen Minneapolis AVID high school students participated in a 3-day Urban Wilderness Canoe Adventures camping trip on the Island during the 2011/2012 school year. When the weather is nice campers are able to venture out in sea kayaks or 24-foot voyageur canoes. On windy days, campers must paddle close to land but they are able to take some great hikes. Unfortunately, the weather was not optimum for this trip and most activities centered on hiking excursions.

The evaluators did not collect pre-trip data from the students. However, AVID students were required to complete an application for the trip. Questions on the application asked students why they were interested in attending the trip and what they hoped to learn from the experience. AVID administrators provided student responses on these two questions.

There were a variety of answers when the students were asked why they were interested in participating in the trip. Most responses fell under specific categories. The most common categories and their respective frequencies of answers were:

<u>Theme</u>	<u>Percent responses</u>
Experiencing nature and the outdoors	53%
Learning new skills (canoeing, camping, adapting to the outdoors, being independent, leadership and teamwork)	41%
Meeting new people, being with friends	41%

When the students were asked what they hoped to learn from the experience, 14 out of the 17 referred to some aspect of nature, the environment, or the outdoors. For example one student said, "I would like to learn new things about the outside; especially because there are so many issues with taking care of our resources, it would be a way to build empathy towards our environment." Another student responded, "I hope to learn and understand the land I walk on and how to help preserve its beauty." Still another student remarked, "I honestly just want to learn about the beauty of nature. Being a city girl, the wilderness is foreign to me. The only idea I have of it is from what I see on TV and I would just like to learn what it's like for myself."

After the Apostle Island trip, the 17 students completed the same 4 item, open-ended trip evaluation survey that the students attending the Baker Near Wilderness trip completed. When asked if they enjoyed the winter trip and if so, why, and if not, why not, 16 out of 17 students responded "yes," they enjoyed the trip. Reasons for their positive answers were:

<u>Theme</u>	<u>Percent responses</u>
Trip leaders/planned activities	30%
Learning about the Islands and the environment	30%
Meeting new people/bonding	24%
Enjoyment and fun	18%
Learning about myself	12%

The second question asked students if their expectations for the weekend were met. Nine out of the 17 students responded both positively and negatively. For example, they said some expectations were met but others were not. Eight of these students referred to not being able to do some activities due to weather problems. For example, one student said, "I was hoping to see the caves, visit one of the islands and canoe. But I had fun anyway." Another student responded, "Yes and no. Yes since I had fun and no since we were told we were going kayaking and didn't go." Still another student said, "I wish the weather was nicer and more activities were available. Other than that the food was really delicious, the games were fun; the people were amazing."

The third question asked if the students' opinions towards the outdoors had changed and, if so, how? Seven of the students responded "yes." Most of these students referred to learning more about the outdoors and environment. Some of their responses were:

- Yes! I now realize that our planet is ours. As in team. So it's what we choose to do with it.
- It has broadened my experience on the outdoors.
- Yes. I learned that what we put in the earth is what we get out and so--by being a part of this outdoor experience I know how to treat my earth a little bit better than before.
- Yes. Because I came to the realization that I can survive without my phone.

The last question asked students if they would choose to participate in additional trips through Urban Wilderness Canoe Adventures. Fifteen out of the 17 students (88%) responded "yes." Their responses could be categorized into four categories. These categories and their frequency of responses were:

<u>Theme</u>	<u>Percent responses</u>
Enjoyment of the outdoors, nature, and the environment	42%
Trip leaders/activities	30%
Fun and enjoyment	30%
Wanting to learn more	18%

AVID Glacier Trip 2012 Application Responses

AVID students who attended the 2012 Baker Near Wilderness Winter Settlement Adventure and the Apostle Island Three Night Camping and Adventure Trip have the opportunity to attend the 2012 summer Glacier National Park Hike and Explore Urban Wilderness Canoe Adventures trip. This culminating trip consists of six days and five nights exploring Montana's Glacier National Park. The park is known for its pristine forests, alpine meadows, rugged mountains, and spectacular lakes. With over 700 miles of trails, Glacier is a hiker's paradise. The trip's main adventure is hiking the length of the famous Going to the Sun Highway.

AVID students who are interested in participating in the Glacier trip go through an application process. One component of the process is to write an essay reflecting on previous Urban Wilderness Canoe Adventures trips, what skills and knowledge were gained from them, and how this information can be used in the future. The evaluators were provided fifteen of these essays. The writings were qualitatively analyzed for themes and patterns among the responses. When examining the impact of the students' two previous Urban Wilderness Canoe Adventures trips, four specific themes emerged from the data. The following list identifies the four prominent response patterns and the number of statements in which they were mentioned across the essays:

- Environmental and Nature Connectedness 31
- Meeting New People/Bonding with Peers 31
- Self-Development 30
- Developing Skills in Outdoor Environments 21

Environmental and Nature Connectedness

All fifteen essays showed that Urban Wilderness Canoe Adventures trips supported environmental awareness and an appreciation of nature. Students demonstrated this connectedness through a variety of statements. For example, one student wrote, "Urban Wilderness Canoe Adventures has impacted my life by showing me a side of nature that I've never seen, and giving me the chance to enjoy the beauty of nature." The same student elaborated with environmental behavioral changes that resulted from the trips. The essay says, "I pay closer attention than I have before....by picking up litter and watering dried

trees, grass and other plants.” Another student discussed environmental opportunities not experienced due to living in a city. Urban Wilderness Canoe Adventures provided, “Gaining more knowledge of the nature you would never really see in the city or blocks you live.” Another similar statement was shown by a student who wrote, “WI trips impacted me by letting me know more about nature and wildlife outside of the city.” Increased environmental interest was emphasized in several essays. For example, one student responded, “Learning from that experience (WI) has made me more interested in the outdoors, exploring life and nature.” Across all essays students reflected that Urban Wilderness Canoe Adventures trips influence levels of knowledge, attitudes and beliefs about the environment.

Meeting New People/Bonding with Peers

Most of the essays addressed positive aspects associated with inter-personal relationships experienced while on Urban Wilderness Canoe Adventures trips. The benefits of meeting new people were mentioned by several students. For example, one student said, “The biggest impact that I have had is meeting new people, I learned a lot about myself and others.” Still another student wrote, “I have been able to learn how to open up and meet new people, this will make it easy for me in the future.” Other students discussed the development of inter-personal skills while on trips. For example, one student stated, “Cooperation is also a skill that I learned from all the activities that we’ve done together from the Urban Wilderness Canoe Adventures trips. Learning to cooperate and work together with people sometimes may be challenging but with the good communication between each other I manage to pull through. I will definitely refer back to these skills in the future.” Another student mentioned, “(WI trips) help me with leadership skills and people skills.” Finally, one student compared the AVID school program with Urban Wilderness Canoe Adventures trips and how they complement each other. The student said, “Both of these programs are similar in many ways because both teach leadership, team building and they both create a family environment.”

Self-Development

The essays revealed that students grow, develop, and change in multiple ways as a result of Urban Wilderness Canoe Adventures trip participation. Self-assurance was one attribute that seemed to be nurtured the most. For example, one student wrote, “The experiences I have had camping with my classmates and the Urban Wilderness Canoe Adventures gave me confidence and I was able to be myself...” The same student goes on to say, “... (UWCA trip) gives me more confidence to speak out and be myself, showing my skills and what I can do in these situations.” Another student supported confidence building by saying, “(WI trips) helped me grow by having me be more open to myself and to others. For example, I took the lead in several group activities.” Other students spoke of overall self-development. For example, a student wrote, “The opportunities that the AVID/Urban Wilderness Canoe Adventures trips have given me to participate in creative activities outside has left me a changed person. Urban Wilderness Canoe Adventures has altered my view on nature; in my school and community.” Additionally, self-awareness was also shown by several essay remarks. Students consistently mentioned that “I learned more about myself, or “I know myself better now.”

Developing Skills in Outdoor Environments

Students wrote about many outdoor survival skills that they learned through Urban Wilderness Canoe Adventures trips. For example, students wrote of learning how to “build fires, build forts and find shelter and food sources.” One student wrote extensively about safety skills acquired on trips. The essay says, “Skills and knowledge that I took away from the AVID and Urban Wilderness Canoe Adventures trips: learning how to survive in the wilderness and an appreciation of nature. As a group we learned how to prevent certain mishaps from happening, if possible, what to be aware of, and how to react if something happened. Learning how to be safe and fun at the same time is very important when going on outdoor

trips. I can use these skills in the future when I choose to go on a trip that is in the wilderness.” Another student wrote about “three rules” to follow when encountering danger while outdoors; “shooting a gun three times (if you have one),” “you can go three weeks without food and still survive,” and “keep a positive attitude at all times.” The essays showed that students were acquiring basic skills to meet outdoor wilderness challenges.

AVID Glacier Trip 2012 Student Interviews

Twenty students participated in the 2012 summer Glacier trip. An AVID administrator accompanied the students on the trip. At the conclusion of the trip, the administrator interviewed 12 of the students as they waited for their train to return to Minnesota. Interview questions were classified in two categories: 1) During Trip Reflections and 2) Post Trip Reflections. The first category of questions asked students about their trip experiences, challenges they encountered, the trip leaders, and group dynamics. The second category of questions asked about the trip’s impact on the students’ personal growth, plans for the future, and perceptions of the environment. The evaluators were provided with the transcripts of the interviews.

During Trip Reflections

Students were asked to describe one experience or observation that helped them feel closer to nature on the trip. There was no clear pattern of responses as each student mentioned a unique experience. One student said, “Star gazing – seeing the big and small dipper and the North Star for the first time.” Another student reflected on “the view of the mountains” while another student said just “getting dirty.” Two students talked about specific trip activities. One said, “Looking back on our hikes and seeing how far we had hiked.” The other spoke about “Swimming in the glacial lakes.”

When asked about the challenges that they experienced while on the trip, some students mentioned the “cold” weather while one student said, “no showers.” Another student said it was difficult “getting to know others.” One student discussed the hiking activities by saying, “Three days of straight hiking-I now know that I can push myself through being tired, sore, and injuries.”

Students were asked what they learned from the trip leaders. Most responses centered on “motivation.” For example, one student said, “If you put your mind to something, you will reach it” while another student remarked, “to keep going.” Some students identified specific skills that the trip leaders taught them. One student spoke about learning “to cook, mixing different foods.” Another student cited “how to survive being close to bears.” Other students mentioned learning “to take risks.” For example, one student gave the example, “(trip leader) was always the first one to jump in the water. I learned to take risks.”

When asked about any observations the student had related to how the group got along, there were only two responses. One student said, “Everyone helped.” While the other student reflected that “We motivated each other.”

Post Trip Reflections

The first interview question in this category asked students if the trip altered any plans for after high school. Two students said they were planning on changing their major to environmental studies or “something similar.” One student said, “I want to travel more.” Another student discussed the trip’s hiking experiences and remarked, “Hiking may become a new hobby of mine.”

When students were asked to describe any ways that the trip had significantly changed them as a person, seven responses pertained to social skill development and group dynamics. For example, one student said, "I now know how important teamwork is" while another student remarked, "I am more trustworthy of others now." Other students spoke about specific social skills. One said, "I learned to be a better listener because there were no distractions like cell phone, computer, etc." Another said, "I am more patient now because I had to learn to wait for everyone so we could stay together on the hikes and I enjoyed staying together with everyone." One student commented on how the trip encouraged acceptance of others. The student said, "I learned more about my race and others and therefore myself. I am more open-minded because of it." The last student commented on the group in general. The student said, "We are just all closer and I feel like I know them so much better."

Other students spoke of personal development when asked this question. For example, one student said, "I feel renewed" while another student said, "I learned not to doubt myself." Still another student commented, "I am physically stronger." The last student remarked, "I will live in the moment more because of this trip."

Four students responded to a question that asked how the trip changed their perspectives about the natural environment. Two students voiced concerns. One said, "Glaciers – global warming – I want to help stop that now." The other said, "Always leave no trace to maintain the naturalness." The other two students spoke about traveling more. One student mentioned "I want to get out of my state more and learn about other states and their environment." The other student said, "I want to see more National Parks."

When asked what they had learned from the trip, again only four students responded. Their answers varied. One student said, "I am excited now – I have closer friends, I want to meet more new people." Another student commented, "Know your limits." Still another student mentioned, "Bear bins." And the last student said, "I need to always have water."

AVID Yearend Student Survey

Four hundred and seventy-nine students (479) responded to the AVID Yearend Student Survey. Student responses from this survey align and corroborate many of the findings in evidence from the survey and interview data described above. In this survey students were asked numerous questions about future plans as well as questions that related to the content of the AVID program.

Improving AVID Activities

When students were asked how AVID activities might be improved, many students suggested that activities should be more active and that staff should consider increasing the number of teamwork activities. Below are some typical responses about this item.

You can have more hands-on activities (this will draw in more AVID students).

I think there should be more teamwork activities, because we can learn how to build trust with one another. Not only that, we should have days when we can talk about college and what kind of college can benefit us.

We can have more activities that will help the students learn how to become leaders.

Comments Regarding UWCA Day and Overnight Trips

On the AVID Yearend Student Survey students were asked, "During the past school year, did you go on any day trips or overnight trips with Wilderness Inquiry (UWCA)?"

One hundred-eighty-five students reported that they had been on at least one trip or camping activity.

When students were asked to rate their trip experience 125 of the 174 students who responded (72%) rated the experience as *Fantastic* or *Very Good*. Some of the typical responses students offered were:

Everyone was helpful and respectful towards one another. I've had such a wonderful experience in both trips, I can't wait for the next one in Montana.

I had an amazing experience. I feel that it was because of the camping trips that made my bond between my AVID friends closer. I also met new people and had good relationships with them.

Having fun with friends and learning things that you don't usually learn in school. You actually experience the wildlife.

Canoeing was such a fantastic trip. It was my third year attending there! It's a great way to bond and start the school year. It shows team work and I learned a lot about nature and habitat. I also got to learn a lot more about students and Minnesota!

Students were also asked about the highlight of their outdoor experiences. Many students talked about wildlife encounters, making or deepening friendships, or challenging themselves and discovering a new strength. A few examples:

One highlight was when I caught a fish on the ice fishing trip because it was my first time catching a fish ever.

The team building, and seeing the wildlife, like the eagles and a coyote.

Getting to know my classmates better, as well as making new friends!

I made new friends and learned new leadership skills.

Being offered a chance to go to Glacier National Park! And making a lot of friends!

A highlight from the field trips were the times when everyone, the staff and students, stay up and talk, just having a fun time talking about our future.

Hiking the extra miles when, the night before, I did not think I could.

Many of the students reported that they learned valuable skills about respect and teamwork as well as outdoor skills, as illustrated in the comments below.

That it's good to get along with people and that you need others to help you, not just do it yourself.

Communication skills, working skills, sportsmanship, respect, patience, etc.

Taught me team work. And mostly how to get along better with people.

It taught me how to be more open to people I'm not really used to.

A skill I gained is how to respond to situations I don't believe are right. It also helped me feel comfortable asking questions and adding my ideas into other ones. It gave me a great bond overall in school and in AVID.

I gained the skills of knowing how to canoe and how to use a GPS.

I learned how to set up tents and survive in the wilderness.

These student responses, collected from almost 500 students, support the findings the evaluators have enumerated in this and previous evaluations of the UWCA program.

Internships & Jobs

A long-term objective of UWCA is to encourage young people, who possess a diversity of skills and come from all backgrounds, to consider careers and work in environmental fields. Evaluators met with three young people who had participated in Wilderness Inquiry activities and had begun working in outdoor careers to understand their experiences.

Interviews with Urban Wilderness Canoe Adventures Youth Participants

The evaluation team wanted to assess longer term impacts of wilderness programming on youth sometime after their introduction to the outdoors. We interviewed three young people who had participated as youth in a Wilderness Inquiry program that served as the forerunner to UWCA. All three youth began participating in adventure programming as high school students and served as youth trip leaders after high school graduation. All are now in their mid-twenties.

The objective of the interviews was to explore whether participating in outdoor activities at all levels of the Pyramid of Engagement resulted in any long term effects on the individuals. Interview subjects were asked to reflect on their early experiences in the outdoors and to share how these experiences may have affected their current interests in and relationship to the outdoors and environmental issues. We also asked the interviewees to discuss their experience roles as trip leaders, their experiences with trips and the populations they served, and how the UWCA may affect youth who participate in the programs.

Interviews were conducted in March 2012. Each interview lasted 60 to 90 minutes. Evaluators used a semi-formal interview protocol and asked them open-ended questions about interviewees past involvement with Wilderness Inquiry. Our goal was to have interviewees reflect on their formative experiences in wilderness programs. We wanted to learn how their experiences changed them as a person, what their unique perspective were about trips, and how those trips may have affected program participants.

All interviews were recorded and later transcribed and coded for patterns of responses. Three themes in particular emerged from data analysis and evaluators noted that these themes aligned to the mission of Wilderness Inquiry:

Our mission is to provide outdoor adventure experiences that inspire personal growth, community integration, and enhanced awareness of the environment. Wilderness Inquiry adventures encourage people to open themselves to new possibilities and opportunities.

Building Relationships and Community Integration

The Urban Wilderness Canoe Adventures' mission statement emphasizes outdoor experiences as a path to "personal growth and community integration." All three young people stated that "building relationships" and "establishing community" were integral parts of their outdoor experiences with Wilderness Inquiry. All three interviewees reported that leadership skills that support participant bonding are "crucial" to a trip's success.

For example, one youth spoke of the "wilderness experience" as a context for "getting people to talk with each other, to address issues." He explained how many groups arrive for a WI trip in cliques with "preconceptions and prejudices" about others. He viewed wilderness trips as a way to "address awareness" and "see beyond your own culture." When asked about leadership styles, he expanded on these ideas by saying, "Sometimes you only have five days to make a connection, get to know people, get to a place where you can invoke that emotional response, to make that trip memorable, the trip of a lifetime---or just 6 hours (a day trip), or a 30 minute workshop, to do that for someone, make them feel that 'I can change my life.'"

Another youth stated that "building relationships" is an important facet to outdoor education programming. He recalled one trip with a group of inner city youth who were into "their iPods, walk men, tech stuff" and talked to each other in slang, often using profane language. He said, "A real challenge was to get the kids to bond and connect." He said, "People come from all over. They mostly don't know each other. It may be their first time camping, sometimes it's the first time they've been in the snow. Just hearing their story is interesting. They make connections and network with others." When he was asked "What was a major benefit to participating in a WI trip?" This leader responded, "Bonding with each other, getting to know each other, and connecting."

The third youth spoke of needed "skills" to "engage" youth in "building relationships." He talked about his relationship with a WI staff member, how the staff member mentored him, and helped him develop those skills. According to the trip leader, "The first five minutes of any trip sets the tone." It is a "crucial time to make people feel comfortable" with each other. A leader's skill and ability to "set this tone" are paramount to establishing a cohesive group, one that "will work together."

Working with Diverse Groups

Urban Wilderness Canoe Adventures is dedicated to making high quality outdoor experiences accessible to all, including those who do not typically get out and enjoy the wilderness. The interviews with the three trip leaders supported this goal. All three youth spoke about the challenges and rewards of working with diverse groups.

Urban Wilderness Canoe Adventures Influences

Urban Wilderness Canoe Adventures impacted all three youth in both personal and professional ways. Throughout our interviews, the three youth spoke often about the personal development they experienced while both participating in Wilderness Inquiry trips as adolescents and working at WI as youth leaders.

One interviewee spoke about learning independence and gaining confidence in his own abilities. According to him, WI staff mentored these skills to all new leaders. For example, WI staff allowed him to plan trips which required working out navigation, equipment and skill details, planning activities, and always facilitating safety measures among the participants. The trip leader said, "I don't think I'd be anywhere if I had not gained that skill (independence). I came to WI with some street skills but the skills of figuring out how to think things through until you can't think it through anymore is what WI is good at."

Another youth reported, working with WI fosters "confidence" and independent skills. He commented that "you don't need high tech gear and clothes" for outdoor experiences. But you do need "attitude and the smarts to survive out there." The third youth, often referred to by the others as the "hard skills" guy, the one with exceptional outdoor survival skills, said, "It's more of a skill. When there is an incident, I'm not running around, I get things done....it can be difficult, stressful, and you have to make decisions." Confidence, independence, autonomy, self-reliance and determination were all personal skills that WI promoted among these youth –and were modeled to trip participants once they became leaders themselves.

The youth also discussed how the "skill set" of "engaging youth" transferred to their present professional venues and future goals. At different points in their WI experience, all three youth realized that they had the ability and talent to work well with people. For example, youth speaks of the leadership skills of being "empathetic, understanding, and pushing people to look inside themselves." He recalls his "first trip" when he realized he could "engage people" in talk, activity, and thoughtful discussion.

Conclusions

Interviews with past Urban Wilderness Canoe Adventures youth participants supported the literature review. All three youth emphasized that outdoor experiences promoted personal growth and community building. Personal skill development such as gaining confidence, independence, and self-reliance were mentioned by the youth throughout our interviews. Team building and connecting with others were also specific goals for trip experiences.

Conclusions of the 2012 Evaluation

The 2012 UWCA Evaluation investigated the outcomes of three UWCA activities this year: 1) The Minneapolis Public Schools' Summer School Mississippi River trip; 2) Washburn High School's at-risk students' involvement with one UWCA trip; and, 3) AVID student's participation in three UWCA trips. Our findings consistently demonstrate that regardless of the specific program or modification the participants received numerous personal, social, and academic benefits through UWCA trip participation. Many of the variables that influenced these benefits have been identified during our data analyses.

The research we initiated before the 2012 evaluation supports findings we observed in earlier evaluations, whether the data was collected from students, teachers, or former youth participants.

Environmental Awareness

The literature suggests that outdoor education increases students' awareness and appreciation of nature and the environment. Yet there are few studies that document those changes. The data from our UWCA evaluation shows that those changes do occur. Eighty-four percent of Minneapolis Public School students and 87% of their teachers agreed that the students learned about environmental issues during their Mississippi River trip. Eight-two percent of the students agreed that due to the trip they knew what to do to protect the environment. Additionally, 96% of the teachers said that students would have more positive attitudes towards the environment as a result of the trip. Several of those teachers wrote that learning about nature and the environment was the trips' greatest benefit.

AVID students who participated in three UWCA trips consistently commented on learning about nature and the environment during their experiences. For example, 53% of those who attended the Baker Wilderness trip cited "experiencing nature" as a reason for applying to participate in the Apostle Island trip. Fourteen out of the 17 students who went on the Apostle trip hoped to "learn" even more about "nature, the environment, or the outdoors" on future UWCA trips. Essay applications for the Glacier trip showed that environmental and nature connectedness was the most prominent impact on AVID students who attended the two previous trips. Across all of the AVID data, UWCA trips supported environmental awareness and an appreciation of nature among students.

Social Development and Connectedness

The literature revealed, and this evaluation confirmed that outdoor programs have significant positive effects on students' social competence. Data across all of our evaluations supported this claim. Eighty-eight percent of the Minneapolis students said that they "worked as a team" on their River trip. Qualitative observational data from their teachers showed positive student interactions and group dynamics occurring as students navigated together canoeing down the River. Teachers noted that the trip "really brought students together," how well "students cooperated" in their canoes, and that the experience involved "community building."

A consistent theme throughout the AVID data was student development related to interpersonal and social skills. Trip evaluation surveys and interview transcripts showed students learning "cooperation," "teamwork," "good communication skills," and "acceptance of others" through UWCA experiences. Further, students cited that "meeting new people" was one of the biggest trip benefits.

As observed by their teacher, at-risk students from Washburn High School also gained social skills on their trip. According to the teacher, trip activities promoted "teamwork." Further, after the trip, the

class showed social bonding that had not been observed before. The teacher described the class as more of a “community” and “club” when they returned.

Academic Benefits

Evaluation data showed that UWCA trips offered students numerous academic benefits. Ninety-two percent of the Minneapolis School teachers said that the Mississippi River trip benefitted their students academically and they believed that students their students were more interested in science as a result of the trip. Eighty-seven percent of those teachers also responded that an outcome of the trip was a deeper engagement of learning among the students. Teachers’ qualitative comments showed that the trip was connected in some way to classroom learning. For example, one teacher said the trip connected to her teaching theme of “aquatic organisms” while another teacher mentioned that the trip “put classroom learning into a real context.”

A Minneapolis teacher noted that her students’ UWCA trip promoted school engagement. She described one student who had school attendance problems. After the UWCA trip, the student began to attend school regularly. According to the teacher, the class was more like a “community” when they returned from the trip and the student felt like she “belonged” more.

It has been difficult to show a causal relationship between UWCA participation and higher academic performance. We believe that this is largely due to a lack of articulation between the outdoor program materials and specific curriculum lessons taught in the classroom. In more than one instance, teachers did not use materials that were provided and available. We believe that a concerted effort to link UWCA activities to specific learning outcomes would make a connection between activities and learning more evident.

Personal Benefits

The outdoor adventure literature and the Wilderness Inquiry trip leaders identified personal development as an important outcome of wilderness programs. The evaluation showed that a variety of students’ personal attributes were impacted by UWCA trips. AVID students cited personal growth related to “leadership skills,” “self-understanding,” “confidence,” and “independence.” According to one teacher, at-risk students gained “responsibility,” “resourcefulness,” “confidence,” and “independence” as a result of the UWCA trip.

The evaluation did not show a significant change in pre and post personal views among the students participating in the Mississippi River trip. However, as discussed previously, the literature suggests a number of reasons why this result may have occurred. For instance, the sensitivity of the surveys may not capture changes in student attitudes that actually took place; or, the limited time of programming and lower demands associated with the river trip may not demonstrably effect personal growth. Evaluators noted that UWCA AVID trips and the Washburn High School trip were of longer duration and provided more wilderness exposure. Additionally, the post survey was administered to the Minneapolis School students directly after the River trip. Some literature suggests that personal growth, such as independence, may begin to develop during a program and continue to increase after a program ends. Follow-up studies may be necessary to determine if indeed personal development has been impacted.

Recommendations

Evaluation findings from 2012 point to numerous youth benefits derived from UWCA programming. We offer these six recommendations based on our findings from our evaluations as well as points revealed in the literature review for UWCA staff's consideration.

1. The literature review identified the need for all outdoor and wilderness programs to provide more detailed descriptions of their activities. We recommend that UWCA consider detailing field activities and educational objectives for two reasons (1) to explicitly state the goals and objectives of the activities and (2) to describe the activities with sufficient detail so that the relationship between participant outcomes and program elements can be understood.
2. We recommend that UWCA staff incorporate a version of the General Wilderness Program Assessment Instrument into the UWCA program for the purpose of collecting participant data over time. This 36-item multiple choice instrument was designed by the CAREI evaluators to collect information about students' prior knowledge, attitudes, and experience (before a trip) and their attitudes, personal, social, and academic growth after a trip. We think these data would help inform UWCA programming in important ways.
3. We recommend that UWCA staff continue to incorporate some form of evaluation in programming for program improvement and to understand and document the impact of the program on its participants.
4. The literature review and student survey responses signal the critical role trip leaders play in student growth and the overall success of the program. This finding underscores the importance of training and developing trip leaders who must possess a variety of skills including safety, wilderness craft, youth development, interpersonal relations, and to a degree, teaching abilities. We recommend that UWCA devote the time and resources necessary to ensure they provide adequate and outstanding training to its trip leaders.
5. The evaluation findings found that teachers often provide little or no pre-trip or post-trip teaching as a means to extend the environmental learning experience to promote further personal reflection. For example, Minneapolis Public Schools' summer session students and teachers reported that fewer than half the students studied the Mississippi River prior to participating on the field trip. Similarly, AVID teachers in Saint Paul Public Schools did not use available materials that were provided by the National Park Service staff or evaluators. We recommend that UWCA staff explore the barriers teachers encounter in incorporating enrichment materials into the regular classroom setting. For example, during one of our teacher interviews, a teacher stated, *"I'd like to see if students could use it [a trip] for credit. Having systems in place where trips are aligned with standards would be great too."* We recommend the exploration of how teachers might be supported to incorporate supporting materials. Would aligning lessons to national or state science standards or district goals promote curricular integration in classrooms?
6. We recommend that UWCA staff follow-up with participants who have had an ongoing relationship with the outdoors through UWCA programming. Research has shown that very few programs follow changes that occur among participants over extended periods of time. Since the impact of outdoor experiences is likely cumulative and may not be in evidence in the shorter term, these efforts may show important participant gains.