

Table 1. Perceived learning immediately following the expeditions as reported in the group journals.

Category	Number of respondents	Number of responses (% of total)	Representative quotes
Nature and place appreciation	28	63 (27.4)	<ul style="list-style-type: none"> • Able to describe flora and fauna • Learning about the history of the area • The North is a vast, beautiful, wild, awe-inspiring place. This and its creatures have taught me beauty, boldness, perseverance and strength. • The place has many qualities that make it a harsh yet beautiful place to travel.
Outdoor skills	28	54 (23.5)	<ul style="list-style-type: none"> • Paddling • Navigation • River reading • Trip planning
Group living	28	45 (19.6)	<ul style="list-style-type: none"> • Learning how people function in groups • Every group has a different flow, it is not good nor bad, it just is. • Working with people is challenging.
Self-awareness	22	41 (17.8)	<ul style="list-style-type: none"> • Learning that I need personal successes to have self-confidence • Only I can decide what is best for me • That I can push myself beyond what I once thought possible both physically and mentally • I don't have to be perfect to do a good job. • Sometimes the greatest lessons and memories come out of what seemed at the time to be the worst times.
Leadership	12	14 (6.1)	<ul style="list-style-type: none"> • It is difficult to lead your peers; an awkward position. • People listen better when you speak less but have something important to say. • Be centred on your principles.
Other	9	13 (5.6)	
Total	40 of 42	230 (100.0)	

Table 2. Perceived learning by respondents from survey data.

Category	Number of respondents	Number of responses (% of total)	Representative quotes
Nature and place appreciation	34	57 (32.3)	<ul style="list-style-type: none"> • A greater wonder and appreciation of the natural world. It is a place I can go to be renewed. It is a place of hope and goodness. • Wilderness is not to be feared but respected and embraced. • I've learned about the vastness and beauty of the north, as well as the fragility. I've come to understand more clearly the impact of my actions on the natural world around me. I've come to believe more passionately in protecting the north, and all natural places.
Outdoor skills	19	39 (22.2)	<ul style="list-style-type: none"> • Paddling skills • Trip planning • Leave-No-Trace • Navigation and river reading
Self awareness	21	38 (21.6)	<ul style="list-style-type: none"> • I learned a great deal about myself, about how I function in groups and one-on-one relationships. • To find something positive in, and make the best of, every situation. That a simple life can be so rich, richer than lives cluttered with meaningless complexities. • I learned a lot about myself such as my limits, how I make relationships, how I deal with certain situations, and how I react to those situations.
Group living	26	33 (18.8)	<ul style="list-style-type: none"> • I think I learned a lot about group processes, how to work together, how to work through conflict, and the importance of dealing with small conflicts before they become big ones. • I think the most important thing we learned as a group was that relationship is more important than the experience. • I also learned about self-sufficiency and interdependence and how and when to express feelings in a tightly knit group.
Leadership	7	7 (4.0)	<ul style="list-style-type: none"> • I learned to be less afraid to taking on leadership responsibilities. • Leadership skills, both as the designated leader and as a group member. • I learned different leadership techniques that I admired as well as techniques that I hope I never adopt into any aspect of my life.

Other	2	2 (1.1)
Total	54 of 57	176 (100.0)

Table 3. Critical elements that facilitated learning the most.

Category	Number of respondents	Number of responses (% of total)	Representative Quotes
Experiential approach	38	41 (46.1)	<ul style="list-style-type: none"> • The structure of the course was the “facilitator” of the learning – specifically the “hands-on” component of the course in everything from researching the route, organizing logistics and drying food, and route-finding on the river. • The trip itself facilitated learning the most, as we got to see and experience firsthand all the things that we had spent the semester learning about and planning for. It’s one thing to read it in a book, it’s another to experience it. • The adventure after all the planning. To put things in motion after all the classroom learning. Bring the class full circle from start to finish.
Group living	17	18 (20.2)	<ul style="list-style-type: none"> • The sometimes painful group process, but also the discipline and value of that process. • I think the part of the course that most facilitated learning was that this took place in a deliberately structured group. We all had to work together to get down the river from the moment the course started. Given our different life experiences, this was a rich learning environment.
Nature and place immersion	15	16 (18.0)	<ul style="list-style-type: none"> • The amazing group dynamic and learning from everyone else’s experience. • Just seeing and being in the environment every day, particularly the remoteness and trip length. • Being outdoors for a long time, allowing for slowing down and reflecting. • Learning specifics about the environment (plants, birds, animals) – it felt like I was really in touch with the land because I knew it better than I did when I arrived.
Instructor influence	7	7 (7.9)	<ul style="list-style-type: none"> • Being able to learn in a safe fostering environment. Without knowing that [our instructors] were looking out for our overall safety it could have easily just been about survival instead of being able to focus on relationships, hard skills, soft skills, etc. • The profs were amazing resources on this trip. To be able to learn from them through conversation and experiencing things side-by-side was invaluable – just as much a resource as any book.

Peer facilitation 7 7 (7.9)

- Having a couple days on the river to lead the group with a partner,
- Facilitating the group definitely made me more aware of my personality and strengths and weaknesses.

Total 49 of 57 89 (100.0)

Table 4. Ranking and Likert scores of course components that facilitated learning.

Timing	Course component	Percent agree or strongly agree	Average score
During the semester	Pre-trip projects	89.5	4.47
	River research project	85.4	4.46
	Pre-trip classes	92.9	4.43
	Pre-trip readings	85.7	4.18
	Geography Paper	82.4	4.15
	Final Exam	26.4	3.05
	Average		4.12
During the expedition	Acting as group facilitator	91.8	4.59
	Cooking with a partner	89.3	4.45
	Group decision making process	94.4	4.44
	Writing in the group journal	87.3	4.36
	Closure activities	88.0	4.34
	Daily group journal reading	83.0	4.30
	Giving interpretive talks	87.5	4.28
	Geography Research Project	84.4	4.28
	Hearing interpretive talks from fellow students	81.9	4.25
	Personal journal	87.5	4.23
	Thoughts for the day	78.9	4.21
	Identification tests	80.0	4.20
Average		4.33	

Table 5. Changes in perceived learning.

Category	Number of respondents	Number of responses (% of total)	Representative Quotes
Self-awareness	17	17 (37.7)	<ul style="list-style-type: none"> • I find I continue to learn lessons from the experience (in hindsight, it was those internal challenges and changes that really were the lifelong lessons I got out of the trip) • I believed that I knew a lot and that I was hot stuff, now I see how young and cocky I was and how little I knew, but now I see how much I have changed and grown.
Group living	9	9 (20.0)	<ul style="list-style-type: none"> • How to better understand what other group members may have been feeling • I now have developed a different attitude towards relations with others
Greater appreciation of the experience	7	7 (15.6)	<ul style="list-style-type: none"> • How much I appreciate the experience has deepened over time • It's a nice reference point in my life to compare new experiences to
Greater appreciation of nature and place	4	4 (8.9)	<ul style="list-style-type: none"> • How much I care about those places has deepened over time • Now I would be much more engaged with what grows there (i.e., places of new travel) and what it endures in order to survive
Forgotten some aspects	3	3 (6.7)	<ul style="list-style-type: none"> • Names for some of the obscure plants that I never see • Some of the group living learning
Other	5	5 (11.1)	
Total	37 of 57	45 (100.0)	

Table 6. Arctic course impacts on respondents' personal lives.

Category	Number of respondents	Number of responses (% of total)	Representative quotes
Positive life experience	22	24 (30.3)	<ul style="list-style-type: none"> • I always have a great story to tell friends and family • It truly changed the person that I am I truly learned who I was • Highlight of my university experience that I will always remember
Nature and place appreciation	19	19 (24.1)	<ul style="list-style-type: none"> • Deepened friendships • Much greater respect for Canada's North • I learned a lot about nature • I now take environmental issues seriously
Confidence	15	16 (20.2)	<ul style="list-style-type: none"> • Gave me confidence for other expeditions I have planned • Confidence to make decisions in the wilderness context
Developed skills	13	13 (16.5)	<ul style="list-style-type: none"> • As a river guide • How I function in a group • Communication and listening skills
Other	7	7 (8.9)	
Total	50 of 57	79 (100.0)	

Table 7. Arctic course impacts on respondents' professional lives.

Category	Number of respondents	Number of responses (% of total)	Representative quotes
Job skills	38	43 (62.3)	<ul style="list-style-type: none"> • Opened the door for guiding • Paddling skills helped me get a Park Ranger job • Fieldwork skills
Confidence	8	8 (11.6)	<ul style="list-style-type: none"> • Feeling confident in taking on other challenges • Sharing my own personal passion for the subject
Career path	7	7 (10.1)	<ul style="list-style-type: none"> • By learning who I was • I learned that I would not enjoy the transient and seasonal work of a river guide
Self-development	4	4 (5.8)	<ul style="list-style-type: none"> • How to compromise when opposing ideas clash • Personally challenging
Other	7	7 (10.1)	
Total	54 of 57	69 (100.0)	

Table 8. Reasons for interest in taking the Arctic course again

Category	Number of respondents	Number of responses (% of total)	Representative quotes
Highlight learning experience	29	29 (48.3)	<ul style="list-style-type: none"> • Rich learning opportunity • Great hands-on learning experience • Opportunity to learn about myself and team dynamics
Positive life experience	22	23 (38.3)	<ul style="list-style-type: none"> • Great way to do something that becomes more difficult as careers and lives move on • A valuable and memorable experience, one of the best experiences I ever had
Other	8	8 (15.4)	
Total	54 of 57	60 (100.0)	

Appendix. Statistical results of relationships between dependent variables (perceived learning and critical elements) and independent variables (year since the expedition, age of respondent, and year status).

Variables Analysed	Statistics
The number of years since the expedition was inversely correlated to the number of perceived learning responses about nature and place appreciation	$r = -0.466, N = 57, p < 0.001$
The number of years since the expedition was inversely correlated only to the number of perceived learning responses about leadership	$r = -0.289, N = 57, p = 0.029$
The age of respondent in 2009 was inversely correlated to the number of perceived learning responses to nature and place appreciation	$r = -0.266, N = 57, p = 0.046.$
The number of years since the expedition was inversely correlated with the number of responses about nature and place immersion as a critical element	$r = -0.274, N = 57, p = 0.039$
Scores for the thought of the day as a critical element were positively correlated with the number of years since the expedition	$r = .305, p = 0.028, N = 52$
Year status of the respondent at the time of the expedition was positively correlated with scores for writing in the group journal as a critical element	$r = 0.294, p = 0.039, N = 50$