# Instructor Influences on Student Learning at NOLS

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## Abstract

Historically, adventure-based research and models have inadequately described the role of the instructor in the process of student learning of transferable outcomes. The purpose of this case study was to investigate the influence of instructors from the National Outdoor Leadership School (NOLS) on learning perceived to be transferable. Qualitative data indicated students perceive instructors to influence learning through two major categories: instructor traits and instructor behaviors. Data analysis yielded 12 sub-themes describing the influence of the instructor. Salient instructor traits included being patient, knowledgeable, empathetic, inspiring, and fun/entertaining. Influential instructor behaviors included role modeling, providing feedback, providing formal curriculum, creating a supportive learning environment, managing risk, direct instruction/coaching, and using a "pet" quote or phrase. Variables identified in the present study are compared to existing models of student learning in adventure education. Implications and considerations for instructor practice, hiring practices, and staff development are discussed. Key words: National Outdoor Leadership School (NOLS), Adventure Education, behaviors, traits, student learning

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Historically, adventure-based research and models have inadequately described the role of the instructor in the process of student learning of transferable outcomes. The purpose of this case study was to investigate the influence of instructors from the National Outdoor Leadership School (NOLS) on learning transferable outcomes from participation in adventure education. Qualitative data indicated students perceive instructors to influence learning through two major categories (a) instructor traits and (b) instructor behaviors. Data analysis yielded 11 subthemes describing the influence of the instructor. Salient instructor traits included being patient, knowledgeable, empathetic, inspiring, and fun/entertaining. Influential instructor behaviors included role modeling, providing feedback, providing formal curriculum, creating a supportive learning environment, managing risk, direct instruction/coaching, and using a "pet" quote or phrase. Variables identified in the present study are compared to existing models of student learning in adventure education. Implications and considerations for instructor practice, hiring practices, and staff development are discussed.

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## Introduction

Instructors serve an integral role in adventure-based education (e.g., Kalisch, 1979; McKenzie, 2000, 2003; Bobilya, McAvoy, & Kalisch, 2005). Beyond the inherent qualities students bring with them to a course, instructors are a significant mechanism perceived to influence learning and transference of adventure education outcomes. However, the nature of how instructors influence learning is not well understood.

Instructors are explicitly identified by current adventure education models as a central component in student learning. Most notably, McKenzie (2003) built upon Walsh and Golins' (1976) model of the Outward Bound Process, a generally accepted framework for adventure education programs, and proposed _instructors_ as one of five interactive course components influencing student learning. As examined by McKenzie (2003), student learning is a concept which includes learning _immediate outcomes_, such as how to rock climb, and _transferable outcomes_, such as the development of new and healthy recreational habits upon returning home. Instructors were included in the process of achieving outcomes based on qualitative and quantitative findings gathered from questionnaires and interviews with 92 Outward Bound course alumni. The model offers several ways through which instructors can influence student learning, including role modeling, instructor expectations, providing feedback, instructor competence, and instructors as mechanisms for presenting formal curriculum. Minimal research of note has been conducted since McKenzie's (2003) efforts to further understand the role of the instructor in the process of student learning. Furthermore, McKenzie's (2003) model seems incomplete in that it identifies "instructor characteristics" (p. 20) but does little to expound on what these characteristics are and why they may matter.

One of the few recent contributions to the literature regarding the overall importance of the instructor was an examination of what learning transfers from participation in adventure education and which mechanisms play an influential role in transference (Sibthorp, Furman, Schumann, Paisley, & Gookin, in press). The authors surveyed 508 alumni from the National Outdoor Leadership School and asked, "Of the things you learned while on your NOLS course, which one, in your opinion, is the most valuable today?" The most common responses were outdoor skills (19%), followed by an appreciation for nature (13%), ability to serve in a leadership role (11%), and a change in life perspective (10%). More important to the present study, a follow-up question was asked in an effort to understand students' perceptions of the mechanisms contributing most to their learning. The results confirmed

the generally accepted assumption that instructors play a significant role in learning. Specifically, "Instructors were noted 44% of the time across all learning outcomes, but were especially reported as important in learning transferable outdoor skills, appreciation for nature, and leadership" (in press). Though these findings agree with the conclusions of previous researchers that instructors exist as one of the most influential variables, these findings also fail to illuminate the specific behaviors, traits, or characteristics, thus failing to clarify the influence of the instructor.

Several researchers have sought to understand the specific influence of instructors on learning outcomes. In a study of Outward Bound instructors, Riggins (1985) found instructor experience and history of travelling to have positive influences on instructors' effectiveness. Aguiar (1986) offered several insights regarding the influence of instructor behaviors and characteristics on learning through a correlational study of instructors and their supervisors' evaluation of effectiveness. Similar to Riggins, Aguiar found a relation between instructor experience and effectiveness. However, Aguiar failed to find a significant relationship between instructor effectiveness and personality characteristics. Though Aguiar's data are useful, they should be approached with caution as these findings fail to account for *student* perceptions of effectiveness.

Further examination of the literature illuminates a conflicting understanding of instructor influence. For example, in contrast to Aguiar's (1986) findings regarding the influence of instructor personality, Hopkins (1982) identified being empathetic as an important instructor characteristic contributing to participant growth. Furthermore, McKenzie and Blenkinsop (2006) posit that important curricular approaches such as an ethic of care in adventure education programs can manifest from a programmatic or individual (instructor) level because care is at the very "being" of human life. An instructor who exhibits an ethic of care may, indeed, influence student outcomes. In sum, previous findings indicate instructors' biographical traits and experience can influence learning; yet, regarding personality traits, such as empathy, the research is inconclusive.

The literature and predictive models, thus far, support the general consensus that instructors matter. Research findings suggest that instructor personality (empathy and care), outdoor experience, personal life experience, feedback, role modeling, and competency in formal curriculum may all play a role in student learning of immediate and transferable outcomes, but the evidence is lacking a body of research to uniformly support these assumptions. In addition, on an intuitive level, the previous list of influences and the supporting research seems incomplete. For example, personality may matter, but how?

Despite the agreement of previous research that instructors play a variety of roles in the learning process (Aguiar, 1986; Hopkins, 1982; Riggins, 1985; Sibthorp, et al., 2008), the voices of the participants are lacking and specific instructor characteristics still remain unclear. Moreover, the broad strokes of research attention paid to instructors thus far have not identified variables with the necessary specificity for examination in subsequent experimental designs. Thus, the purpose of this case study was to investigate the influence of instructors from the National Outdoor Leadership School (NOLS) on student learning, specifically, learning perceived to be transferable.

The present study examined National Outdoor Leadership School (NOLS) courses. Established in 1965, NOLS offers programs in adventure-based education combining instruction in leadership, risk management, technical outdoor skills, ecology, and environmental ethics. Specific courses range widely in age from youth programs (14-16), college age students, participants over the age of 25, and individuals over the age of 18 with interest in working as outdoor educators with NOLS or other adventure-based programs. Course length ranges from 8 days to 135 days. Courses at NOLS distinctly target the development of six outcomes: leadership skills, communication skills, outdoor skills, environmental awareness, small group behavior, and judgment. Respectively, within these outcomes, several intermediate skills receive instructional attention including: decision-making skills, feedback skills, hazard avoidance techniques, Leave No Trace skills, self-awareness, and route finding (Gookin, 2006).

This particular study examined three NOLS courses, each approximately 30 days in length. Two Wind River Wilderness (WRW) courses backpacked exclusively in the Wind River Range while the third course was a two-part program (Rock and River – RAR), with time divided equally between a base-camp style rock climbing program and a river rafting expedition. A convenience sample (Miles & Huberman, 1994) was used to gather responses to semi-structured interviews from 34 participants across the three courses. Interviews were conducted on July 18, 2008 in Lander, WY after students had returned from their field experiences. The participants in this study were 24 males (71%) and 10 females (29%). The average age of participants was 17 years (age range = 15 – 20 years).

## Method

This was an exploratory case study attempting to illuminate the nature of instructor influence on learning outcomes. A qualitative approach of semi-structured interviews was utilized to gather data due to

the method's usefulness when working within a limited knowledge of variables and utility in providing rich description (Fontana & Frey, 2008). Furthermore, semi-structured interviews, within the context of a case study, allow meaning to be conveyed through dialog which can be useful when relationships between variables are unknown (Marshall & Rossman, 2006).

The interview team was comprised of three researchers. Each interviewer has extensive (10+ years) field experience working as an educator in adventure-based programs. In addition, the interviewers were familiar with current research and literature in adventure education, youth development, and quality course components. In an effort to be reflexive, it is worth noting the researchers' previous experience and knowledge functioned as a lens which influenced how they heard and reacted to participant responses during the interviews. These biases are inescapable, yet their recognition is useful amidst the subsequent collection and interpretation of the data.

Interviews were a combination of structured questions and follow-up questions to generate further description and meaning. The interviews began with general questions regarding each student's initial reflections on the course in an effort to build rapport and encourage reflection. Subsequently, the first structured question was asked: "What do you think is the most valuable thing you learned from one of your instructors that you will take back with you?" A variation of this question developed through the interview process as the researchers began to hear students talk about their instructors collectively. In response to participants' meaning-making about how they learned specific outcomes, a new question was developed: "In terms of your instructors, or a particular instructor, what do you think you learned most from them that you will take back with you?" This question was designed to focus the participant on the instructor variable and specifically the most *transferable* outcome learned via the instructor. Recognizing that "take back with you" may not fully capture the notion of transferability, the primary research interest regarded the specific impact of the instructor. Thus, the students' responses may have represented more broad concepts of learning rather than learning they will use in a different context after the course (i.e. transferable learning). Following each participant's response to the first structured question a second was asked: "What was it that your instructor(s) did that helped you learn this (the answer to the first question)?" Clarifying questions followed in varying degrees based on the nature of the participants' descriptions and willingness to expound on their responses.

### Data Analysis

All data were collected on July 18th, 2008. Of the 34 interviews, 9 contained small portions which were inaudible due to recording complications. Six of these 9 interviews contained large enough portions of audible data to be deemed useable for analysis. Two interviews were completely inaudible and the researchers' field notes were coded in place of the participants' transcribed responses. Lastly, despite researchers' field notes, one interview was not retrievable and was not available for analysis. This left a total sample of usable data from 33 interviews conducted by the researchers.

Data were analyzed via a thematic reduction, specifically utilizing methodologies advocated by Spradley (1979). Once data were transcribed verbatim, two researchers independently identified salient instructor influences. The instructor influences were developed from *emic* perspectives (expressed in the students' words) and *etic* perspectives (summarized in the researchers' words). After independent coding, the researchers discussed the labels and determined the best fit for the few cases of disagreement. This discussion minimized repetition so that each theme was the smallest independent unit representing students' perceptions and also ensured that idiosyncratic responses were not represented as being salient across the population. To this end, 16 initial types of instructor influence were reduced to 12 salient types of instructor influence. The instructor influences were then grouped with other like influences in the process of taxonomic analysis (Spradley, 1979) into two broad themes or categories for the 12 new themes (now considered sub-themes i.e., X is a type of Y). Each students' narrative varied in length and number of responses, based on follow-up questions. Thus, a unit of analysis, or denominator, for reporting percentages of the presence of specific themes is not available (nor epistemologically appropriate).

### Results

The results presented herein are organized into two major types in the context of student learning: instructor characteristics and instructor behaviors. From a behaviorist perspective, it is arguable that all actions are behaviors. Whether it is tying a knot or listening, all we can observe are behaviors. However, the data suggest that students perceive particular characteristics within instructors which cannot simply be relegated to a behavior; rather, these characteristics were simply *who* the instructor was. For example, when asked what his instructor did to help him learn leadership (a response provided to the first question),

one participant responded, "Hmm, that's hard 'cause I learned a lot of stuff from Jeff and this other rock instructor, Marcus, because he really helped me learn, he was just a funny guy." The student continued to discuss how the humorous nature of the instructor's personality enabled him to learn transferable skills. In an effort to be true to the data, we have chosen not to reduce these traits to specific behaviors (i.e., "told jokes") because, many times, the respondent's perceptions of these influences were simply who the instructors were at their very *"being"*, not how he or she behaved. Therefore, one theme of instructor influences on student learning is referred to as instructor characteristics (either biographical or personality-based). The sub-themes or types of influence include being patient, knowledgeable, empathetic, inspiring, and fun/entertaining. Logically, the other emergent theme of instructor influence was related to instructor "behaviors" or actions, with sub-themes including: providing feedback, role modeling, direct instruction/coaching, creating a supportive learning environment, managing risk (lessons and activities), providing formal curriculum, and using a "pet" quote or phrase. All results presented in blocks or quotations are verbatim, in addition, to protect the identities of the study participants, actual names have been replaced with pseudonyms.

*Instructor Characteristics*

> *Patient.* Participants identified the impact of a patient instructor in learning particular skills or difficult concepts, either as a result of the difficulty of the task or their own perceived limitations. Daniel, a student who enjoyed the rock climbing section and felt the skills he will use the most upon returning home are the technical climbing skills, recalled the following when asked what he believed his instructor did that helped him learn:

> Jeff would have no problem telling me what we need to do over and over again. Cause, I have pretty bad ADD. When someone tells me something, I would have no idea what they told me 5 minutes later... He would just explain things over and over in the most calm manner.

The above student recalled the instructor's patience as an influence which helped him learn a skill he may have forgotten otherwise.

*Knowledgeable.* Student perceptions of instructors' knowledge appeared to influence particular types of student learning, specifically outdoor skills and leadership. Perceptions of instructor knowledge were developed both through observations of an instructor and developing an understanding of an instructor's previous experience or expertise. Stu-

dents recalled distinctive adventures or previous experiences their instructors had which, ultimately, inspired them to learn a lesson they felt they would use upon returning from their course. One student who learned how to surmount unexpected challenges explained how the instructors' previous experiences inspired him:

> "Javier the older one had done a lot of stuff, like he had been to Antarctica and he was Australian, and Richard had done the Alaska stuff, and they had all been backpacking all their lives... I think the instructors personally had a lot of experience and stories. Like one of the instructors, Eric, told us a story about a polar bear clawing at the door and how they handled it. Just kind of an awesome story"...

Another student felt he will use both cooking skills and leadership skills after his course, because of his instructor, stated it simply: "Heinrich was just so knowledgeable, 'cause he had been doing it for so long."

*Empathetic.* Several students identified the instructors' ability to listen to their concerns and make them feel validated and understood. One student expanded on how her instructor helped her develop self-awareness and begin to have fun:

> She was my counselor. When I was feeling really homesick, she would say, "It's ok, it's really normal. You can talk to me about anything you want..." She helped me, to help work on realizing that the soft skills are just as good as the hard skills. Because that is what I was good at out there.

The above quote emphasizes the trait of empathy as the instructor explained it is understandable (to feel a certain way) and helped her value her own strengths.

*Inspiring.* Participants indicated that something about the instructor was notable. Unable to completely articulate this concept, some students enumerated the characteristics of their instructors in such a way that they took on a role of a celebrity whom she admired or an individual whom she aspired to become. The following is a response a student provided explaining how she learned leadership from her instructors:

> Lewis was like very at peace with himself, very Zen. It didn't rub off on me, but it made me think about what I thought about things. Carmen was like the sweetest person ever, so nice, and really there for all of us, especially the girls. She helped me on, like, really hard days and become aware of myself and that I can do everything that I set my mind to. Will was a really good example because of all of the hard skills I wanted to be good at. He also would say how he has problems with his communication, but then he would have the coolest reaction to emotion. They were just all

really cool people that I might try to be like and just people that I look up to.

As demonstrated above, the influence of inspiring instructors was generally noted by students through an identification of characteristics perceived to comprise each instructor as a person.

*Fun/Entertaining.* Some participants, when prompted to reflect on their instructors' influence, identified an instructor's overall entertaining nature and how it helped them learn things they will use in the future. One student mentioned how he believed, on some level, he learned to function more effectively in groups and explained he learned this from "this one instructor who was crazy and did card tricks." Another student felt she learned technical rock skills from her instructor because of his ability to have fun when appropriate and noted, "Jerry really showed me that you can still, like, have fun but be really safe. He always made us laugh and stuff like that but then he always took climbing really seriously."

Another student explained he will use problem solving skills gained from his instructor because:

> …everyone was willing to take Gill's input, and so you took it 'cause it worked… He was a good climber, he was a good instructor, and he was entertaining, he always made it a fun day out of the activity we were doing.

Students appeared to be open to learning from a particular instructor who was perceived to be fun or entertaining. This characteristic may have elevated the instructor to the position of someone they preferred to learn from and, ultimately, resulted in perceptions of learning.

## Instructor Behaviors

In addition to instructor characteristics, instructor behaviors were found to influence students' perceptions of learning transferrable skills. Instructor behaviors are *actions* performed by instructors and recalled either specifically by the students or synthesized by the researchers into a representative etic code.

*Providing Feedback.* Interestingly, instructor-provided feedback was identified as both a positive and negative influence on learning. Several students mentioned feedback as a useful means of identifying areas for development which were previously unknown, clarifying concepts, or formulating solutions. Specifically, one student who expects

to take the leadership skill development from his course back home explained how instructor feedback created this opportunity:

> …talking one-on-one and check-ins when we had free time if we had some questions, we'd get feedback to help like fix some stuff. I didn't pay attention to if people were afraid to do something sometimes a little bit on our trip. I wasn't, like, super tolerant of that and then I'd ask for help on like how to listen to that stuff that I don't really understand as well. I think it really helped out a lot.

Another student who learned the technical skill of identifying hazards on the river from his instructor's feedback explained:

> … at the end, from the feedback, I learned a lot more from the river section (than the rock section). I wasn't aware of certain things that I was doing. Just stuff that I didn't realize when I was on the river, I was doing stuff that I probably could have done that was safer…

Although, only one student noted the negative aspects of instructor provided feedback in the interviews, we feel its significance as an outlier provides rich data which may contradict assumptions surrounding the overall usefulness of feedback. This alternative perspective was discovered when a researcher specifically asked about feedback and the response was an unexpected level of description and emotion regarding the summative feedback provided to the student at the end of the course. As a result we felt it was worthy of inclusion here:

> They were awful when we sat down and they gave me the overall feedback. Like I thought I did just fine and felt so gypped by this grading system...I mean I'm also just a really natural leader or whatever. I guess it sounds stupid 'cause it says leadership (in the name of the school) but I didn't really come to NOLS to perfect my leadership. I came for the outdoor experience…, I don't know it's just kind of frustrating that, like, I got graded on things that I wasn't, like, here for.

It appears, from the above examples, that the instructor behavior of providing feedback has the potential to influence students in a variety of ways.

*Role Modeling.* Participants appeared to have learned several skills through observing their instructors. Several students mentioned watching their instructors react (or not react) to circumstances such as an impact on the natural environment or a difficult time on the river (respectively). One student who learned how to deal with difficult situations from watching his instructors stated:

The instructors were always just really, really positive. They were, [in response to a boat wrapping on a rock] "It's ok, we still have a lot more that we need to do, (and) that we can do." In one instance, it was the matter of not dwelling on something that happened and just moving on to something better and more fun basically.

Another student who learned Leave No Trace skills as one of the most valuable things he will take back with him noted:

As for the LNT piece they were always on top of it. They were always reminding us and conscious of what we did and what was around us. They did an excellent job of setting the example and leading by example.

*Direct Instruction/Coaching.* Direct instruction or coaching was an instructor behavior consistently perceived by students to influence learning. Students commonly referred to a teaching practice which involved instructors demonstrating a particular skill and subsequently providing opportunity for practice and correction of student errors. This description accurately fits the key components of both direct instruction and coaching (More & Franks, 1996). Both terms are noted here as they are used somewhat interchangeably in the traditional education and adventure education literature. The following participant described how his instructors coached him and he indicated this was the reason he learned the technical river skill of rolling a kayak which he intends to use when he kayaks in the future. He noted:

They were out of their boats, you'd kind of hold their hands and work with your hips. If you couldn't get it they would be right there and flip you back over. They'd tell you what you were doing wrong and what you could do to better yourself.

Another student explained, "A lot of the stuff on the river was taught by demonstration, which worked really well. The way they taught how to roll worked really good because they would stay in the water with us and hold our paddle." Lastly, another student explained how his instructor would differentially utilize direct instruction to help him and other students while rock climbing , "Oh, Jared, would be like, 'oh do this' or not help us until we were stuck and then he'd be like, 'do this, this, and this'."

As the quotes denote, coaching and direct instruction were typically mentioned in reference to learning technical outdoor skills such as climbing or paddling where a specific set of motor skills was necessary for success. It appears instructors who utilized these strategies were perceived to be effective.

*Creating a Supportive Learning Environment.* Implicated with the above instructor behaviors, instructors were seen as individuals who could create environments which were supportive in nature. This theme has similarity to the instructor behaviors of providing feedback and direct instruction/coaching, yet was distinct enough in participant responses to be identified as an independent type of instructor influence on learning. For example, the following student mentioned learning how to kayak as a skill he looks forward to using upon returning home; in the context of being coached, he calls specific attention to the environment in which he was learning:

When we'd be rolling or trying something new, like I tried the hand roll I kind of got that down, they were just all really psyched no matter what happened they were just like, "oh, you're so close keep it up". It was just good support.

The above quote demonstrates how the cheering and supportive behaviors of the instructors helped him learn a skill he intends to use in the future.

*Managing Risk.* Many of the students were acutely aware of the risks present in the adventure education setting. A salient theme which emerged surrounding the presence of risk was how an instructor verbalized or demonstrated the management of risk and provided the student with an opportunity for learning a transferable skill. One student clearly explained this phenomenon:

In the river section it would have been Larry, who said experiment! Figure a few things out on your own. If you're about to really do something wrong I'll grab the oars and we'll figure something out and get through it together.

Another referred to the management of risk in the context of rock climbing, "He let us push our limit without feeling like we were doing something dangerous." Similarly, another student referred to this instructor behavior while expanding on how he learned leadership skills:

Um, my instructors did a really good job of finding a balance between telling kids everything and letting them figure it out for themselves. Letting them take risks they could manage and not telling them everything.

Most commonly, the instructor behavior of managing risk was related to learning technical skills or leadership where physical risks were present.

*Providing Formal Curriculum.* Several students explained they learned a transferable skill from their instructor and described a par-

ticular lesson as an instructor behavior. Leadership development and self-awareness were skills commonly associated with formal lessons. The following student expanded on how he learned leadership and self-awareness most from his instructors by explaining:

> Um, well there was one really cool activity that was on a continuum of where you are or what you are like with people... It gave you some perspective on like how you were seen by the group and it was just really cool.

Another student who learned leadership through the curricular component of "Leader of the Day" attributed this learning to her instructors when she noted:

> Well, they asked people to be leaders, and everyone had to take turns doing that and it gave me the opportunity to do that and when it worked out at the end of the day. That was really good.

In addition to the above behaviors for providing formal curriculum, students mentioned regular classes every night and instructors "using a whiteboard" as influential instructor behaviors in the process of learning skills.

*Using a "Pet" Quote or Phrase.* A few students who learned transferable lessons attributed this learning to their instructor verbalizing a particular saying during opportune times. It seems that a simple quotation surfacing throughout the course made a lasting impression on several students. One student who learned commitment from her instructor recalled the instructor saying, "It ain't over till it's over." Another student explained he learned to deal with challenge on the first night of the course amidst "awful mosquitoes." The student recalled the instructor saying, "Leadership qualities: Tolerance for Adversity, you're practicing." Interestingly, no single quote was mentioned by more than one student, suggesting that the quotes resonated differently with particular students. The above examples illustrate the presence and influence of instructors who utilized a "pet" quote or phrase in the present study.

## Discussion

The findings of the present case study demonstrate the multifaceted nature of instructors' influence on student perceptions of learning. Two major categories of instructor influence, instructor characteristics and behaviors, were identified and are supported by previous research (e.g., Aguiar, 1986; McKenzie, 2003; Phipps & Claxton, 1997; Riggins,

1985). In addition, the findings of this study provide description and offer additional detail to further explicate these categories. Specifically, the data identify the nuances of instructor characteristics of being patient, knowledgeable, empathetic, inspiring, and fun/entertaining. Likewise, emergent themes within instructor behaviors, including providing formal feedback, role modeling, direct instruction/coaching, creating a supportive learning environments, managing risk, providing formal curriculum, and using a "pet" quote or phrase further illuminate how instructors influence learning skills through specific behaviors.

### Instructor Characteristics

Beginning with instructor characteristics, patience is not previously mentioned in the adventure-based empirical research; yet, it emerged from this data as a salient influence in student learning. Though not identified in the research literature, patience is present in the current texts used to train outdoor educators (e.g., Gookin & Leach, 2008). The findings in present study add support to the common understanding in training materials for NOLS instructors that a patient instructor can be an influential instructor.

Instructors who were perceived as knowledgeable were cited by students who learned both technical skills and self-awareness. It appeared that particular instructors who "know what works" appeared to be influential in the process of learning transferable skills. Similarly, Luckner (1994) identified the importance of instructor knowledge and recommended, "to ensure that students have meaningful experiences, [instructor] skill improvement should be a primary objective of educators in outdoor adventure settings" (p. 61). It seems that Luckner's suggestion may have gained research-based support from these findings. The caveat however, is to consider if an instructor is able to increase her knowledge and students' perceptions of her knowledge through skill improvement.

The findings in relation to being empathetic were in agreement with Hopkins' (1982) identification of empathy as an important instructor trait. The author found the effects of an instructor who lacked empathy could negate the positive effects and personal development resulting from participation in an adventure experience. In the present study, empathetic instructors were connected with the development of self-awareness and communication skills.

Instructors who were inspiring individuals, were found to influence the perceptions of skill acquisition. Several participants mentioned instructors' travels and adventures prior to the course as a mechanism for learning skills. This description may be similar to Riggins' (1985) bio-

graphical characteristic of having "traveled for long periods of time" (p. 8) as a characteristic correlated with enhanced effectiveness. Though these two characteristics are not exactly the same construct, they are similar in that each refers to previous travel and experiences which may subsequently influence student learning. Furthermore, Riggins (1986) proposes the potential influence of instructors as serving in a "hero's role, persuading students to adopt program values as guides to subsequent behavior" (p. 4). The findings of this study appear to support Riggins' proposition: inspiring instructors were found to influence learning leadership skills and personal development (e.g., commitment). Interestingly, McKenzie (2003) included a student quote referencing instructors as "inspirational", yet neglected to include this specific characteristic in her proposed model of student learning.

Being fun and entertaining is an instructor characteristic emergent in the present case study and is supported by research in teacher effectiveness. Specifically, instructors who are humorous can maintain student interest (McKeachie & Svinicki, 2006). This support comes with a caution that students may remember the humor and not the content or, worse, an instructor's humor disengages the students and any subsequent attempt to use humor causes students to lose interest or become uncomfortable. In the present study, students learned a variety a skills through humorous instructors including technical skills, small group functioning, and self-awareness. This is not a blanket endorsement of humor in teaching, but clearly demonstrates how appropriate humor can be used to engage some students.

*Instructor Behaviors*

With respect to the influential instructor behaviors, role modeling was found to influence the perceptions of student learning. This behavior is generally accepted as a useful means to develop student learning in adventure education. Gookin explains, "Students learn from watching us (instructors) be good campers, safe climbers, effective leaders, positive expedition members, and skilled problem-solvers" (2006, p. 11). The findings in the present study support this premise and are consistent with the existing model (McKenzie, 2003) that role modeling is an influential instructor behavior.

Both the positive and negative influence of feedback from instructors found in this study is consistent with the literature in the field of general/traditional education. Findings from White's (2007) investigation of 68 pre-service teachers indicated that feedback which celebrated successes, was directed specifically at behaviors, and highlighted areas for improvement was perceived by students to have the most influence on development. In a meta-analysis of feedback interventions, Kluger and DeNisi (1996) explain that feedback has not uniformly improved performance and that, in some conditions, feedback can "debilitate performance" (p. 254). Specifically, differing and unclear goals have been shown to be detrimental. Kluger and DeNisi's findings account for the participant who had a negative experience resulting from summative feedback and students who also had positive experiences. These results support the inclusion of feedback as an instructor-level influence of student learning as identified in McKenzie's (2003) model of student learning in adventure education. However, it should be understood that poorly provided feedback or feedback about program areas the student is not concerned with, can produce negative results.

The data in this study suggest direct instruction/coaching is an effective behavior for instructors to enhance learning, specifically of technical skills. Anyone who has been taught a technical skill, such as a J-stroke, how to use a throw bag, or swing an ice tool, would intuitively agree with these findings. Not surprisingly, the literature in adventure education (e.g., Gilbertson, Bates, McLaughlin, & Ewert, 2006) and behavioral/motor science (e.g., Carroll & Bandura 1982, 1985, 1987) is compatible, as well. Students in this sample learned from sound demonstrations and opportunities for guided practice amidst feedback.

The instructor behavior of creating supportive learning environments was present in this study and is also noted in previously established frameworks such as Walsh and Golins (1976), who recommend prescribing social environments which include trust and support. Furthermore, NOLS specifically addresses this construct, referring to it as a "positive learning environment" (Gookin, 2008, p. 16). The presence and influence of instructors creating a supportive environment in this study suggests it may be useful for inclusion in future models of student learning, as it has been removed in the model offered by McKenzie (2003).

Participants consistently identified instructors managing risk as an influential component of learning particular skills. This behavior involved instructors allowing and, in some cases, encouraging students to "experiment" in settings and situations the student would normally deem too dangerous for experimentation without guidance. Nicolazzo (2004) clearly delineates this process called stationary site management, which is an environment created by an instructor. Instructors can choose a site limited by physical boundaries, for example, a specific rapid or a top-roped climbing site, and ensure a "high degree of communication, ease and availability of feedback, and a high degree of instructor control over safety" (p. 12). Stationary site management allows students to perform to failure amidst perceived or actual objective hazards but where an instructor can safely intervene, if necessary. Findings

in the present case study indicate that, when instructors acknowledged a stationary site to students, either verbally or through other actions, students felt they had learned.

Instructor behaviors linked to the provision of formal curriculum were an emergent theme in the data and consistent with previous findings (Sibthorp et al., 2008). In an examination of course aspects that influence outcomes, McKenzie (2003) found "formal curriculum presented by instructors" (p. 14) plays a determining role in outcomes and was mentioned overwhelmingly more times (45) than any other instructor role (instructors as role models was the next most frequent with 19). Program directors and curriculum managers may view this finding as encouraging, in that this is one area where instructors can be utilized in the process of delivering pre-established activities and lessons to promote student learning.

The final instructor behavior found to influence learning was using of a meaningful "pet" quote or phrase. Initially, this instructor behavior seemed idiosyncratic, yet it continued to emerge from the process of data analysis. Though no one particular quote surfaced as consistently influential across participants on a single course, it appears that some students' learning of transferable skills was enhanced as a result of this behavior, perhaps due to the concise nature of the "lesson" being taught.

In sum, several of the instructor characteristics and behaviors are supported by the current literature and adventure-based student learning models, while several additional influences were discovered through data analysis. In total, the present case study illuminated 12 types of instructor influence on student learning, 9 of which add an additional level of description to McKenzie's model (2003). While McKenzie's model does not distinguish between types of outcomes, the study examined both transferable and immediate outcomes. As noted previously, the present study focused on students' perceptions of the instructors' role in learning which was perceived to be used in the future, student responses may have been more specifically related to learning on course. Furthermore, the students have not yet returned to the home lives and had opportunities to transfer their learning. A summary of influential instructor characteristics and behaviors is shown in Table 1. For clarity, McKenzie's model is not shown in its entirety as the model includes several other course components such as the physical environment, social environment, and course activities, in addition to instructors. The table first shows instructor components present in McKenzie's existing model and then for comparison, the results of the present case study are shown. The table demonstrates the additional variables present in the current study but not delineated in McKenzie's (2003) model.

### Limitations

As with any case study, readers should use caution when considering generalizing the findings of this study. Participants in this study were not representative of the typical NOLS population nor the general population of participants in adventure education. Though they may be informative for considering existing theory, the data from this study are contextually bound and difficult to extrapolate to other contexts. Furthermore, due to complications with the recording technology, small portions of several interviews were irretrievable and this lost data may potentially have changed the meanings and interpretations of researchers in the development of salient themes. In addition to technological difficulties, the interviews were conducted by three researchers who each brought with them individual biases and perceptions. A single researcher as the interview instrument (opposed to three interviewers) may have reduced the variation in student responses and lent further consistency across all semi-structured interviews.

Table 1

*A Summary of Influential Instructor Characteristics and Behaviors*

| McKenzie's (2003) Instructor Components | Influences of the Instructor in the Present Case Study | |
|---|---|---|
| Instructor | Instructor Characteristics | Instructor Behaviors |
| Characteristics | Patient* | Role modeling |
| Expectations | Knowledgeable* | Providing feedback |
| Role modeling | Empathetic* | Providing formal curriculum |
| Feedback | Inspiring* | Creating a supportive learning environment* |
| Competence in formal curriculum | Fun/Entertaining * | Managing Risk* |
| | | Direct instruction/Coaching* |
| | | Using a "pet" quote or phrase* |

### Implications

The results of this study produced several outcomes: (a) an identification of additional variables for consideration in an adventure education student learning model; (b) a student-based conceptualization of the two major types of instructor influence on student learning (characteristics and behaviors); and (c) data representing the students' voice and perceptions which may inform practices at various levels including instructor practices, hiring considerations, and program design. McKenzie (2003) includes the instructor as 1 of 5 interactive course

components which influence student learning in adventure education. This study focused solely on the instructor component and discovered the presence of role modeling, instructor feedback, competence (knowledge), and the provision of formal curriculum as influential instructor level variables. In addition, several variables emerged from the data which merit further examination in subsequent studies and consideration for inclusion in a more descriptive model of instructor influence. These additional variables include the instructor characteristics of being empathetic, patient, inspiring, fun/entertaining, and knowledgeable. Variables in the instructor behavior domain include managing risk (and verbalization of managing risk), using a "pet" quotes or phrase, and consciously creating a supportive learning environment.

It is difficult to recommend to instructors and practitioners that an individual should "act" according to each of these types of influence in order to achieve desired outcomes. Student perceptions of instructor characteristics comprised who particular instructors were at their "being" and an effort to put on a costume of humor or knowledge which does not fit might be perceived as inauthentic and ineffective. This is the difference between students' perceptions of instructor being and behaving. Instructors can likely learn and adopt behaviors but personality traits are more difficult to develop.

The field of positive psychology asserts that positive character strengths and virtues (traits) are somewhat innate in everyone and that an *enabling institution* can help bring these positive traits to the surface. They also assert that there is no clear boundary between many character traits and behaviors and that instead there is a continuum from being to behaving (Peterson, 2006).

Lastly, in relation to informing practice, these findings illuminated several themes which may be worthy of attention and useful in application. Instructors who transparently managed risk and verbalized when students could experiment to the point of failure were shown to enhance the learning of transferable skills. As per Nicolazzo's (2004) recommendations, instructors should utilize sites where instructor control is great and potential to intervene safely exists, yet students are allowed by the instructor to experiment. Likewise, these contexts should be verbalized to students in an effort to encourage the development of skills.

Instructors should be aware that, although feedback is generally accepted as a universally beneficial process in adventure-based learning (Hattie, Marsh, Neill, & Richards, 1997), feedback can result in both positive and negative outcomes. Feedback directed at specific behaviors and which highlights areas for improvement was found to be effective in this study. In contrast, summative, performance related feedback that was not consistent with participant goals appeared to produce negative feelings and perceptions.

It may be useful to identify small quotes or phrases which clearly summarize a desirable learning outcome. Many instructors already practice this technique and use these quotes during "teachable moments" (Drury, Bonney, Berman, & Wagstaff, 2005). This practice is encouraged as it was shown by the participants in this study to influence learning leadership, tolerance for adversity, and commitment. The use of a "pet" quote or phrase by instructors may have been effective as a result of the sample population age being accustomed to short bits of information which are commonplace in the current era of technology.

Staffing directors may be encouraged by these findings for a few reasons. First, the instructor characteristic of being inspiring may be implicated with extensive travel experience (Riggins, 1985). This is a common characteristic of outdoor educators who often travel between seasonal work periods. It is encouraging to see this variable present in the data as it is often an inherent quality of adventure-based instructors. Furthermore, and perhaps more broadly, staffing coordinators may choose to consider ways to screen for the instructor characteristics identified in the study in addition to the behavioral components or possession of particular and necessary job performance skills.

In regard to considerations for program coordinators, case study participants perceived the instructors as curriculum providers to be an influential learning mechanism. The presence of this influence on learning sheds light on the importance of identifying and developing effective curriculum which can be subsequently provided to program staff via trainings and course curriculum materials. Lastly, instructor knowledge was perceived to influence the learning of transferable skills. This may support programmatic efforts to offer continuing education trainings to staff to the extent that training is an effective means of increasing students' perceptions of instructor knowledge. Moreover, the findings in the present study support the provision of trainings not only in the behavioral domains (e.g., outdoor skills or instructional strategies) but also trainings attending to the development of character traits (e.g., patience and empathy).

In conclusion, instructors comprise one of the major components in adventure-based education. Instructors are individuals who bring with them inherent personality traits, experiences, and unique biographies, all of which influence student learning of transferable skills. In addition, behaviors that instructors exhibit on a course can have a profound impact on student learning and many of these behaviors can be performed with forethought and intention. Ultimately, instructors in the present study were a powerful mechanism in adventure-based student

perceptions of learning through influences stemming from both, instructor characteristics and behaviors.

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