DISSERTATION

WHAT WERE YOU THINKING? DO WILDERNESS LEADERSHIP GUIDES' ACTIONS

MATCH THEIR EMPLOYERS' INTENTIONS IN HIRING A GOOD EMPLOYEE?

Submitted by

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ABSTRACT

WHAT WERE YOU THINKING? DO WILDERNESS LEADERSHIP GUIDES' ACTIONS

MATCH THEIR EMPLOYERS' INTENTIONS IN HIRING A GOOD EMPLOYEE?

This study explored the hiring effectiveness in wilderness leadership professionals. A gap

in the wilderness leadership body of knowledge identified a need for the understanding of

judgment, decision-making, and leadership in wilderness leadership professionals. An

understanding of these concepts will be beneficial to those that hire and train wilderness leaders.

The study involves two phases. The first phase explored wilderness leadership practitioner

considerations when evaluating an applicant's level of good judgment, good decision-making,

and strong leadership that comprised one's expertise. Eleven hiring practitioners from the

wilderness leadership industry were interviewed in a semi-structured, qualitative format. The

interview explored how the practitioner knew if a future employee has the judgment, decision-

making, and leadership. A narrative ethnography was used to analyze the seeking emerging

themes in the data. Six themes developed from phase-one. They were the applicant's character

and reputation; applicant's holistic approach, awareness, and people skills; applicant's

experience, references, certifications, and skills; practitioners observing leadership in action; and

applicant/practitioner using mentoring, apprenticeship, and empowerment. The second phase was

a phenomenological ethnography; it investigated the wilderness leader's internal process of

judgment to examine if they made good decisions and executed strong leadership in the field.

This involved field observations and robust field notes to record instances of decision-making

and leadership. Conversational interviews were conducted post-observation. They were designed

to reveal a leader's judgment or their internal process. The participant was reminded of the field observation moment and then asking them "what were you thinking?" to discover their internal process. This was identified by their external process of making a decision or the execution of leadership. Themes emerged regarding one's judgments that lead to their decisions and leadership. The themes were communication, safety, and teaching tactics. Finally, a triangulated approach in the discussion and synthesis chapter investigated if wilderness leadership organizations were hiring the caliber of employee they intended, which was revealed through semi-structured interviews multiplied by the actions of the professionals they hired. The study's emergent implications were accountability, mentorship, and leadership in action. Recommendations were made for hiring practitioners in the wilderness leadership industry.

ACKNOWLEDGEMENTS

"Wilderness is not a luxury, but a necessity of the human spirit."
— Edward Abbey, Desert Solitaire

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To all of my unnamed subjects, thank you for caring about our industry enough to participate in this study. I truly hope this work helps the industry become stronger, safer, and more robust.

DEDICATION

To our grandchildren's children.

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CHAPTER 1 INTRODUCTION

Wilderness leadership industry pioneers such as the National Outdoor Leadership School (NOLS), Outward Bound, and the Wilderness Education Association (WEA) educate and train tomorrow's wilderness leaders. Paul Petzoldt was the founder of NOLS (1965) and the WEA (1977), he also worked for Outward Bound, and trained in the US Army's 10th Mountain Division. Petzoldt is considered a wilderness leadership icon and dignitary. He asserted, "leadership and judgment could be taught with more technical outdoor skills" (Wren, 1999, p. A15). Paul Petzoldt also wrote:

> Skill level is not the most important part of outdoor leadership. Having judgment is the most important aspect. Another important aspect is knowing one's limitations and knowing one's ability. Having judgment to accept leadership within one's limitations [sic]. Since faulty planning is responsible for about 75% of deaths, accidents, search and rescue and plain unrewarding trips [sic]. Being taught the knowledge and judgment of how to plan a trip is indispensable to trip leadership. (Wagstaff and Cashel, 2001, p. 164).

Bob Rheault, a 32 year Outward Bound wilderness leader and 26 year Green Beret veteran from the Vietnam War, was quoted in a tribute piece highlighting his tenure at Outward Bound that "leadership and ethics are [were] not separate" and "that the leader has good judgment and the personal restraint and integrity to act on it [good judgment]" (Chatfield, 2004, p. 5). Propst and Koesler's (2009) review of the literature, "the outdoor leadership literature places more emphasis on behaviors and developmental skills (i.e., judgment and decision-making), mentoring, and ongoing feedback as valuable components of the leadership development process (Cain, 1985; Priest, 1990; Hunt, 1984; McAvoy, 1980; Petzoldt, 1984)" (p. 321).

Certifications are an industry standard that attempts to safeguard that guiding professionals have appropriate skill sets to perform their jobs safely. Over the past 20 years, an increasing emphasis of certification credentials for nature-based recreation industry has become the norm, although these credentials are for the most part activity-specific. For example, swift water rescue usually resides within the white-water river community, or an AMGA (American Mountain Guides Association) certification resides within the mountaineering community. Commonly, at a minimum, WFR (Wilderness First Responder) certifications is required industry-wide for wilderness guides in the United States. Currently, there is not a formal discussion and very little research in the industry of how to determine expertise within the wilderness leadership industry or how to measure actual leader judgment, decision-making abilities, or leadership skills. Expertise is looked at as an umbrella over judgment, decision-making, and leaderhsip in this study. Furthermore, there is no formal discussion and very little research in the industry to verify if a potential or existing employee will execute sound judgment and decision-making or use good leadership skills regarding issues that directly affect clientele and group dynamics as a whole. Several studies have demonstrated expertise as the ability to rapidly identify relevant cues that lead to optimal outcomes according to Klein (1999). He also infers that concepts of judgment, decision-making, and leadership are key components of expertise within a profession, such as wilderness leadership, where outcomes are as critical as life or death (Klein, 1999). This view of expertise is highly relevant to the primary activities of persons professionally engaged as wilderness leaders complimented by sound judgments, good decision-making abilities, and strong leadership skills.

The concept of wilderness is defined by the Wilderness Act of 1964 as "lands designated for preservation and protection in their natural condition" Section 2(a); "an area where the earth

and its community of life are untrammeled by man" Section 2 (c); "an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvement or human habitation" Section 2 (c); "generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable" Section 2(c); "has outstanding opportunities for solitude or a primitive and unconfined type of recreation" Section 2(c); and "shall be devoted to the public purposes of recreation, science, scientific, educational, conservation, and historic use." Section 4(b).

This is a two-phase study; phase one was a narrative ethnography that told a story of the culture of how guides are hired in the wilderness leadership industry, and phase two was a narrative phenomenology, investigating if guides in action exhibited sound judgments that lead to good decisions and effective leadership.

This dissertation will include five chapters. Chapter 1 is an introduction and chapter 2 an overall literature review relevant to the entire research effort. Chapters 3 and 4 will represent two distinct articles. The first article will explore how practitioners hire guides in the outdoor recreation industry, specifically in wilderness leadership. The second article will explore guides and their experience in the field. These articles are intended to stand alone, each to be submitted to a relevant peer-reviewed journal. Chapter 5 of the dissertation will represent the discussion, synthesis, conclusions, implications of the entire research effort, and ultimately recommendations for the practitioner. Pseudonyms and the disguise of identity have been required by the Intuitional Review Board (IRB) at Colorado State University (CSU). The articles are written to accommodate the specifications of the Journal of Experiential Education (JEE) since the pilot study presentation at the Association of Experiential Education (AEE) proved there is a very strong audience for this topic. They also meet the specifications for the Journal of

Outdoor Recreation, Education, and Leadership (JORL) which represents the Association of Outdoor Education and Recreation (AORE).

Purpose

This research explored and evaluated hiring effectiveness in wilderness leadership professionals. The purpose involved two components. The first component explored employers' considerations when evaluating an interviewee's level of and potential for positive judgment, decision-making, leadership, and expertise. The second component investigated the guide's thought process as they operated their expertise or lack of expertise. Specifically, wilderness leadership guides were observed for their decision-making and leadership execution, to discover their internal thought processes, defined as judgment, which lead to these decisions and leadership choices.

Overarching Research Problem

The research is aimed to address the problem of gravity, life and death judgments, decisions, and leadership in the field. Overall, does considering judgment, decision-making, and leadership help steer hiring strong applicants, as proven through hiring agent (from this point on referred to as practitioner) inquiry and in the field guide observation?

A Brief Introduction to Study Methods

Two separate articles were written. The first article explored how practitioners hired guides in the outdoor recreation industry, specifically in wilderness leadership. The second article investigated guides and their experience in the field. The intersection of the two articles resulted in a dissertation chapter called "discussion and recommendation for the practitioners" where the findings and results were analyzed and synthesized. Permission to use subjects' direct

quotes was granted from the Institutional Review Board (IRB) at Colorado State University (CSU). However, the CSU IRB required a place of employment and name, either not be directly mentioned or pseudonyms be used. Addressing qualitative trustworthiness for both articles can be found at the end of the methods section.

Article 1 Methods: Practitioners

Archival interview data from the original pilot study in 2012 was used. The pilot study reviewed two industry standard setters, one small organization, and one academic program member of an accredited wilderness program. Although a slice of the industry was looked at critically, the pilot study raised additional questions such as "Did other industry cornerstones affect the industry-wide discussion?" or "Do other industry standard setters like unique NPS (National Park Service) concessions in extreme environments provide different, and important factors influencing the hiring of guides?" As a result, a larger, more robust sample was chosen for the dissertation in hopes to ascertain a more complete picture of who is being hired in the wilderness leadership industry and exactly what the employer was searching for upon hire.

Population. The population for this study was practitioners from the wilderness leadership industry. All participants were a convenience sample coupled with deliberate sampling. Eleven participants were asked, and all 11 participants agreed to participate in the study. Two participants were from wilderness leadership guiding companies and were industry standard setters; three participants were from different accredited institutions affiliated with the WEA; two participants were from different Christian based wilderness leadership organizations affiliated with the WEA; one participant owns a wilderness medical company, wilderness curriculum writer, and wilderness medical standard setter; one participant owns a small private Colorado-based mountaineering company regulated by AMGA (American Mountain Guides

Association); one participant owns a small private Alaska based wilderness guiding company; and the last participant was the owner of a Grand Canyon river company that contracts to the USGS (United States Geological Survey and the Grand Canyon Monitoring and Research Center.

Research Questions. A series of questions were asked regarding expertise, judgment, decision-making, and leadership:

1. How do wilderness leadership industry employers discern good judgment in future employees?

2. How do wilderness leadership industry employers discern good decision making in future employees?

3. How do wilderness leadership industry employers discern good leadership in future employees?

Research Method. The method for the practitioners was an ethnography combined with narrative research as defined by Creswell (2013). The population was comprised of wilderness leadership professionals that exist within a culture that is defined by their vocation. The narrative research assisted in the dissemination of 11-recorded interviews.

Data Collection. After receiving approval from Colorado State University IRB office, data was collected in the form of recorded interviews conducted either face-to-face or over-the-phone. There were 23 interview questions (see Appendix A).

Method of Analysis. A coded thematic analysis was conducted (Glesne, 2011). Glesne noted that "with data coded in the same way" one will "figure out what is at the core of that code" (p. 187, 2011). An exploration of the relationships of the codes across and within

interviews was conducted. All Eleven interviews were recorded digitally and then integrated into Nvivo qualitative software. A rudimentary coding scheme was developed (Glesne, 2011) via the following process. Each interview was then listened to carefully and coded for topic relevance about individual research questions. Therefore, a vast multitude of possible answers was analyzed for similarities, trends, or notable gaps and differences.

Interview Questions. The interview questions are also referenced in Appendix A for future chapters of this paper.

Expertise Interview Questions:

1. Does your organization have expertise in judgment? Please elaborate.

2. Does your organization have expertise in decision making? Please elaborate.

3. Does your organization have expertise in leadership? Please elaborate.

Judgment Interview Questions:

1. How do you determine if a perspective employee has judgment?

2. How do you determine the quality of the individual's judgment?

3. If you use scenarios to acquire this information, please provide a common example of the scenario you offer to the prospective employee, examples of their answers, and please comment on your expectations of an answer that would be acceptable to your organization.

Decision Making Interview Questions:

1. How do you determine if a prospective employee has decision making?

2. How do you determine the quality of the individual's decision making?

3. If you use scenarios and/or observations to acquire this information, please provide a common example of the scenario or observations you offer to the prospective employee, examples of their answers, and please comment on your expectations of an answer that would be acceptable to your organization.

Leadership Interview Questions:

1. How do you determine if a prospective employee has leadership?

2. How do you determine the quality of the individual's leadership?

3. If you use observations to acquire this information, please comment on your expectations of observable measures of leadership that would be acceptable to your organization.

Organizational Interview Questions:

1. On average how many new hires do you have each year?

2. How many field staff do you have total?

3. How many clients do you serve a year?

4. How long have you been in the industry?

5. How long have you been hiring in the industry?

6. What is your position?

Article 2 Methods: Guide Observation and Interview

Research conducted for the second article of the dissertation explored the actions of guides while in the field, and the thought process behind those actions. I observed decision-making and leadership execution. Observations of decision-making and leadership in action provided qualitative evidence of when the internal process of judgment occurred. At the end of each course, I conducted extensive interviews with guides to examine their internal process of

judgment. I intended to unveil how judgments affect decision-making, leadership, overall expertise, colleagues, and clientele.

Population. The population for this study was a deliberate convenience sample. There were six participants, all who were guides/instructors in the wilderness leadership industry. Permission to use subjects' direct quotes was granted from the Institutional Review Board (IRB) at Colorado State University (CSU), and pseudonyms were required. Six guides in action participated in phase-two; a Chief Operating Officer (CEO) of a Christian wilderness program affiliated with the WEA; a Registered Nurse (RN), instructor of wilderness medical company; a medical doctoral student and instructor of wilderness medical company; two wilderness leadership instructors from an accredited institution that have both instructed in the wilderness for over 30 years, and have direct teaching experience with the three largest industry standard setters and the AMGA (American Mountain Guiding Association); and one ski instructor, skiing is considered a gateway wilderness activity.

Research Questions. Unstructured interviews took place. The interviews were directly guided by the observations and the resulting discussion I had with the guides. I observed events in the field. The lens used was looking for decisions made, and leadership executed along with situational circumstance. Based on the events observed, I interviewed each guide to review and discuss each event. The purpose of this discussion answered the following questions about each guide:

1.   Did the guide use good judgment in action in their workplace with both clientele and co-guides?

2.   Did the guide exhibit sound decision-making in their workplace with both clientele and co-guides?

3.   Did the guide exhibit sound leadership in their workplace with both clientele and co-guides?

Ultimately answers to these questions assisted in a broader assessment of the judgment, decision-making, and leadership that existed in the population of subjects.

Research Method. A phenomenal ethnography was conducted as viewed by Merriam (2002). The phenomenon to be observed was if guides were using good judgment that was expressed in decisions made and leadership executed. The ethnography focused on the culture of guides in wilderness leadership positions.

Data Collection. Field observations were made of a variety of wilderness leadership employees who spanned the spectrum of experience from new to a lifetime career. All data gathered was robust and through qualitative field notes. Each time a decision is made, or leadership being executed was observed, the facts were recorded on notebooks. The data gathered was based on the availability and willingness of the participants. Through accurate and detailed field notes, meticulous observations were made.

Each participant was then debriefed of the researcher's process (see Appendix B). The debrief informed the participant that I was not just observing their 'wilderness leadership' and that I had, in fact, used deception. They were informed that I was observing their decisions and leadership. The reason for deception was so the guide continued to make their usual decisions despite my observation. If the guide knew I was watching for decisions and leadership in action to identify moments where the judgment process occurred, my data would be skewed by their behavior of knowing why I was observing them.

Next, their further participation was requested in a recorded conversational interview, guided by the field notes, to take a deeper look into their internal judgment process, which could not be observed. All participants agreed to continue the research. The field notes were detailed enough to bring the participant to memory recall of the precise moment. The participant recalled the moment with the researcher, and then answered the question "what were you thinking at that moment? Why did you make that decision or execute that leadership? What was going on inside of you and your process?"

The interviews asked the guide to share what they thought when particular decisions were made, sometimes but not always, resulting in leadership execution that visibly affected the group dynamic, clientele, and/or co-guides. The interviews flowed in a normal conversational pattern to deeper explore decisions made, leadership executed, and overall professional expertise. There were no right or wrong answers, just an exploration of guides' internal process in particular moments.

Method of Analysis. Interviews were recorded digitally. Early data analysis was conducted throughout the observation process by continuously focusing and reflecting on the data as it was observed in action, along with studiously detailed notes (Glesne, 2011). Each interview began by questioning observations made of the participant where either a decision was made, or leadership was executed. I have identified those as precise points that a judgment was made just before the action part of decision-making or leadership occurred (Anderson, 2008, p. 102.; Baber and Butler, 2012; Guthrie 1996, p. 6; Lloyd-Strovas, 2011; Priest and Gass, 1997; Weiss et al., 2003, p. 107). The action was recalled, and the guide was asked to reveal their internal process to discover their judgment process. Often after memory recall occurred, the interview became conversational. Questions were asked for clarification, to hone in on what the

guide was thinking and to discover if an internal judgment was made first. A rudimentary coding scheme and a thematic review (Glesne, 2011) analyzed and synthesized in Nvivo software concerning all observations revealed similarities, trends, or notable gaps and/or differences of the guide's internal judgment process.

Interview Questions. Semi-structured interviews (Glesne, 2011) were conducted in the following manner. Each question was a result of either decision made, leadership executed, or unforeseen or significant events that occurred at the time of observation. The event was recreated in detail to the participant based on my field notes and observations. After the participant agreed, they recall the moment, then I asked, "what was going on in your mind then?" or "why did you execute that leadership then?" or equivalent inquiry to ascertain what a guide was thinking or not thinking to prompt a particular decision or leadership execution. I was seeking to discover if an unseen judgment was made. Judgment is an internal process that cannot be seen (Dunne, 2001; Guthrie, 1996; Hanna, 2011; Lloyd-Strovas, 2011; Logan, Ramachandran, Mulhausen, Banerjee, Hewett, 2011; Vokey and Kerr, 2011). I discerned judgments being made by observing when decisions are made, or leadership is executed. Therefore, the intent of the interview was either to clarify observation or to understand the unseen judgment that was made.

Trustworthiness

Trustworthiness consists of the following components: credibility; transferability; dependability; and confirmability. Creswell (2013, p 201-203) addressed pertinent procedures to contribute to the researcher's trustworthiness. Trustworthy approaches used in this study were

- "prolonged engagement" (p. 201) through the interview process;

- use of "multiple data-collection methods" to triangulate information (p. 201) via interview and follow-up for clarification;

- debriefed all observed interviewees;

- looked consciously for "negative cases and unconforming evidence" (p. 202) to refine perspective;

- clarified researcher bias;

- promised to share final report with participants;

- followed up with the participant for understanding and clarity of topic;

- used robust description to allow the reader to enter the context;

- allowed academic committee to do external audits as warranted.

These steps increased trustworthiness as a researcher according to Creswell (2013), Glesne (2011), and Merriam (2002).

Researcher's Bias

I am a graduate of the industry standard setter and hold an undergraduate degree in Parks and Recreation Management with an emphasis in teaching wilderness leadership. I am also a certified wilderness leader and leave no trace trainer. As a result, I have guided throughout Arizona, Utah, Colorado, Northern California, Oregon, Washington, and Alaska a variety of wilderness settings and climates. I co-operated a backpacking concessionaire in the Grand Canyon. I have taught extensively for an accredited and impactful wilderness leadership association, a wilderness medical company, and was a ski instructor, supervisor in Arizona, and an assistant ski school director in Alaska. Furthermore, as a ski instructor, and guide, I was involved in the hiring of many employees. Also, as a subordinate, I found myself consistently asking "What were you thinking? Who hired you?" The more I shared this observation with

peers and colleagues alike, I discovered many people wondered about this phenomenon. Consequently, my passion for people and the recreation industry has led me toward this study. I admit I have a lens for seeing recreation and wilderness leadership in both its optimal and degenerative states. I do have extensive experience in the field I am studying. This industry expertise that I have impacted the lens through which I conducted the research.

Conclusion

Both studies have been conducted and analyzed and addressed in a formal dissertation discussion. The data has been triangulated to answer the question if wilderness leadership companies are, in fact, hiring professionals who are effective, have expertise, use good judgment, make sound decisions, and execute good leadership. The discussion addresses the overall purpose of the dissertation. Beyond the triangulation, recommendations for the practitioner have emerged out of either study or the discussion and synthesis.

CHAPTER 2 LITERATURE REVIEW

This chapter will review pertinent literature concerning wilderness leadership. The literature will help define critical concepts of this study. A brief look at the background of wilderness leadership helped to define the industry. Then a review of the literature covering the topics of judgment, decision-making, and leadership was conducted as guided by the research questions. The problem this study examines how practitioners in the wilderness leadership industry determine a wilderness leader applicant has judgment, decision-making, and leadership upon hire. Furthermore, wilderness leadership guides were observed to determine if they exhibited good judgments that led to good decisions made and good leadership executed.

Adventure travel is the third largest retail industry in the US (Xola Consulting), and is facilitated by wilderness/adventure/outdoor recreation leaders (from now on referred as wilderness leaders) who influence their clientele's trip satisfaction and repeat business. The extent to which personal benefits and positive and negative environmental impacts are experienced is influenced by the expertise, judgment, decision-making abilities, and leadership skills of wilderness leaders while in the natural environment. Expertise is looked at as an umbrella over judgment, decision-making, and leaderhsip in this study. Galloway (2007) acknowledged that very little "empirical research exists in outdoor leadership" (p. 100). Vokey and Kerr (2011) noted: "professionals must make sound judgements [sic] in the complex contexts of contemporary practice in order to fulfill their manifold responsibilities to their clients, their colleagues, their employers and society at large" (p. 63) and associated making judgments to decision-making and therein leadership.

Credentials such as certifications are often required by the industry as a check and balance system to ensure that professionals have obtained specific skill sets to perform their jobs safely, an increasingly important emphasis in the nature-based recreation industry over the past 20 years. Currently, there is not a formal discussion and very little research in the industry of how to determine expertise within the wilderness leadership industry; measure leader judgment, decision-making abilities, or leadership skills; and to verify if a potential or existing employee will execute sound judgment and decision-making or use good leadership skills regarding issues that directly affect clientele and group dynamics as a whole. Viewing the concepts of judgment, decision-making, and leadership skills as key components of expertise within a given area, such as wilderness leadership where outcomes are as critical as life or death, several studies have demonstrated expertise as the ability to rapidly identify relevant cues that lead to optimal outcomes (Klein, 1999). This view of expertise is highly relevant to the primary activities of persons professionally engaged as wilderness leaders complimented by sound judgments, good decision-making abilities, and strong leadership skills.

Wilderness Leadership Background

Wilderness leadership industry pioneers such as the National Outdoor Leadership School (NOLS), Outward Bound, and the Wilderness Education Association (WEA) educate and train tomorrow's wilderness leaders, today. Paul Petzoldt, the father of NOLS and the impetus for the WEA, worked for Outward Bound, and trained in the US Army's 10th Mountain Division. Petzoldt is considered a wilderness leadership icon and dignitary. He asserted, "leadership and judgment could be taught with more technical outdoor skills" (Wren, 1999, p. A15). Paul Petzoldt also wrote:

Skill level is not the most important part of outdoor leadership. Having judgment is the

most important aspect. Another important aspect is knowing one's limitations and

knowing one's ability. Having judgment to accept leadership within one's limitations

[sic]. Since faulty planning is responsible for about 75% of deaths, accidents, search and

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how to plan a trip is indispensable to trip leadership. (Wagstaff & Cashel, 2001, p. 164).

Bob Rheault, a 32 year Outward Bound wilderness leader and 26 year Green Beret veteran from

the Vietnam War, was quoted in a tribute piece highlighting his tenure at Outward Bound that

"leadership and ethics are [were] not separate" and "that the leader has good judgment and the

personal restraint and integrity to act on it [good judgment]" (Chatfield, 2004, p. 5). Regarding

Propst and Koesler's (2009) review of the literature, "the outdoor leadership literature places

more emphasis on behaviors and developmental skills (i.e., judgment and decision-making),

mentoring, and ongoing feedback as valuable components of the leadership development process

(Cain, 1985; Priest, 1990; Hunt, 1984; McAvoy, 1980; Petzoldt, 1984)" (p. 321).

Expertise

When reviewing literature on expertise and discerning its contextual value, expertise is

often described in the literature as a process when one finds a "domain they feel comfortable

operating" in, coupled with "deliberate practice" and "experience," and hence, one will develop

"expertise in that domain" (Preston & Hermann, 2006, p. 9). As wilderness leadership

professionals, certain certifications reflecting industry expertise are usually required as Irving

(2012) notes that for sea kayaking "guides are trained with CPR, Advanced Wilderness First Aid

or Wilderness First Responder, Level 2 or 3 American Canoe Association or British Canoe

Union certifications" (p. 22). Irving was describing a sea kayaking adventure on Baja California

that had a guest yoga teacher who was required certain certifications as a base to their yoga expertise. Based on Irving's premise, expertise in wilderness leadership, at this point of the industry's evolution is asserted based on certification alone. A thorough review of expertise literature, found predominantly in the fields of business and the medical industry, suggests expertise means much more than certifications.

Both NOLS and WEA have published core curricula that include an expertise base for wilderness leaders. No curriculum was available for Outward Bound expertise or leadership development after lengthy research and phone conversations.

NOLS describes expertise in the industry as a culmination of safety and judgment, consisting of "basic first aid, safety and accident prevention, hazard evaluation, wilderness medicine-related injury prevention and treatment, rescue techniques, emergency procedures"; leadership and teamwork, "Competence, self-awareness, expedition behavior, judgment and decision making, tolerance for hard work, communication, vision and action, small group expeditions, practical leadership opportunities daily"; outdoor skills "campsite selection, shelter and stove use, fire building, sanitation and waste disposal, cooking and baking, nutrition and rations, equipment care and selection, keeping warm and dry, route finding and navigation, backpacking, kayaking, horse-packing, sailing, fishing, telemark skiing, caving, climbing, canoeing"; and environmental studies, "Leave No Trace camping and resource protection, ecosystems, flora and fauna identification, geology, weather, astronomy, land management and cultural issues, public service, wilderness ethics" (NOLS Core Curriculum, 2018).

Table 1 describes the WEA curriculum. This curriculum is composed of seven "educational components".

Table 1 WEA Curriculum Educational Components

WEA Educational Components	Description of Educational Component
Judgment	the act of integrating previously learned information with situational factors to arrive at a decision
Outdoor Living	the specific outdoor skills that are essential to individual/group sustainability in the backcountry
Planning and Logistics	the knowledge, skills and ability to design, implement, and prepare outdoor expedition trips a minimum of 7 days long
Risk Management	a structured approach to manage actual risk, emotional risk and perceived risk through: risk assessment, utilization of management and instructional resources, and development and execution of emergency protocols
Leadership	the ability to accurately self-assess as well as those essential skills concerning or involving relationships between people; the ability to effectively implement a decision
Environmental Integration	the concepts that embody ecological and cultural literacy along with the cooperative planning and management skills needed to ensure preservation of resources through personal connections for past, present and future generations
Education	the ability to know and implement theories and practices of teaching, processing and transference

(WEA Curriculum, 2019).

Outward Bound has a curriculum that focuses on character building. Its values are "Compassion, demonstrating concern and acting with a spirit of respect and generosity in service to others; Integrity, acting with honesty, being accountable for your decisions and actions; Excellence, being your best self, pursuing craftsmanship in your actions, and living a healthy and balanced life; and Inclusion and Diversity, valuing and working to create communities

representative of our society that support and respect differences" (Outward Bound Philosophy and Values, 2017).

Definition of Expertise

The study of expertise is recent according to Preston and Hermann. (2006). They found that training and specialization, often characteristics of expertise affected the ways that problems are defined far more than leadership style or worldviews. They also assert that the concept of expertise lacks a common definition.

Does Experience Count in Expertise. Howard (2012) found that in professional level chess, player expertise was not a result of mere practice. Howard noted that experience was a factor in developing expertise, but not the penultimate variable. When Preston and Hermann (2006) discussed expertise, asserted that the actual practice amount outweighs the number of years of experience when it comes to expertise. Most scholars focus solely on experience "when measuring expertise" (2006, p. 10). Many experts have conducted studies that solidify a theory known as the ten-year rule. This rule is the "mastery of special skills and knowledge required for achieving expert performance generally takes about ten years to develop" (p. 10). Furthermore, there appears to be a connection between experiential education and expertise (Hayes, 2009; Preston & Hermann, 2006) that implies gaining experience does help to develop expertise but experience alone is not enough.

Competence. Preston and Hermann (2006) note one way to measure expertise is through competence. They imply that different types of competencies reveal the existence of many types of expertise, which suggests why there are discrepancies in how expertise is defined. The concept of competency itself is expansive. For example, they identify two types of competencies: task-related and situational competencies.

Task Competence. In a study of the expertise of United States Presidents, expertise is guided by actions "hands-on practice and … specialized knowledge", or task competence (Preston & Hermann, 2006, p. 5). Wilderness leadership-related examples of task competence include actions such as setting an anchor or knowing how to decipher a topographic map. Learning by doing rather than regurgitating proved to greatly increase proficiency or expertise. The take away from this is to give learners hands-on experiences to effectively develop proficiency and expertise (Preston & Hermann, 2006; Ruixue, 2012).

Situational Competence. Situational competencies requires "transforming some situation in the world from its current state into a more desired state by analyzing it into a set of appropriate tasks, delegating them if necessary to people with the necessary task-competencies, and then integrating the results to produce key decision or synthesize a plan of action for achieving the desired outcome" (Preston & Hermann, 2006, pg. 3). Situational competence can be considered the type of expertise the wilderness leadership industry needs and lacks. This is evident in the lack of wilderness leadership research and the lack of streamlined skills or expertise found industry-wide.

Nine Forms of Knowledge. Preston and Hermann discussed nine forms of knowledge that "distinguish experts from novices". They described what it means to have expertise and also characterized "the range of capabilities that are acquired when someone works in an organization for" a prolonged period of time (2006, p. 7). The following are the nine forms of knowledge that comprise expertise (2006, p. 7).

(1) the procedures that are generally followed in the particular domain;
(2) specific details about the problems that one is likely to face;
(3) facts about the domain;
(4) spatial, causal, and temporal relationships found in the domain;
(5) understanding of the people who are relevant to the domain;

(6) skills related to the tasks at hand;
(7) goals of the organization or unit;
(8) precedents from past experience;
(9) the culture

They considered the forms of knowledge in distinguishing experts from novices, which logically lends its concepts toward defining expertise.

Motivation and Performance. When components of expertise were analyzed it was discovered that expertise also requires a focus on effort and hard work. They stated that expertise is the "motivated effort to improve performance that determines if expert performance is reached in a domain, not innate talent or ability" (p. 8). Preston and Hermann further stated, "anyone who is sufficiently motivated can become an expert at something" (p. 8).

Identifying Criteria of Expertise

Similar to the definitions of expertise, multiple criteria have been considered to comprise the concept of expertise; however, no common thread of criteria has been found among multiple sources in this literature review. Again, much of the expertise literature has been deciphered out of business and the medical industries.

A Variety of Skills. Many components of expertise throughout the literature. Harvey and Flewitt (1998) suggested that having an interest in a topic is a precursor to acquiring expertise. Furthermore, in gathering a variety of different types of expertise such as offering a palate of skills or services or having a broad knowledge base were considered some of the constructs of having expertise (Harvey & Flewitt, 1998; Preston & Hermann, 2006). Additionally, Preston and Hermann (2006) continued that measurements of expertise included the "degree of specialization, prior experience, and training" (p. 1), all of which helped researchers see the level of expertise in people.

Motivation. A debate surfaced that addressed the nuance and components of expertise. Experts have been considered anyone who is sufficiently motivated to become an expert (Ericsson, Ralf, Krampe, & Clemens, 1993; Preston and Herman, 2006); versus experts have general abilities such as traits and intelligence which allow one to attain expertise along with experience and "deliberate practice" (Preston & Herman, 2006, p. 9).

Traits. Several traits surfaced throughout the literature signifying what embodied an expert. Certain traits were attributed directly to expertise. Concepts like training, perception, and awareness surfaced as the most prominent of expertise traits.

Training. Different types of training such as "military…apprenticeships, internships, bureaucratic mentoring, patron-client interactions, extensive observation, and participation in youth, trade union, and party groups" (Preston & Hermann, 2006, p. 9) all lead to criteria that one with expertise would have in their repertoire. Mentoring seemed to be the popular approach in creating expertise (Chang, 2010; Curtis, Sheerin, & de Vries 2011b; Crumpton-Young, McCauley-Bush, Rabelo, Meza, Ferreras, Rodriguez, Millan, Miranda, & Kelarestani, 2010; Hayes, 2008, Hicks, 2011; Howard, 2011; Patrick, 2005; Rennie, Rij, Jaye, & Hall, (2011); Rodriguez, Goertzen, Brewe, & Kramer, 2012; Smith, 2007)

Perception. Perception was another trait that surfaced. The caveat was if one perceived themselves as an expert or having expertise then that person would be considered an expert both from the perception of self and from their audience. Furthermore, if one perceived self as an expert, the reduction of group dissent with the audience occurred but only when the audience perceived the expert as having expertise as well (Preston & Hermann, 2006). Experts are considered self-aware of how they cognitively complete tasks and how they learn (van Velzen, 2012; Richards & Schimelpfenig, 2010). The expert who develops expertise in problem-solving

is self-aware of how to organize knowledge, analyze problems, and has discernment with the "depth of self-explanations" (van Velzen, 2012, p. 367). Experts also use "higher-order thinking skills" such as "knowledge of different task demands involved in thinking, and thinking preferences or thinking styles" (p. 367).

According to Preston and Hermann (2006), self-perception lends validity to one who has expertise in a particular domain. Those who perceive themselves as experts, also display high "self-confidence in their own judgments regarding situations, subject matter, and the overall tasks domain inside and outside of group settings" (p.13). This comment does not imply, however, that one's judgments will be accurate, but rather "relatively stable" because of one's self-confidence. Furthermore, based on the principle of self-reflection as a tool of self-perception, Richards and Schimelpfenig (2010) commented "The ability to intentionally develop our own judgment, and to pass on the lessons we have learned to our students requires that we spend time reflecting on our decision-making process. How can we expect to teach others if we cannot articulate what we ourselves have experienced?" (pg. 1).

Awareness. Preston and Hermann (2006) noted that expertise impacts how aware one is of problem contexts and that previous research indicated four nuances an expert would have related to problem solving:

1. The expert "pick[s] up on the complexity of any domain-related situation".

2. The expert is able to "differentiate between consistent and inconsistent information".

3. The expert is "able to consider a range of options" in relation to the problem at hand.

4. The expert is "open to information for longer periods of time" than the novice (p. 16).

Part of awareness included the concept of self-monitoring. The expert proved to have strong self-monitoring skills; tended to be more acutely aware when they made errors and were able to perceive why they failed to comprehend a problem; and have awareness of when they need to "check their solutions" (Preston & Hermann, 2006, p. 16). Finally, the experts showed awareness of their mental process by asking "more questions when they are [were] asked to learn difficult material, while novice learners ask[ed] more questions on easier materials. Further, experts can [could] control the trade-off between efficiency and accuracy that comes with schematic processing" (Preston & Hermann, 2006, p. 16).

Developing Expertise

Different approaches to developing expertise were identified. These include naturalistic intelligence; positive and negative feedback; and decomposition and conversion. These approaches ranged from discerning types of intelligence to determine and develop types of expertise, to understanding one's formative past to shape expertise. Evidence of the expert's expertise development illustrated how experts disseminate and evaluate problems in order to solve them.

Naturalistic Intelligence. Naturalistic intelligence is defined as "the cognitive potential to process information that is exhibited by expert naturalists" (Hayes, 2008, p. 1075). Hayes analyzed the implication of Howard Gardner's Multiple Intelligence theory, specifically naturalistic intelligence. He noted that a person's potential requires stimulation to develop naturalistic intelligence. This, in turn, encouraged the development of naturalistic expertise (p. 1077). Educators, according to Hayes, purport that time spent with persons of expertise within a particular field, specifically in a nature-based environment, will influence the "knowledge and skills" students "learn, the careers they pursue, and the contributions they make" to their

particular field (Hayes, 2008, p. 1079). Therefore, developing naturalistic intelligence in the classroom leads to the development of expertise. Furthermore, Hayes noted that identifying a group of people with perceived naturalistic intelligence would aid in understanding how expertise develops for experts. The group of people with naturalistic intelligence was "Carolus Linnaeus, Charles Darwin, Henry David Thoreau, Jane Goodall, George Schaller, and John Muir" (p. 1076). Each of the listed people has held prominent, academically revered places of expertise. Furthermore, Hayes mentioned that both Wilson and Louv, contemporary and extremely popular naturalistic authors encouraged naturalistic intelligence in their readers.

Positive and Negative Feedback. Since the 1980s, the literature has suggested that one's individual characteristics such as their personality, abilities, or interests lead to and develop expertise. For example, according to Preston and Hermann (2006), both negative and positive feedback can result in the development of expertise. Furthermore, "Critical events in a leader's life can also lead to the development of expertise" (p. 6). Young adulthood is made up of "impressionable years" (Preston & Hermann, 2006, p. 6) and events which happen during the impressionable years are influential and critical in developing expertise.

Decomposition and Conversion. Two problem-solving strategies were identified from an analysis of the nature of experts. By their nature, experts have access to more information and nuance in a particular context than novices; and therefore, tend to "consider more attributes when evaluating a problem in their domain of expertise," this process is called decomposition (Preston & Hermann, 2006, p. 17). Therefore, the expert will make "moderate evaluations" (p.17) of a perceived problem as a result of having mixed evidence and having greater access to information and nuance. Conversion, on the other hand, searches for the "primary cause of the problem" (p. 18) to solve or resolve problems. Decomposition and conversion have become "the basis for the

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development of scenarios" used during training and teaching segments that correlate to the intentional development of expertise.

From Novice to Expert

There are some differences between novices and experts. The expert "not only knows more, but also potentially can learn more and see more into a problem because more global [general information] processing resources are free for dealing with novelty" (p. 18). Experts have "more 'tightly organized knowledge' than novices. This allows experts to 'handle greater quantities of information more efficiently" (p. 14). Preston and Hermann (2006) also suggested that "experts are more likely to attend to inconsistent information, assimilate it, and creatively take it into consideration when making inferences. Novices on the other hand, are [were] relatively inefficient in organizing information; they are more likely to concentrate on information consistent with prior expectation because doing so requires less effort and resources than dealing with inconsistent information. Their interpretation are less accurate" (p. 14).

Novices and experts also differ in decision-making skills according to Galloway (2007). Novices "rely on context-free rules and attend to a limited number of factors when making decisions, while experts rely on context-dependent judgment and skills learned through practice" (p. 101). This section explores the differences by examining the process by which one becomes an expert.

Processes of becoming the Expert. Expertise, according to Callanan (2004) is dynamic, evolving, and about relationships. Weiss and Shanteau (2003) identified some of those relationships as roles an expert might play. They discovered there were four roles or types of experts: judges, experts in prediction, instructors who train novices, and "performance experts

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who can do something better than most people can do it" (p. 105). Regarding expert processes and how an expert relates to the process, Weiss created the following construct:

Evaluation + qualitative or quantitative expression = expert judgment.

Evaluation + projection = expert prediction.

Evaluation + communication = expert instruction.

Evaluation + execution = expert performance (p. 106).

Furthermore, they asserted there were always two criteria that made up an expert, and they were: "the ability to differentiate between similar but not identical stimuli" and "internal consistency" (Weiss & Shanteau, 2003, p. 107; Baber & Butler, 2012).

Finally, Preston and Hermann (2006) identified a three-stage process of evolving from a novice to an expert:

The first stage focuses on gaining adequate knowledge about the domain; the second on learning how to distinguish relevant from irrelevant information in that domain; and the third on gaining the ability to think abstractly in that domain by applying the broader understandings of how the environment functions that one has acquired and recognizing useful diagnostic patterns within the incoming data (p. 14).

They identified the maturity of an expert's process, filled with refinement, caution, and deliberate action and distinction.

Attributes of the Expert. Several attributes of an expert surfaced throughout the literature to describe expertise. Many of the attributes were discovered through various studies. Preston and Hermann (2006) showed that experts functioning within their domain "were more

sensitive to information that could potentially disconfirm the hypothesis in question. By contrast, when the expert was placed outside of their domain, "they behaved much as the novices did and preferentially remembered hypothesis-confirming information" (pp. 16-17). They showed that expertise occurs in specific areas. In other words, just because one is an expert in one domain, does not mean their expertise transfers to another domain.

Experts by their nature have access to more information and nuance in a particular context than novices; and therefore, tend to "consider more attributes when evaluating a problem in their domain of expertise" (Preston & Hermann, 2006, p. 17). Therefore, the expert will result in "moderate evaluations" (p.17) of the perceived problem as a result of having mixed evidence by having greater access to information and nuance. Meanwhile, novices, contrastingly, are aware of fewer nuances than the expert and have less access to information merely by default. As a result, their evaluations of problems are more likely to be extreme.

Experts, according to Furman, Shooter, and Schumann (2010) "are more able to organize complex information, attend to a variety of cues, and disregard extraneous cues" (p.455). "The higher the level of expertise a person has, the more likely he or she is to make appropriate automated decisions and have less need to rely solely on controlled decision-making processes" (p. 455).

Chunking. "Chunking" was discovered by William Chase and Herbert Simon in 1973. Chunking occurs when information needs to be assimilated (Preston & Hermann, 2006). The novice is capable of chunking but normally chunks information together on a surficial level. Experts, on the other hand, usually chunk through principles, semantic aspects, or categories that play a "central role in knowledge representation" (p. 15). "This difference in information processing results in experts being able to encode material more rapidly than novices and to store

the relevant information in their memories, allowing them to be more efficient in manipulating the data and [being] faster in their processing" (Preston & Hermann 2006, p. 15).

Evolving from Novice to Expert. A study on what novices do with planning and managing and decision-making was conducted by Timothy Salthouse, according to Preston and Hermann (2006). What he discovered was novices did not know what to do, when to do a task, what to expect, and lacked interrogational knowledge among variables. Furthermore, the study validated many past studies which stated that there was "a difference in performance even among experts," highlighting that experts executed their expertise proficiently "in domains focused around decisions involving human behavior (e.g., intelligence analysts, clinical psychologists, judges)" (Preston & Hermann, 2006, p. 18; Weiss & Shanteau, 2003)

Ways of Discerning Expertise. According to Rodriguez et al. (2012), three elements need to be present to be considered an expert. First the person will know what questions need to be asked, second, they will know how to "approach those important questions" (p.320), and third, the expert will publish their answers and contribute to their knowledge base in their field. Furthermore, this study revealed that contributing new knowledge to the knowledge base in one's field and by communicating through publication and writing in peer review journals were stringent components of what made an expert.

Another study was conducted by the Michigan Department of Human Services and reported by Patrick (2005). The study partnered with a consulting firm to create a leadership academy at the state level to improve the level of expertise throughout the Department of Human Services. The four-step process is listed below (p. 13):

1.   Situational judgment inventory – a one-hour test that measures leadership judgment and provides an indicator of leadership potential.

2. Experience profile – A written exercise where candidates describe how they have demonstrated leadership competencies.
3. An interview with a panel of top leaders.
4. Reference checks.

One caveat for the leadership academy was to discern a good candidate for the process. Four measures were taken for each prospective leadership academy participant to reveal if one had expertise enough to join the academy. Each step reduced the number of prospective participants until a core group was created.

Expertise Conclusion

Expertise is seen as an umbrella, including concepts like judgment, decision-making, and leadership skills, all which fold into the making of an expert. The literature highlighted what constituted an expert, and commonly without a consensual, streamlined perception. NOLS and WEA both purported via their curriculum their sense of expertise about the wilderness leadership field. Furthermore, there are few peer-reviewed articles or information regarding expertise in the wilderness leadership industry. Shared information coming from predominantly the business and medical industries lent volume to how expertise had been defined, what criteria assert an expert, how expertise develops, and illuminated the process of evolving from a novice to an expert.

Judgment

This section explores the concept of judgment. Judgment has been studied since the late 1700s instigated by Immanuel Kant's "Critique of Judgment" (Kant, Benard, & Benard, 2000). Since then, a massive body of literature called "Judgment and Decision-Making". Due to its immense size, an implication of variety exists throughout this body of literature has arisen through the fields of psychology and philosophy. For this literature review, a focus on key literature that defines the concept "judgment" and its identifiable constructs will be examined.

Next, a review of highlighted literature that embodies the process of sound judgment execution will include professional recommendations and prescriptions; comments on judgment education; wilderness leadership judgment models, and clarifications on reliability and validity on measuring judgment. A small group of studies exists about the nature of judgment. However, few of these studies have been rooted specifically in the wilderness leadership realm. Lastly, an examination of literature that supports a gap found in the knowledge base about wilderness leadership. An examination of the literature will aid in the understanding of the nature and role of judgment in wilderness leadership.

Definitions of Judgment

Having been studied since the 1700s, a variety of definitions of the concept of judgment exist. For this study, a look at the genesis of the study of judgment was reviewed, along with different types of approaches to judgment. There was also a review of the literature concerning the wilderness leadership industry's perception and working definitions of judgment. Finally, a review of studies about judgment was conducted, including studies in wilderness leadership and natural resources.

Kantian Approaches and Critiques. In 1790 Kant wrote the "Critique of Judgment" (Anderson, 2008; Benard, 2000; Hanna, 2011; Rosenkoetter, 2009). Hanna (2011), translated and interpreted Kant's definition of the "power of judgment and the other faculties of cognition". The following is Hanna's translation:

> According to Kant, a "judgment" (Urteil) is a kind of "cognition" (Erkenntnis) — which he defines in turn as an objective conscious mental representation (A320/B376) — and is the characteristic output of the "power of judgment" (Urteilskraft). The power of judgment, in turn, is a cognitive "capacity" (Fähigkeit) but also specifically a

spontaneous and innate cognitive capacity, and in virtue of these is it is the "faculty of

judging" (Vermögen zu urteilen) (A69/B94), which is also the same as the "faculty of

thinking" (Vermögen zu denken) (A81/B106).

Hanna's translation is accepted by authors both the academic and professional communities.

Hanna is a Stanford University, Kantian judgment specialist and is published in the Stanford

Encyclopedia of Philosophy, which is a dynamic, ongoing, and frequently updated Kantian

academic resource.

The Judgment and Decision-making literature body is enormous. Numerous definitions

of judgment have been put forward. Many are unique and subject to the author's interpretation

and contextual regard. The following writers have highlighted one or more interpretations of the

definers of judgment. Due to the infinite amount of interpretations of the definition of judgment

from a vast body of literature, often only one author can be emphasized at a time and also

maintain relevance with the topic, for the most part. This technique does offer a true modicum of

the diversity and immensity of the body of knowledge available on judgment.

Anderson (2008) defines judgment as a "truth-evaluable whole" (p. 91) and that

"judgment have [has] two terms, and that 'the mind must connect them'" (p. 93) or that a

judgment is "a logical relation of some concepts" (p. 93) belonging together, or sometimes they

do not belong together. According to Anderson's interpretation of Kant, a judgment is "the

representation of the unity of the consciousness of various representations, or the representation

of their relation insofar as they constitute a concept. [Logic §17, Ak. 9: 101]" (p. 98;

Rosenkoetter, 2009) and fluidly comments that the unification of "representations by

representing the relation among them" (p. 98) would be the correct interpretation of Kant's

definition on judgment. Anderson states that judgment constitutes a concept and notes within her

critique of Kant through the lens of authors Martin and also Brandom, that Kant is claiming "that the way we put concepts into use is to make judgments" (pp. 99-100). Furthermore, the critic, Anderson claims that Kant intends for judgment to be a conceptual process that unifies concepts and posits "that unified structure as a claim. Judgment asserts something" (p. 102). Anderson identifies three Kantian judgment types: categorical, hypothetical, and disjunctive judgments (p. 102), the author also notes a lofty ideal, Kant offers existential judgment as well. For this review, the three Kantian judgment types will be considered; Anderson even asserts that Kant himself would perceive existential judgment as a separate form of judgment (p. 105). Existential judgment is not the intent of this review of the literature. Overall, Anderson claims that Kant's ideas "about the structure of judgment" are correct and emphasizes that Kant's claims that judgment and intuition are similar in the way they operate and function (p. 106). Moreover, judgment is a synthesis Kant says and his critics agree (p. 107). Anderson leaves room for one to argue that judgment is not a synthesis, although she does not contend her point.

Rosenkoetter (2009) views Kant different than Anderson (2008) that Kant further defines judgment and "reads: 'an action through which given representation first become cognitions of an object [Objekt]'" (p. 539). He notes the nature of judgment in a Kantian view, is logical (p. 542). Rosenkoetter (2009) agrees with Kant and notes judgment is interpreted as "placing, putting, or setting [setzen] an object outside of one's representations – in particular, an object corresponding to the concept posited" (Merritt, 2009). Merritt also concurs with Rosenkoetter that in this model of an object becoming a judgment, "two judgment-types are distinguished not by any difference in their forms but rather by what is posited: either an object or 'the relation . . . of something as a mark to a thing" (p. 546). Finally, Rosenkoetter (2009), Merritt (2009), and

Anderson (2008) agree there are categorical judgments, as Kant said. Additionally, Rosenkoetter and Merritt emphasize the logical components of the Kantian definition.

Professional Judgment. The concept of professional judgment has emerged within the last 30 years. A complex definition given is, "the capacity of an experienced professional to draw correct inferences from incomplete data based on their knowledge gained from formal education, experience, experimentation, inferences and analogy" and "the capacity of an experienced professional to draw correct inferences from incomplete quantitative data, frequently on the basis of observation, analogy, and intuition" (Logan, Ramachandran, Mulhausen, Banerjee, & Hewett, 2011, pp 746-747).

Discernment in Judgment. Discernment is an identified component found in the judgment literature. Vokey et al. (2011) consider discernment as the "ability to arrive intuitively at a sound moral judgment in the face of complexity" (p. 66), that "need not involving conscious deliberation" (p. 68) and "defined heuristically as what distinguishes those who rightly have confidence in their practical judgments, involves the integration of perceptual, affective, intuitive, intellectual, volitional and communicative capabilities" (p. 76). Furthermore, Vokey et al. distinguish judgment as a "complex interaction of feeling, imagination, insight, intellectual understanding and intention in which each of sensory perceptions, emotions, images, concepts and objectives affects the rest" (p. 70). Notably, their distinction of judgment and complexity is akin to the professional judgment definition of Logan et al. (2011). Finally, Vokey et al. concluded that "discernment is an informed intuition" (p. 66), which implies that discernment is judgment and judgment is a form of intuition.

Tacit Knowledge in Judgment. Guthrie (1996) described the elements, dynamics, and roles of judgments in wilderness leadership both at gateway sites like ski resorts and in the

backcountry. According to Guthrie an important component of judgment is the nuance of tacit knowledge. He writes that tacit knowledge as part of the judgment process; it is "generally unarticulated" and a "preconscious form of knowledge that is the basis for human judgment and decision making" (p. 1). Other tacit attributes described by Guthrie are that it is "a form of knowledge," it is "distinguishable from intuition, gut feelings, or mere personal opinion," is not "subjective," and often is "difficult to express or explain" to others (p. 2). Finally, Guthrie affirms, regarding judgment that "an experienced leader's tacit knowledge also figures in anticipation and prevention of problems, instant recognition that a problem exists, and a constant unconscious for of evaluation and decision making" (p. 1).

Definitions Stemming from the Wilderness Leadership Field. There are two forms of definitions found within the literature of outdoor recreation and the wilderness leadership field. Some definitions are applied definitions coming from theoretical frameworks or constructs. Other definitions are considered "working" definitions, meaning their application is currently being used by NOLS, WEA, and Outward Bound as a defining principle for their curriculum basis in educating both current and future wilderness leaders through courses and training modules.

Applied theoretical frameworks and constructs. A limited amount of definitions came out of literature directly linked to the wilderness leadership field. Those industry relevant descriptions identified judgment definitions to be more of an applied nature. For example, Guthrie (1996) noted that the dynamic of judgment making in recreational settings (i.e. wilderness leadership) had a "tendency to think that good judgment is exhibited (or has failed) only when" there was an "immediate need for a good decision" (p.8). Examples in the literature are usually instances where the leader is compelled to make a good (sound) decision, or else

something dire would happen" (p. 8). Many writers suggest that "judgment is based on acquiring the skills, knowledge, and experience necessary for leading a safe and enjoyable outdoor trip (Cain, 1985; Green, 1981; Koesler & Prospt, 1994; McAvoy, 1980; Petzoldt, 1984; Swiderski, 1981)" (p. 2). Finally, Dunne (2011) recognized judgment as a "notion phronesis" or coming from "practical wisdom (or good 'judgement' as the capability to make good judgment-calls reliably)" and noted that judgment is "experiential" in nature, as well as "(beyond mere knowledge) with character" (p. 17).

Working definitions in NOLS, WEA, Outward Bound, and Priest. Three major working definitions of judgment have been identified within the cornerstone organizations of the wilderness leadership industry. These organizations are the largest, most popular, and trend setting of the wilderness leadership field: NOLS, WEA, and Outward Bound. The Priest model was highlighted comparatively with the WEA model in the literature and is worth mentioning although it does not have a home with a wilderness leadership organization.

NOLS. Paul Petzoldt, the father of NOLS, said in the NOLS Wilderness Handbook (Harvey, 1999) that he defined judgment personally, for his organization, and for wilderness leaders:

"This is the real core of everything I have to teach, be it in the wilderness or in a book. Judgment. I define judgment as the ability to relate a total experience to a specific activity. Learning judgment, assessing priorities, is as important as perfecting techniques; in fact the teaching of techniques (without commensurate judgment) can be dangerous" (Petzoldt, 1974, p. 25).

The working definition of Petzoldt has changed little since 1975, however it has evolved and as a NOLS concept. NOLS defines judgment as "good judgment: the ability to arrange all available experiences, resources and information in a common-sense way to get positive results" (NOLS Toolbox, 2011).

Furthermore, a group of both academics and NOLS specific researchers, Sibthorp, Paisley, and Gookin (2007) state:

Based on its mission, NOLS courses offer a combination of generic outdoor leadership training as well as activity- and context-specific course objectives. The general objectives include safety and judgment, leadership, expedition behavior, outdoor skills, and environmental awareness. The safety and judgment objective includes wilderness hazard knowledge, performance of hazard avoidance techniques, and knowledge of emergency planning (p. 2).

WEA. The Wilderness Education Association offers a six-core competency curriculum (formerly known as the 18-point curriculum). The first-core competency is judgment. The WEA defines judgment as "the act of integrating previously learned information with situational factors to arrive at a decision" (WEA Curriculum, 2019). Guthrie (1996) describes the WEA judgment educational process as follows:

"the leader recognizes a need to make a decision, collects all available relevant information, identifies and analyzes potential options for actions, and identifies consequences of those actions. Then the leader (or group) selects an option. The option is executed and the results are evaluated" (p. 6).

Guthrie mentions that a shortcoming of the WEA model for judgment is that it does not explain "how a leader knows the most appropriate options, nor does it explain how a leader knows which is the best decision" (p. 6).

Outward Bound. Outward Bound does not formally elicit an adoption of a particular judgment doctrine, decree, or definition. Nevertheless, an evaluative research on the topic consistently leads one to Outward Bound's association with the Wilderness Risk Management Conference (WRMC), held every year in the US. The WRMC iterates their purpose as: "The core objective of the Wilderness Risk Management Conference (WRMC) is to offer an outstanding educational experience to help you mitigate the risks inherent in exploring, working, teaching, and recreating in wild places" (NOLS Wilderness Risk Management Conference, 2011). Furthermore, Outward Bound offers a course called "Instructor Judgment Training", (Outward Bound Employment, 2018).

The Priest Model. Lloyd-Strovas (2011) created an experiential learning and judgment paradigm based on experiential experts' Priest and Gass (1997) works on judgment as an experiential process. Figure 1 shows the Priest model for the judgment process.

Figure 1 Priest Model
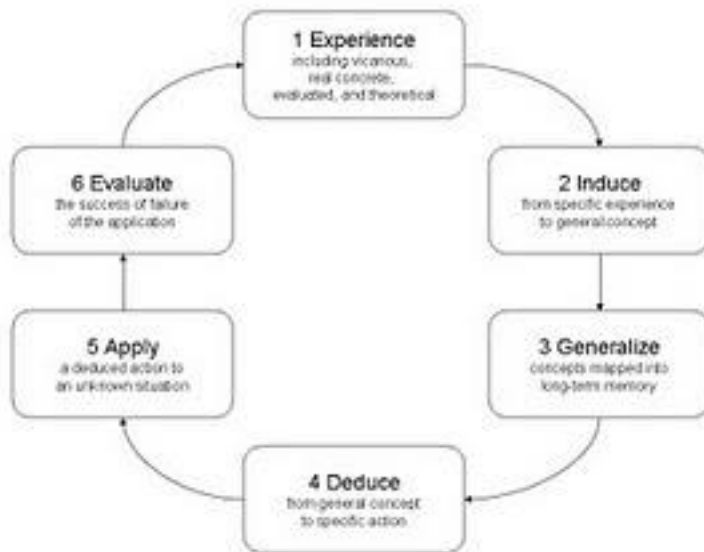
Figure 1. This model is adapted from Priest (1990) and was inspired by Dewey's belief that judgment plays an essential role in experiential learning (Priest & Gass 1997). It begins by describing multiple types of experiences that can be stored in the student's memory. Next, the specific experience is recognized and categorized in the brain as a general concept. When faced with a problem the brain retrieves the memory of the general concept and applies it to that specific event. The student then makes a judgment concerning the problem at hand. Finally, the judgment is evaluated and used as a reference for future experiences. Due to the cycle, learning occurs over periods of time in which experiences and reflections are repeated (Priest & Gass 1997). (Lloyd-Strovas, 2011).

Guthrie (1996) highlights the Priest model as a predominant model about experiential education. Experiential education is throughout the wilderness leadership industry. This model, according to Guthrie considers judgment "a series of procedures undertaken by the human brain

in an effort to fill in for information that is uncertain, but nonetheless important to the problem-solving process" (p. 6).

Relevant Studies found in the Judgment Literature

Few studies were found relevant to this review of the literature concerning judgment in wilderness leadership. Little research has been unearthed on judgment, specifically in wilderness leadership. However, some studies were found and are highlighted in this review, showing the scope of studies in judgment wilderness leadership.

Judgment in Wilderness Leadership Studies. Koesler and Propst (1994) offered a study called "Factors Influencing Leadership Development in Wilderness Education" that created a proposal and conducted an evaluation of a "theoretical model that identified the components of the process by which leadership development in wilderness education occur" (p. 2). They determined and recommended to practitioners that "Active Involvement" in wilderness leadership programs "leads to better judgement" within oneself (p. 2).

Prospt and Koesler (2009) concentrated on a study called "Bandura goes outdoors: Role of self-efficacy in the outdoor leadership development process." The study focused on "the benefits of participation in outdoor leadership programs and the factors that contribute to continued participation in outdoor leadership development activities" (p. 319). Their study was conducted in a pretest/posttest model where instructors and students were surveyed on self-evaluative perceptions of the benefits of either teaching or taking a wilderness leadership course. The recommendations of this study were "that instructors be exposed to training that sensitizes them to the differences between females and males in their development as confident persons and competent outdoor leaders" (p. 341). Secondly, in "providing mentoring relationships will enhance self-efficacy, particularly for women, thus increasing the potential for continued outdoor

participation" (p. 341). Lastly, "instructors and outdoor educators should give immediate and positive feedback to students. Positive feedback was more important for females and immediate feedback more important for males in raising levels of short-term self-efficacy." Also, Propst and Koesler mentioned it was particularly important for males to continue to participate in "outdoor leadership development activities" (p. 342).

Sibthorp et al. (2007) conducted a study known as "Exploring Participant Development Through Adventure-Based Programming: A Model from the National Outdoor Leadership School" and was published in 2007. Their study looked at the:

"impacts of a participant's age, sex, previous similar experiences, personal perceptions of empowerment, group perceptions of challenge of terrain, group functioning, instructor rapport, and course length on perceived gains in communication, leadership, small group behavior, judgment in the outdoors, outdoor skills, and environmental awareness (p. 12).

Two major findings from this study were that previous experience and a sense of empowerment in the students were significant predictors of judgment in wilderness leadership courses (p. 11).

Friese, Pittman, and Hendee (1995) conducted a meta-analysis of wilderness leadership studies done through 1995. Their research annotated 187 research-based literature pieces. Some of their findings concluded "participation in wilderness experience programs results in positive benefits, such as enhanced self-esteem and sense of personal control, and negative results from participation are virtually non-existent" and that much of the literature in the field was "reported in non-peer reviewed outlets and "grey" literature, with less than expected in scientific journals and serialized professional outlets" (p. 96).

The following is a concise review of studies found by Friese et al. (1995) that are relevant to the topic judgment in wilderness leadership. The sources of the annotations were

scientific journals; conference, convention, symposia and workshop proceedings; published reports and monographs; books and book chapters; theses and dissertations; unpublished papers and reports; and pertinent articles from trade journals and popular magazines that describe research findings, facts and important ideas about use of wilderness for personal growth (p. 5).

Comparative Analysis Studies. One comparative analysis study was conducted named "Outward Bound: The Congruence of Principles and Practice (Environmental Awareness, Outdoor Education)" written by Estes and Kleinman in 1990. It was a dissertation that looked for congruence principles between North Carolina Outward Bound and Colorado Outward Bound. Eleven principles were measured "judgment and action, self-discovery, self- development, success and failure, responsibility to community, service, compassion, value of commitment, environmental awareness, cooperation and introspection" (p. 21) through a questionnaire of professionals at the two organizations. Recommendations for Outward Bound and for future studies were made but not illuminated in the work.

Qualitative Analysis Studies. In an analysis of the content of college-level courses, Green (1981) interviewed 61 wilderness leaders and identified a top ten list of topics for them professionally. Judgment was the second most important topic behind risk management. The list generated from Green was "(1) risk management plans (minimizing risks, emergency plans, prevention); (2) judgment; (3) wilderness ethics; (4) first aid; (5) analyzing risks; (6) minimum impact practices; (7) outdoor leadership objectives; (8) hazard analysis: hypothermia; (9) back country first aid; and (10) minimum impact philosophy" (Friese et al., 1995, p. 41). It is pertinent

to mention that judgment came in as the second most important wilderness leadership topic according to 61 wilderness leaders in the Pacific Northwest in 1981.

Program Evaluation or Descriptive Studies. Friese et al. (1995) found three studies relating to judgment, wilderness leadership, and program evaluation or descriptive in nature. The first study was "The NOLS Experience: Experiential Education In The Wilderness (Outward Bound, Petzoldt, Tapley, Wyoming)" by Bachert in (1987). The study was a NOLS program evaluation through a descriptive approach. Bachert concluded that "wilderness management and wilderness education programs can improve the judgment and performance of participants and instructors by providing both primary and reflective experiences in, and about and for the wilderness that result in positive change in the cognitive, affective, and psychomotor domain" (p. 45).

The second study was by Cockrell in 1991, titled "The Wilderness Educator: The Wilderness Education Association Curriculum Guide" that was descriptive of "The Wilderness Educator: WEA Curriculum Guide," where, judgment and decision-making ability is the second chapter (p. 49). The text was quoted as "being a useful text" throughout the semester. WEA is fostered in academic, accredited, college and junior college settings.

The last study in this category as identified by Friese et al. (1995) was titled "The Effects Of A Group Based Wilderness Adventure Program On The Moral Reasoning, Sociomoral Attitudes, and Self-Esteem Of Adolescents" and was conducted by Steiger, 1986. This was a study on a group-based wilderness adventure program that analyzed moral judgments as a way to substantiate and "promote moral reasoning, socio-moral attitudes, self-esteem, and positive behaviors related to drug and alcohol use and school performance" (p. 65). In the study, the moral judgments are viewed as a tool to achieve the desired outcome for students.

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Proposed Model or Explanation Studies. Raiola (1986) conducted the only study of this type related to judgment and wilderness leadership. The study's title was "Outdoor Wilderness Education - A Leadership Curriculum". This study was conducted at Unity College in Maine evaluated "curriculum for outdoor leadership education" (p. 84) that was suitable to both land and water-based programs. "A panel of five experts and a group of seven students rated a list of thirty objectives for their importance in guiding such a curriculum" and both experts and students classified Judgment/Subjective-Objective as a necessary element. The study results revealed that "students had increased their levels of skill, competence and knowledge related to the curriculum objectives after the completion of the course of instruction" (p. 85).

Concluding Remarks on Friese Pittman, and Hendee, (1995) meta-analysis. Overall, Friese et al. (1995) provided a substantial overview of pertinent studies in wilderness leadership and judgment. However, as the author mentioned, many of these studies were considered less than academically rigorous. Another point of academic contention is that the studies are outdated by 20 to 30 years. More studies, based in academia, which are subject to peer review, must be done to update the database in judgment in wilderness leadership.

Spanning the Gap in Natural Resource Social Science

Ultimately, a call to link the judgment literature to the "larger context of social science research, both theoretical and applied," Pitz and Sachs (1984), offer a variation of the definition of judgment as a:

"task…characterized either by uncertainty of information or outcome, or by a concern for a person's preferences, or both. Unlike other tasks, there may exist no criterion for determining whether a single choice or judgment is correct, since the response is based in part on personal opinion or preferences" (p. 140).

Task analysis will be the thrust of the proposed research, concurring with the definition that no "single choice is correct" due to personal uniqueness and interpretation. According to Dillion (2005), the essence of judgment as defined in "Blink" by Malcolm Gladwell is, "based on fairly deep knowledge" and does not require the "consideration of too much information" (p. 27). "Blink" is a modern book that underlines the "power of thinking without thinking" (p. 27). Dillion's review of Gladwell's book asserts, "snap judgments are everywhere" (p. 27).

Sibthorp et al. (2007) noted that personal empowerment supported sound judgment practices and suggested educational implementation "through use of on-program goal-setting, using a student leader-of-the-day, facilitating group decisions when possible, allowing students to travel unaccompanied by an instructor, and generally running programs with a less autocratic style" (p.15). Furthermore, instructors are encouraged to empower themselves, each other, as well as their students to foster sound judgment practices. One way that Sibthorp et al. identified the execution of empowerment on wilderness leadership courses was to consistently attend "to the group and any fractious group issues. They [the instructors] should be working to establish personal relationships and strong connections with their students" (p. 15). Sibthorp et al. set the stage for directions of future research, especially regarding how to foster sound judgment practices on wilderness leadership courses.

Considering Friese et al. (1995) research conclusion that "reported in non-peer reviewed outlets and "grey" literature, with less than expected in scientific journals and serialized professional outlets" (p. 96) a genuine and serious need for academic research rooted in the knowledge base, supported by peer-review, and clarified through rigorous theoretical constructs warrants a dissertational study on the task analysis and nature of judgment of wilderness leadership. Friese et al. (p. 96) further noted that throughout their meta-analysis studies lacked

rigor, sources of data were predominantly surveys, very few comparative studies or experiments were conducted, as well as very few long-term studies.

Decision-Making

Galloway (2007) noted that the decision-making environment that wilderness leaders exist in includes: "ill-structured problems; uncertain, dynamic environments; shifting or competing goals; action/feedback loops; time stress; high stakes; multiple players; and organizational goals and norms" (p. 100). Wagstaff and Cashel (2001) published an article on Paul Petzold, the founder of the National Outdoor Leadership School (NOLS) and archived writings on his from the last 20 years of his life. Petzold lived to be 93 and still is considered one of the godfathers of outdoor and wilderness leadership. Petzold believed that often one's prior experience as a wilderness leader would hinder "further development in decision-making skills" (p. 163). In his writings, he proclaimed "dealing with the 'expert' who has had some experience and wants to publicize his knowledge presents a problem. He finds it more interesting to question than to listen" (Wagstaff & Cashel, 2001, p. 163). Finally, Preston and Hermann (2006) mention that the level of expertise influences "the nature of the decision-making process" (p. 1). That is, in decision-making the novices showed lack of aptitude in deciphering what information was relevant and why; "lacked knowledge about interrelations among variables, and had difficulty combining and integrating information" (Preston & Hermann, p. 18).

Theories of Decision-Making

According to Furman et al. (2010) there are three "branches of decision theories: (a) classical, normative models, (b) models that focus on automated processes of decision making such as the role of affect, intuition, and heuristics, and (c) dual-process models, which explain decision-making based on some combination of the previous two models" (pp. 454-455;

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Galloway, 2007). Classical models of decision-making are rational and come from a perspective of cognition. Decision-making models that include intuition, the role of affect, and heuristics "focus on how emotion or automaticity affects decisions" (p. 455). Furman et al. (2010) also highlighted the dual-process decision-making model includes both classical and automated aspects of "decision-making by suggesting that affective processes, such as heuristics, influence the ability to make decision according to the standards of normative models" (p.455; Galloway, 2007).

Three categories of decision-making interventions are identified as face-to-face decisions, independent decisions, and those mediated by interactive and social technologies (Elwyn, Frosch, Volandes, Edwards, & Montori, 2010). These categories apply to wilderness leadership as instructors making decisions with other instructors or students in the face-to-face component; instructors making independent decisions without other instructor or student input, and instructors making decisions using technology such as GPS or NOAA weather information for example. The reason decision support intervention is important and should be used is:

Decision support interventions help people think about choices they face: they describe where and why choice exists; they provide information about options, including, where reasonable, the option of taking no action. These interventions help people to deliberate, independently or in collaboration with others, about options, by considering relevant attributes; they support people to forecast how they might feel about short, intermediate and long-term outcomes which have relevant consequences, in ways which help the process of constructing preferences and eventual decision making, appropriate to their individual situation (Elwyn et al., 2010, p. 705).

Furthermore, the authors view decision support intervention as one form of a theoretical decision-making base.

Definitions of Decision-Making

Many definitions of decision-making were discovered by this literature review. Some definitions came directly out of the field of wilderness leadership like the definition noted by Galloway (2007) that includes two features; task-oriented components and the expertise and knowledge the decision-maker brings relevant to the task at hand.

Petzoldt defined decision-making as "the combination of information available at the moment combined with past experience to yield a decision" (Wagstaff & Cashel, 2001, p. 164). He strongly felt that "judgment is the result of previous bad decisions," (p.164) which also would benefit making transparent decisions in front of one's students. "To him [Petzoldt], it was decision-making and judgment ability that separated effective from non-effective instructors" (p. 164). Petzoldt believed that instructors should think out loud so that their students can understand into their process of judgment and decision-making and learn from their instructor's example.

A commonly accepted definition of decision-making is considered a process and is defined as "the making of reasoned choices from among alternative courses of action (concerning a personal or public issue), which require judgments in terms of one's values" (Kortland, 1996, p.675). Kortland (1996) elaborated a normative model in figure 2.

Figure 2 Kortland Normative Model
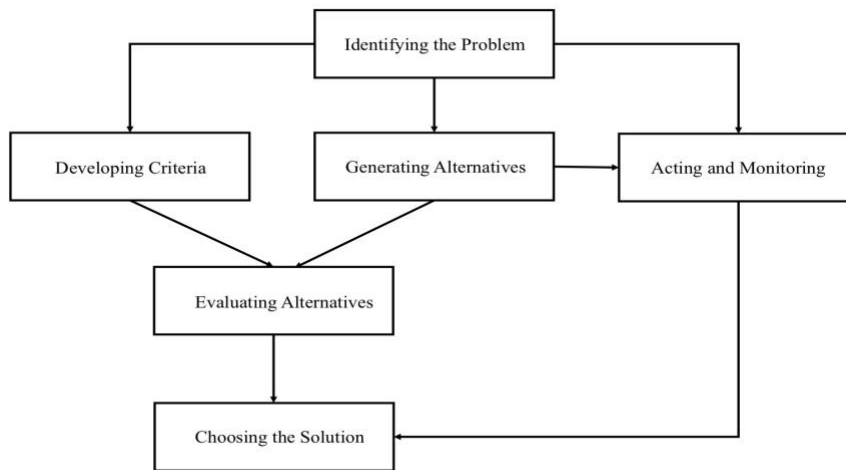
Figure 2 shows a flow chart of the decision-making process according to Kortland (1996). The flow starts with identifying a problem, developing criteria or choosing alternatives, either evaluating alternatives or acting and monitoring, which leads to choosing a solution. Identifying the problem lead to either developing criteria or generating alternatives. Both processes lead to evaluating alternatives and then choosing a solution. From that point, acting and monitoring occurred until a new problem was identified, and the process repeated itself.

Finally, Rennie et al. (2011) studied decision-making on surgical trainees in the medical field. They found that a good surgical decision maker is a surgeon or trainee who makes well informed and considered, timely, patient-focused decisions which are backed by sound knowledge and appropriate evidence base. To make good decisions, the decision-maker must recognize their limitations, acknowledge the need for collaboration, and engage in reflection and clear communication to bring about an appropriate action (p. 1218). This definition was stated as intended to be a working definition with the flexibility to evolve.

Galloway (2007) stated that decision-making is considered a critical competency for outdoor leaders. He noted that programs and individual businesses lack the knowledge to effectively train staff to "make good decisions in the field" (p. 101), especially concerning wilderness medical decisions.

Judgment Relates to Decision-Making. Paul Petzoldt believed that "having judgment is [was] the most important aspect" of leadership (Wagstaff & Cashel, 2001, p. 164). Schimelpfenig (2007) supported Petzoldt's assertion of judgment and revealed how and why judgment's importance is a direct link to decision-making. "Judgment is reasoning under uncertainty" (p. 1), and is considered a critical component needed when one is making a decision.

Good Versus Poor Decision-Making. Rennie et al. (2011), a group of expert surgical doctors, conducted a study on decision-making aspects found in medical surgeons and trainees. They noted that consistency and well-informed personnel created components of a sound decision, which revealed that "all relevant information has been considered" and that the information considered was "soundly thought through" (p. 1216). On the other hand, elements of a poor decision were also discovered and reported. Rennie et al. (2011) commented that it was important to note a decision's timing. Nevertheless, if a decision was either "too slow" or "too fast", uninformed by "collecting irrelevant data or acting without adequate clinical assessment", or relied on "too much analysis or too little analysis of the clinical data" the decision had a poor result according to their assessment (p. 1216).

Outcomes. Both Rennie et al. (2011) and Galloway (2007) noted that outcomes are not necessarily related to if good or bad decision-making occurred. The "need to bring about

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appropriate action," according to Rennie et al. (2011) was considered a "crucial aspect that distinguishes decision making from problem solving and judgment" (p. 1218). Also, the study suggests that outcome alone does not reflect if a decision was good or poor, and that poor decisions may be ignored or excused when outcomes are good. The caveat links good decision-making to expertise where the expert can see the decision-making path regardless of the outcome and be able to assess the quality of a particular decision.

NOLS on Good Decisions. NOLS has been the strongest wilderness leadership industry standard setter. All of their courses are accredited through the University of Utah. NOLS and its associates at the University of Utah are the predominant peer-reviewed authors throughout the industry. Every year the Wilderness Risk Management Conference (WRMC) has been held and is sponsored by NOLS, Outward Bound, and the Student Conservation Association (SCA); the industries' strongest and most influential building blocks and standard setters.

WMI Decision-Making Path. The Wilderness Medicine Institute (WMI), a division of NOLS presented on Decision-Making and Judgment at the WRMC conference in 2011. WMI (2011) listed ten components that comprise making a good decision.

- Use Protocols
- Have Situational Awareness
- Tolerate Uncertainty
- Be Self-Aware
- Use Your Team
- Communicate
- Seek Feedback
- Get Good Information
- Be Mindful
- Be Intentional (Schimelpfenig & Richards, 2011, p. 23).

PAS by WMI. Another decision-making component the WMI uses is the patient

assessment system (PAS) to assist in the decision-making process. The steps help to clearly

outline what is needed to make a good decision. The steps for the PAS are below:

- Describe what needs to be decided and Define the Problem.
- Gather Information.
- Identify options, choices and alternatives.
- Identify parameters for the decision.
- Compare the [your] options.
- Decide, implement and evaluate. (Schimelpfenig, 2007, pp. 3-4).

Developing Decision-Making

One central approach to decision-making is called the Analytic Hierarchy Process. The

process deals with "both rational and intuitive to select the best from some alternatives evaluated

concerning several criteria" (Saaty & Vargas, 2012, p. 1). One example Saaty and Vargas

provided was if you offer a hungry person a beautiful apple or a shriveled-up orange to eat, they

will likely choose the apple. But, if on the second day you offer them a juicy round orange or a

small soft apple with wormholes, they will change their choice and decide on the orange.

The hierarchical method, according to Saaty and Vargas (2012) "provides an overall view

of the complex relationships inherent in the situation and in the judgment process, and it also

allows the decision maker to assess whether he or she is comparing issues of the same order of

magnitude" (p. 2). Decision-Making hierarchies need to include "relevant detail" representing the

problem, "identifying issues or attributes" that contribute to the solution of the problem,

alternatives to the solutions, and understanding who are the stakeholders associated with the

problem (p. 2).

How an expert makes a decision according to Schimelpfenig (2007), the Curriculum

Director of the Wilderness Medicine Institute (WMI) is "that experts recognize specific patterns,

finds clues within those patterns, and then quickly sort the clues. Experts intuitively recognize a situation, evaluate and accept or reject choices without lengthy side-by-side comparisons" (p. 2). This process is referred to by Schimelpfenig as "the expert decision model, expert intuition, natural decision-making or a pattern recognition model" (2007, p. 2). Schimelpfenig (2007) cautioned that although one may have much experience, bad decisions could still be made. Some suggestions he gave to the decision-maker to avoid decision-making traps included: being realistic, self-aware, seeking feedback from peers, and being thoughtful and careful with judgment assessments that lead to decision-making (p. 3).

Concluding Decision-Making Remarks

Decision-making revealed to be a process perceived as strongly dependent on the concept of judgment (Wagstaff & Cashel, 2001; Galloway, 2007; Preston & Hermann, 2006). Three theories of decision-making were revealed: classical decision-making, heuristic approaches, or a dual-process of decision-making. Many versions of defining decision-making were offered, including definitions that came directly out of peer-reviewed processes in the wilderness leadership field. Next, a review of the different elements and components that go into making a decision are examined. A few suggested approaches of how to make a decision came again directly from the wilderness leadership field. Lastly, a short analysis of how decision-making can be developed and traps to avoid revealed that decision-making can be a hierarchal process and with proper experience and knowledge, decision-making traps have been avoided in the past.

Leadership

Tennant (2005) wrote an editorial for Computerworld journal, on a special report of the top 100 IT (Information Technology) leaders. Regarding leadership, he said that "It's not what [a]…professional receives that makes him a leader. It's what he gives" (Tennant, 2005, p. 1).

Curtis, de Vries, and Sheerin (2011a) study the role of leadership in the field of nursing. Citing previous studies, they suggested that most nurses come out of nursing school underprepared for roles in leadership. Overall, leadership is both personal and professional. On the personal side, as Tennant mentioned, leadership is what the leader makes of it. On the professional side, a real need for strong, good leaders is needed in any industry, including the wilderness leadership industry.

Definitions of Leadership

Eleftheriou (2006) stated there are "overwhelming amounts" of leadership definitions and resources which resoundingly contribute "to the confusion" of discerning what leadership is (p. 20). NOLS defines leadership as "timely, appropriate actions that guide and support your group to set and achieve realistic goals" (Kanengieter, 2001). Kanengieter stated the four types of leadership asserted by NOLS; peer leadership, designated leadership, self-leadership, and active followers. Outward Bound defines leadership as "the art of mobilizing others to work together to achieve shared goals" (Raynolds & Chatfield, 2007). Although NOLS and Outward Bound's leadership definitions were instrumental in developing the perception of wilderness leadership in this study, other sources have been reviewed to achieve a more complete picture of the true definition of leadership. Some of the literature was extrapolated from the medical industry and likewise from the business field.

There are exponentially many definitions of leadership. Curtis et al. (2011b) offer a timeline spectrum of some of the most commonly accepted definitions of leadership:

- "The process by which an agent induces a subordinate to behave in a desired manner (Bennis 1959)
- Leadership…is the ability to influence people toward attainment of goals (Daft, 2000)

- Leadership is defined as influence, that is, the art or process of influencing people so that they will strive willingly and enthusiastically toward the achievement of group goals (Weihrich and Koontz, 2005)
- Leadership involves the use of interpersonal skills to influence others to accomplish a specific goal (Sullivan & Garland, 2010)" (p. 306)

Lastly, Curtis (2011) mentions that a common thread that was discovered running through the many definitions of leadership was that "leadership involves influencing the attitudes, beliefs, behaviors and feelings of other people" (p. 306).

Davis (1997) defined leadership as "the process of persuasion or example by which an individual (or leadership team) induces a group to pursue objective held by the leader or shared by the leader and his or her followers" (p. 227). Raiola (2003) saw leadership more as a group process, "leadership is an interactive process, requiring us to be actively engaged in dynamic situations" (p. 54).

According to Farrell (2007) an Outward Bound affiliate, leadership embodied "the capacity to anticipate and adapt to change with the capacity to learn and to keep learning" (p. 7). Farrell said that leadership was also "defining, exemplifying, and communicating values is [sic] one of the central requirements of leadership and of education leadership especially" (p. 10). On the note of educative leadership, Farrell (2007) asserted that teaching and leading are synonymous acts. He listed seven principles and practices found in teachers/leaders:

1) Managing the Self, Teaching/Leading By Example, Using Examples to Teach

2) Establishing a Culture

3) Knowing and Caring About the Students/Employees/Followers

4) Knowing and Caring About the Content/Material/Work

5) Building a Good Team

6) Committing to the Mission, Focusing, and Persevering

7) Stepping Back, Letting Go, Bringing Out the Best" (p. 9).

Finally, one last long-term Outward Bound employee, and past Vietnam commanding officer veteran Colonel Rheault defined leadership as "being able to inspire others to do the hard, dangerous, uncomfortable stuff for low pay and little hope of reward" (p. 15). His definition does link closely with Tennant (2005), where he pointed out leadership was what one chose to put into the ideal.

Elements that Comprise Leadership

Many elements of leadership exist. This section reviewed the NOLS and Outward Bound perspectives first, due to the fact those entities are current industry standard setters. From there, the review of the literature spanned between the medical industry literature and the business field literature to gain a more robust scope of what elements comprised leadership.

NOLS. NOLS has seven categories that they refer to as "leadership skills". Achieving these skills is presumed to make one a "strong leader". Below is a list of the seven leadership skills as devised by NOLS:

(1) Expedition Behavior, which entails cooperation and conflict resolution, teamwork, keeping yourself, and others, motivated, getting along in a group of very diverse people;
(2) Competence, that includes knowledge and skills, organization and management, technical ability;
(3) Communication, which means using timely, specific, clear feedback, listening actively, having courage to state what you think, feel and want, trying to put yourself in other people's shoes during conflicts;
(4) Judgment and Decision-Making that involves situationally-appropriate [sic] decision-making, using your experience to develop good judgment, harnessing the strengths and knowledge of other group members to solve problems;

(5) Tolerance for Adversity and Uncertainty that involves learning to endure, even enjoy, hard work and challenge, adapting to changes and unknowns, turning challenging situations into opportunities, using humor to keep things in perspective, making focused decisions under stress;

(6) Self-Awareness which encompasses knowing yourself and your strengths and weaknesses, learning from experience, being aware of your own leadership style and how you influence others, realizing how your words and actions impact others;

(7) Vision and Action which incorporates seeing the possibilities in any situation and finding creative ways to move the group forward, motivating and initiating, using group goals to guide your actions (NOLS, Leadership Skills, 2018).

Outward Bound. Colonel Rheault (2007), declared that leadership and ethics are "NOT separate" (p. 15), and that these concepts "converge to create trustworthiness" (p. 15). Rheault is a military veteran of the Vietnam War and a long-standing, seasoned Outward Bound Instructor. He offered four elements that he believed trust in a leader is dependent on:

- The leader is competent, knows what is being asked of the troops from personal experience—hence the importance of having come up through the ranks. One does not become a trusted leader in combat or Outward Bound without having "done the stuff" in the field.
- The leader has good judgment and the personal restraint and integrity to act on it.
- The leader has good will towards the troops and will take care of them.
- The leader is confident because he/she knows the profession, knows the troops, and knows that his/her boss is committed to his/ her success and will not abandon him/her (p. 15).

Rheault's colleague Farrell (2007) echoed Rheault's leadership sentiments by conveying that leadership is situational, and its effects and evaluation as a case-by-case barometer.

Wilderness Leadership Academics. Shooter, Sibthorp, and Paisley (2009) wrote on outdoor leadership skills that were found in various wilderness leadership programs and institutes. They declared that "Outdoor leadership skills are commonly thought of in terms of the knowledge, aspirations, skills, and abilities of individuals" (Shooter et al., 2009, p. 2). Nevertheless, common knowledge in the outdoor leadership industry is that a streamline of skills is lacking. Shooter et al. noted specifically that programs differ from each other "regarding the

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specific skills they require of and value within their leaders" (p. 2). For example, most programs require their leaders to obtain a current medical training of at least a Wilderness First Responder (WFR). WFRs can be obtained from a variety of wilderness medical companies. Future employees can then hold the same certifications, but there is no regulatory body or mechanism that holds WFRs to a streamlined standard. Therefore, there can be significant variation within skill sets and knowledge among employees with WFR certifications potentially could have extreme variance in their WFR skill set and knowledge base.

Shooter et al. (2009), also recognized to become a "competent outdoor leader…a wide range of skills" (p. 3) was needed. Furthermore, they discuss an array of skills broadly categorized as hard, technical skills and soft, interpersonal skills that must be developed to be a competent outdoor leader.

Shooter et al. (2009) discussed early works of outdoor leadership competency assessments. One assessment published by Buell in 1983, highlighted 12 leadership competency categories: "philosophy, history, and theory; leadership; counseling; program planning; outdoor skills; environmental awareness; first aid and safety; administration; equipment and facilities; professionalism; evaluation; and trends and issues" (p. 3). Other early works discussed by Shooter et al. (2009) mentioned a second common knowledge base in the current field of outdoor leadership; that soft skills, the interpersonal skills, were often, and are often overlooked in training outdoor leaders. Training trends of the outdoor leaders in the past 20 years have increasingly placed greater emphasis in creating a balance for both hard or technical skill intake with the softer, more interpersonal skill sets.

Since the 1990s, a third skill set has surfaced, according to Shooter et al. (2009), and is considered common knowledge in the outdoor leadership field. This skill set category refers to as

"operational skills" (p. 4), skills that fall under the soft, interpersonal domain, but focus specifically on "judgment and decision-making" (p. 4). In the current decade, the terms "hard and soft skills" are considered "outdated" and Shooter et al. (2009) "propose that outdoor educators abandon these terms and embrace the terms technical skills and interpersonal skills" (p. 7). Furthermore, "technical skills are the physical tasks associated with the hands-on activities of outdoor education" (p. 7). Technical skills are: wilderness medicine, rock climbing, telemark skiing, backpacking, land navigation, or backcountry living skills. "Interpersonal skills are those skills that specifically require direct personal interaction with participants through verbal and non-verbal communication" (p. 7). Examples of Interpersonal skills are: teaching, group facilitation, and conflict resolution.

The Medical Industry. In nursing leadership, the premise is everyone must become a leader to some capacity. The principle, as described by Curtis et al. (2011a) was that supervisors lead the nurses, and the leadership descends throughout the nursing hierarchy; nevertheless, the nurse at the lowest level of the hierarchy is still a leader to their prospective peers and patients and their families. The idea that everyone ought to be a leader has been supported by Curtis et al. (2011a), Curtis et al. (2011b), Sheerin, and de Vries (2011b), Eleftheriou (2006), and Gordon and Berry (1993). The real thrust of the hierarchy described here is empowering of employees, both Curtis et al. (2011a) and Gordon and Berry (1993) have strongly advocated the idea of empowerment in leadership. According to Curtis et al. (2011b), "particular traits and characteristics that have been shown to promote leadership are openness, extroversion, and motivation to manage. Furthermore, age and experience facilitate leadership, while gender seems unimportant" (p308). They noted that experience and age were direct correlations to leaders who were considered "more effective" (p. 346).

Other initiatives that Curtis et al. (2011b) mentioned to foster strong leadership among nurses through programs were: "creating a warm, safe and supportive culture and work climate" and sharing leadership with peers lead to a healthy work environment (p. 351). Furthermore, the authors mention that these initiatives had a positive effect on learner retention of curriculum material. Of all of the initiatives that Curtis et al. revealed, empowerment in developing future leaders was the strongest standing initiative. Delegation of leadership responsibilities is considered one form of empowerment in leadership. This principle allows people; nurses, in this case, to feel a part of a team, invest in active collaboration, gain self-respect, and professionalism.

The **Business Industry.** Like Curtis et al. (2011a; 2011b) there is also an aim to develop leadership skills such as collaboration, communication, and emotional intelligence. Crumpton-Young et al. (2010) acknowledged additional leadership skills that need to be developed such as situational awareness, conflict management, effective leadership, and motivation of team members. Other leadership development skills that were noted as important by Crumpton-Young et al. (2010) were "knowing where to fit into the organization,…people skills, negotiation skills, understanding team limits, time management,…resource leverage, being open-minded, the ability to develop a vision, being a good listener,…self-initiative, teamwork abilities, customer relations, and decision making" (p. 18).

Business magazine Inc. published an interesting article of their take of "13 ways of looking at a leader" (Buchanan, 2012). The 13 ways ultimately surmounted to 13 leadership traits commonly found in current leaders of today and the traits are: adaptive; emotionally intelligent; charismatic; authentic; are goal oriented and humble in nature; mindful; narcissistic; no-excuse; resonant; servant; storytelling; strength-based; and tribal (Buchanan, 2012, p. 74-76).

The author was clear that no lead normally would embody all 13 traits at once, but any leader could be found with multiple traits at once. More components found in a leader according to Gordon and Berry (2006) are to "think frequently and positively about change, think broadly and flexibly, learn to listen, know and practice your values, and be a lifelong learner" (p. 30).

Mentorship. The concept of mentorship has been predominating and thematic idea throughout most of the literature, including the areas of expertise, decision-making, and now leadership. The leadership section of this literature review reveals that mentorship emerged out of the leadership sector. Hicks (2011) stated that "mentorship is often considered one of the best ways to develop leadership potential" (p. 66) as he found in the business industry. Many other authors supported the importance of mentorship as a leadership development tool (Chang, 2010; Curtis et al., 2011; Crumpton-Young, McCauley-Bush, Rabelo, Meza, Ferreras, Rodriguez, …Kelarestani, 2010; Hayes, 2008; Howard, 2011; Patrick, 2005; Rennie, Rij, Jaye, & Hall, 2011; Rodriguez, Goertzen, Brewe, & Kramer, 2012; Smith, 2007). Hicks (2011) purported that self-reflection from both the mentor and protégé was the strongest caveat needed to have a successful mentoring relationship. According to Curtis et al. (2011b), mentorship was a close second to empowerment as for elements needed to create leaders. Although mentorship seemed to be more informal, nevertheless, many benefits resulted in the development of leadership skills among nurses. Many mentor relationships transcended jobs and often became lifelong relationships. The bottom line premise is that mentorship fosters leadership skills and professional development with positive outcomes (Chang, 2010; Curtis et al., 2011b; Crumpton-Young et al., 2010; Hayes, 2008, Hicks, 2011; Howard, 2011; Patrick, 2005; Rennie et al., (2011); Rodriguez et al., 2012; Smith, 2007).

Theories of Leadership

Four common leadership theories were identified that classify and describe leadership (Curtis et al., 2011a). Their theories were the only that surfaced throughout the literature review. Those theoretical leadership classifications were:

- Trait approach, which is concerned with personal traits that contribute to effective leadership.
- Behavior approach, which, like trait theory, explores leadership from the perspective of the leader and focuses on leader behavior [sic].
- Contingency approach (Fielder's contingency theory and path-goal theory) suggests that leadership is about the interaction between a person (leader), his/her behavior [sic] and the situation.
- Leader-member exchange approach (charismatic or transformational leadership) is concerned with the relationships between subordinate [sic] and supervisor (Curtis et al., 2011b, p. 307).

Leadership Development

Curtis et al. (2011b) acknowledge that leadership curricula and programs originate and derive from the business field and that nursing leadership may use the business leadership model but must tweak it for their industry needs. The same would be true for any industry, specifically the wilderness leadership industry.

Curtis et al. (2011) reviewed 24 studies on nursing leadership and stated that the overall conclusions within those 24 nursing leadership studies suggested that leadership could be "developed through educational activities, modeling and practicing leadership." Furthermore, when Curtis et al. analyzed behaviors and practices, they concluded, "relationship skills are more important than financial and technical abilities, and that demonstrated leadership tends to foster leadership behaviors in others" (p. 308). Curtis et al. (2011b) reviewed other research on leadership education programs and determined that the programs have a "positive impact on new leaders and that leadership training has a positive impact on institutions" (p. 346). Further

findings also asserted that both previous leadership experience and formal education contributes significantly to the development and training of leadership skills.

A gap was identified by Curtis et al. (2011a) between leadership education and the demands for leadership in their field, nursing. Moreover, they assert that relationship skills are the most important skill for any leader to have and strongly recommend relationship skills be a key component in any leadership development or training program. Other suggestions made by Curtis et al. concerning leadership development curriculums included components on emotional intelligence, "the ability to integrate and manage emotions and reason" (p. 308), effective communication skills, and learning to become approachable. Each of these components was found to be critical and valuable in nursing leadership development according to Curtis et al. (2011a).

Curtis et al. (2011b) wrote a second article on nursing leadership in the same year. Their second article concerns with the impacts of leadership and training from an educational standpoint. They asserted, "leadership skills can be advanced through leadership programmes [sic], workshops and professional education seminars" (p. 344). One study analyzed by Curtis et al. (2011b) identified beneficial outcomes of nursing leadership programs. Those benefits discovered were "the enhancement of leadership skills,… growth in the personal development of the participants,…positive outcomes in patient and client care,…conflict management, change management skills, and networking opportunities" (p. 350).

Simms (2010) purports a "three step process for leadership development, which involves assessing the current management team against the organization's leadership capability requirements, identifying ways to develop the capabilities and determining gaps in roles or expertise" (Simms, 2010, p. 4). Developing leadership "is an investment to an organization's

future" by developing leaders from lower levels in the organization through upper management (p. 4).

In the UK the National Health Service (NHS) has created a special National Leadership Center (NLC). The NLC requires persons with expertise to be the ones who orchestrate their leadership program. One interviewee of the NLC commented that the leadership center was "about making sure that everyone has the skills they need to take risks, to shape their own organisation [sic] and to deliver much better, more effective and more efficient care for their patients" (Jeavons, 2011, p.25).

Like nursing, engineering has pushed for more leadership development programs to ensure future engineers have the needed leadership skills to effectively lead a team of engineers. Unlike nursing programs, Crumpton-Young et al. (2010) promote leadership programs that are embedded in business such as NASA or Lockheed Martin, rather than in higher education institutions. Many of these leadership programs were created based on a need to assist employees transitioning "from an academic to a corporate mindset" (p. 15). The majority of these corporate programs develop leadership skills through experiential learning segments. Crumpton-Young et al. (2010) noted that some of the leadership programs they reviewed also provided workshops on how to assume "leadership positions in academia" (p. 16) which then suggested further leadership development of future engineers in academic settings, fostered by developed industry leaders who will educate them to industry standards.

Schuhmann (2010) divulges on Penn State's leadership program for engineers. Like Curtis et al. (2011a; 2011b) and Crumpton-Young et al. (2010), his program heeds the need for good communication skills and to work effectively in teams. Additionally, Schuhmann recommended for leadership programs to "enhance the ability to think innovatively" and "

provide an understanding of the nexus between engineering and business" (p. 61). Schuhmann, like Crumpton-Young et al. (2010) has functioned in the realm of STEM (Science, Technology, Education, Mathematics) Education, providing academic insight and leadership into the business leadership development realm.

Transformation Leadership, the Global Leadership

"What a world experiencing rapid change needs is transformative leadership" quoted Farrell (2007, p. 7) of the late James McGregor Burns, the man who inspired Kurt Hahn, the father of Outward Bound. Farrell defined transformational leadership as "able to adapt itself (and the institutions, organizations, and groups it leads) to changing circumstances" (p. 7). Furthermore, Kelly O'Dea (Kusumowidagdo, 2007) was an Outward Bound USA board member who specialized in global aspects of the organization. She propagated the idea of transformational leadership to Outward Bound because she desired to see leadership change and evolve to accommodate the global perspective and the global market.

In nursing, the transformational leadership theory is the most widely accepted approach to the development of leadership. Curtis et al. (2011) note that the concept of transformational leadership is about "vision, ability to inspire followers, trust, sharing a bond with followers, and being able to empower others" (p. 306). Ultimately, transformational leadership seems to be the best form of leadership for nursing (Curtis, et al., 2011a; 2011b).

Conclusion

As this literature review showed, there was very little peer-reviewed literature in wilderness leadership. The majority of literature in wilderness leadership comes from NOLS, the University of Utah, or WRMC. Much of the content of this literature review was borrowed from other disciplines and industries. In the expertise and leadership realms, the majority of the

literature was borrowed from the medical and business industries. The literature for the judgment and decision-making components was primarily taken from one of the largest bodies of academic literature on the planet, judgment, and decision-making out of the academic psychology industry. Although, the culmination of these borrowed literature assisted in creating a path for addressing expertise, judgment, decision-making, and leadership in the wilderness leadership industry, a gap has been identified and a need substantiated for more academic work to be done to support a growing knowledge base regarding wilderness leadership.

Furthermore, across the literature, the resounding best practice for expertise, judgment, decision-making, leadership was the notion of mentorship. Mentorship was not exclusive, empowerment of people showed to lead to strong, reliable leaders with developing expertise.

CHAPTER 3 ARTICLE 1

Hiring Based on Judgment, Decision-making, and Leadership in the Wilderness Leadership Industry

This narrative ethnography tells a story of how guides are hired in the wilderness leadership industry. Industry employers must ensure that their employees have good judgment, decision-making, and leadership abilities for the safety of their clients and the success of their enterprise. By obtaining a better understanding of how hiring agents (referred to as practitioner) in wilderness leadership-based organizations ensures applicants possess the 'expertise' necessary in the areas of judgment, decision-making, and leadership will benefit the field of practice. Expertise is looked at as an umbrella over judgment, decision-making, and leaderhsip in this study. Vokey and Kerr (2011) noted: "professionals must make sound judgements [sic] in the complex contexts of contemporary practice in order to fulfill their manifold responsibilities to their clients, their colleagues, their employers and society at large" (p. 63) and associated making judgments to decision-making and therein leadership.

Credentials like certifications are routinely required by the industry as a check and balance system to ensure that wilderness leaders have developed specific skill sets to perform their jobs safely; an increasingly important emphasis in the nature-based recreation industry over the past 20 years. Currently, there is not a formal discussion and little research in the outdoor industry on how to determine expertise within wilderness leadership employees; measure leader judgment, decision-making abilities, or leadership skills; and to verify if a potential or existing employee will execute sound judgment and decision-making or use good leadership skills regarding issues that directly affect clientele and group dynamics as a whole. The goal of this

study is to discover if wilderness leadership practitioners are hiring guides who use sound judgment, make good decisions, and execute good leadership. Furthermore, the research intends to inform the industry of the findings as a recommendation for the practitioner.

This paper focused on an overarching research question of what factors do practitioners consider when assessing the quality of an applicant for wilderness leadership positions? It was part of a broader qualitative study that gathered information for industry standards to be established, implemented, enforced, and regulated to assure quality guidesmanship and instructorship throughout the wilderness leadership and wilderness leadership industry. The overall research problem considered if judgment, decision-making, and leadership help steer hiring strong applicants, as proven through practitioner inquiry and in the field guide observation?

Literature Review

The literature revealed there was little peer-reviewed literature in wilderness leadership. The majority of literature in wilderness leadership comes from the National Outdoor Leadership School (NOLS), the University of Utah, or WRMC (Wilderness Risk Management Conference). Much of the content of this literature review was borrowed from other disciplines and industries as well, including nursing, psychology, political science, business, and education. Although, the culmination of these borrowed literature assisted in creating a path for addressing expertise, judgment, decision-making, and leadership in the wilderness leadership industry, a gap has been identified and a need substantiated for more academic work to be done to support a growing knowledge base regarding wilderness leadership.

Expertise

Expertise is considered a process when one finds a "domain they feel comfortable operating" in, coupled with "deliberate practice" and "experience," and hence; one will develop "expertise" according to political scientists Preston and Hermann (2006, p. 9). Irving (2012) a wilderness leader, noted that expertise in wilderness leadership has been asserted based on certification alone. Harvey and Flewitt (1998) are both in the wilderness leadership industry and declared interest is a precursor to acquiring expertise, along with gathering different types of skills, services, or a broad knowledge base.

Training, perception, and awareness surfaced in previous literature as the most prominent of expertise traits. An expert training repertoire composed of "apprenticeships, internships, bureaucratic mentoring, patron-client interactions, extensive observation, and participation in youth, trade union, and party groups" (Preston & Hermann, 2006, p. 9). Predominantly mentoring was the popular approach in creating expertise (Chang, 2010; Curtis, Sheerin, & de Vries 2011; Crumpton-Young, McCauley-Bush, Rabelo, Meza, Ferreras, Rodriguez, Millan, Miranda, & Kelarestani, 2010; Hayes, 2008, Hicks, 2011; Howard, 2011; Patrick, 2005; Preston & Hermann; 2006Rennie, Rij, Jaye, & Hall, (2011); Rodriguez, Goertzen, Brewe, & Kramer, 2012; Smith, 2007).

Preston and Hermann (2006), discerned individual characteristics such as personality, abilities, or interests, negative and positive feedback, and critical life events shaped expertise. Young adulthood was considered "impressionable years" (p. 6) and noted many scholars agreed events which happened during the impressionable years were deeply influential and critical in developing expertise. Patrick (2005) in the field of education, established a situational judgment inventory to measure leadership judgment and indicators of leadership potential; a written

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experience profile to describe demonstrated leadership competencies; panel interview with current top leaders; and reference checks. (p. 13) revealed expertise.

Preston and Hermann (2006) noted expertise impacted one's problem awareness, including contexts, nuance, complexity, discernment of consistency, and open to information and options for longer than the novice. The expert showed strong self-monitoring skills; were acutely aware when errors occurred and perceived why they failed to comprehend a problem, and had an awareness of the need to "check their solutions" (p. 16). Richards (2010) of the wilderness leadership industry agreed with van Velzen (2012) also an educator, that experts were self-aware of how they cognitively completed tasks, how they learned, and used "higher-order thinking skills" such as "knowledge of different task demands involved in thinking and thinking preferences or thinking styles". They were self-awareness in organizing knowledge, analyzing problems, and had discernment with the "depth of self explanations" (van Velzen, 2012, p. 367).

Judgment

The dynamic of judgment making in wilderness leadership led Guthrie (1996) to suggest that "good judgment is exhibited (or has failed) only when the leader was compelled to make a good (sound) decision or else something dire would happen" (p. 8). Koesler and Propst (1994), wilderness leadership academics, identified that "judgment is based on acquiring the skills, knowledge, and experience necessary for leading a safe and enjoyable outdoor trip (Cain, 1985; Green, 1981; McAvoy, 1980; Petzoldt, 1984; Swiderski, 1981)" (p. 2). Dunne (2011) an educator, called judgment a "notion phronesis" coming from "practical wisdom (or good 'judgment' as the capability to make good judgment-calls reliably)" and noted that judgment is "experiential" in nature, as well as "(beyond mere knowledge) with character" (p. 17).

Sibthorp, Paisley, and Gookin (2007) wilderness leadership experts in academia and at NOLS suggested personal empowerment supported sound judgment practices and recommended educational implementation "through use of on-program goal-setting, using a student leader-of-the-day, facilitating group decisions when possible, allowing students to travel unaccompanied by an instructor, and generally running programs with a less autocratic style" (p.15). Instructors were encouraged to empower themselves, each other, and their students to foster sound judgment practices. They identified the execution of empowerment in wilderness leadership courses was to consistently attend "to the group and any fractious group issues. They [the instructors] should be working to establish personal relationships and strong connections with their students" (p. 15). Providing "mentoring relationships will enhance self-efficacy… and instructors and outdoor educators should give immediate and positive feedback to students…[to raise] levels of short-term self-efficacy." (Propst & Koesler, 2009, p. 341).

Decision-Making

Paul Petzoldt, the founder of the National Outdoor Leadership School (NOLS), defined decision-making as "the combination of information available at the moment combined with past experience to yield a decision" (Wagstaff and Cashel, 2001, p. 164). He felt that "judgment is [was] the result of previous bad decisions," (p.164) that would benefit students by making transparent decisions in front of them. "To him [Petzoldt], it was decision-making and judgment ability that separated effective from non-effective instructors" (p. 164). Petzoldt encouraged instructors to think out loud so their students observed their process of judgment and decision-making and learned from their instructor's example.

Galloway (2007) a wilderness leadership practitioner noted the decision-making environment that wilderness leaders existed in included: "ill-structured problems; uncertain,

dynamic environments; shifting or competing goals; action/feedback loops; time stress; high stakes; multiple players; and organizational goals and norms" (p. 100). Schimelpfenig (2007) cautioned that although one may have much experience, bad decisions could still be made due to decision-making traps. He suggested avoiding decision-making traps by being realistic, self-aware, seeking feedback from peers, and being thoughtful and careful with judgment assessments that lead to decision-making (p. 3). Schimelpfenig suggested decision-making traps were concepts like "assuming the outcome you 'want' is the most likely"; "believing causation and correlation are the same thing"; "more control = more safety"; or "feeling like you've 'earned' good luck" (NOLS Blog Decision Making, 2019).

Leadership

Wilderness leadership industry innovators such as the National Outdoor Leadership School (NOLS), Outward Bound, and the Wilderness Education Association (WEA) educate and train tomorrow's wilderness leaders, today. NOLS defines leadership as "timely, appropriate actions that guide and support your group to set and achieve realistic goals" (Kanengieter, 2001). Kanengieter stated the four types of leadership asserted by NOLS; peer leadership, designated leadership, self-leadership, and active followers. Outward Bound defines leadership as "the art of mobilizing others to work together to achieve shared goals" (Raynolds & Chatfield, 2007).

Curtis et al. (2011) from the field of nursing, said "particular traits and characteristics that have been shown to promote leadership are openness, extroversion and motivation to manage. Furthermore, age and experience facilitate leadership, while gender seems unimportant" (p308). NOLS listed seven concepts that comprised "leadership skills": expedition behavior, competence, communication, judgment & decision-making, tolerance, self-awareness, and vision & action (NOLS Leadership Skills, 2018). Propst and Koesler's (2009) review of literature,

"places more emphasis on behaviors and developmental skills (i.e., judgment and decision-making), mentoring, and ongoing feedback as valuable components of the leadership development process (Cain, 1985; Priest, 1990; Hunt, 1984; McAvoy, 1980; Petzoldt, 1984)" (p. 321).

Curtis, et al. (2011) and Crumpton-Young et al. (2010) agreed the following components develop leadership skills; collaboration, communication, emotional intelligence, situational awareness, conflict management, effective leadership, and motivation of team members. Crumpton-Young et al. (2010) a group of educators, asserted "knowing where to fit into the organization…people skills, negotiation skills, understanding team limits, time management…resource leverage, being open-minded, the ability to develop a vision, being a good listener…self-initiative, teamwork abilities, customer relations, and decision making" (p. 18).

Buchanan (2012) from the field of business declared that effective leadership is: adaptive; emotionally intelligent; charismatic; authentic; goal oriented and humble; mindful; narcissistic; no-excuse; resonant; servant; storytelling; strength-based; and tribal (p. 74-76). Crumpton-Young et al. (2010, p 18) stated other important leadership skills were "knowing where to fit into the organization,…people skills, negotiation skills, understanding team limits, time management,…resource leverage, being open-minded, the ability to develop a vision, being a good listener,…self-initiative, teamwork abilities, customer relations, and decision making".

Curtis et al. (2011) asserted that relationship skills are the most important skill for any leader to have and recommend relationship skills be a key component in any leadership development or training program. They also suggest leadership development curriculums included components on emotional intelligence, "the ability to integrate and manage emotions

and reason" (p. 308), effective communication skills, and learning to become approachable. Each of these components were found to be critical and valuable in nursing leadership development.

Hicks (2011) stated that "mentorship is often considered one of the best ways to develop leadership potential" (p. 66) as he found in the business industry. The importance of mentorship as a leadership development tool was supported by many other authors (Chang, 2010; Curtis et al., 2011; Crumpton-Young, McCauley-Bush, Rabelo, Meza, Ferreras, Rodriguez, …Kelarestani, 2010; Hayes, 2008; Howard, 2011; Patrick, 2005; Rennie, Rij, Jaye, & Hall, 2011; Rodriguez, Goertzen, Brewe, & Kramer, 2012; Smith, 2007). Additionally, these authors felt mentorship fostered leadership skills and professional development with positive outcomes. Hicks (2011) purported that self-reflection from both the mentor and protégé was the strongest caveat necessary for a successful mentoring relationship. According to Curtis et al. (2011), mentorship was a close second to empowerment as for elements needed to create leaders. Although mentorship seemed more informal, enormous benefits resulted in the development of leadership skills.

Methods

Study Purpose and Research Questions

The purpose of this study is to determine what factors practitioners consider when assessing the quality of an applicant for wilderness leadership positions? The research is aimed to address the problem of gravity, life and death judgments, decisions, and leadership in the field. Overall, does considering judgment, decision-making, and leadership help steer hiring strong applicants, as proven through practitioner inquiry? Because very little research has been conducted on this topic in the wilderness leadership industry, a gap has been identified. Literature was considered from business, nursing, education, political science, and psychology.

These are industries that have addressed judgment, decision-making, and leadership. Based on the literature review; judgment, decision-making, and leadership were identified as constructs of one's professional expertise. Applying this literature to the hiring of wilderness leaders, the following research questions directed this study:

1. How do wilderness industry employers discern good judgment in applicants?

2. How do wilderness industry employers discern good decision-making in applicants?

3. How do wilderness industry employers discern good leadership in applicants?

Population and Data Collection

The population was a convenience sample and pseudonyms were required by Colorado State University's (CSU) Institutional Review Board (IRB)to protect subject identity. There were 11 participants, all of whom hired guides within their organization. Table 2 describes the participants of the study based on their pseudonym and professional affiliation.

Table 2 Study Pseudonyms and their Professional Affiliation

Pseudonym	Description of professional affiliation
Michelle	Foremost wilderness leadership industry standard setter in technical and interpersonal skills, hiring, program development, and leader in the industry
Nancy	Industry standard setter
Steve	Accredited programs affiliated with WEA
Delila	Accredited programs affiliated with WEA
Bradley	Accredited programs affiliated with WEA
Frank	Christian wilderness program affiliated with the WEA
Margaret	Christian wilderness program affiliated with the WEA

Sonja	Owner of wilderness medical company, wilderness curriculum writer, wilderness medical standard setter
Roy	Small private Colorado-based mountaineering company regulated by AMGA (American Mountain Guides Association)
Tony	Small private Alaska based wilderness guiding company
Eric	Owner of a Grand Canyon river company that contracts to the USGS (United States Geological Survey and the Grand Canyon Monitoring and Research Center.

WEA (Wilderness Education Association)

Data were collected as recorded semi-structured interviews conducted either face-to-face or over-the-phone. There were 23 interview questions (see Appendix A).

Method of Analysis

Digitally recorded interviews were integrated into Nvivo qualitative software. Each interview was reviewed and coded by emergent topic relevance about individual research questions. Coding thematic analysis revealed trends and helped link the data to current literature. Specific themes were pulled out and identified from four recorded interviews. Those statements pulled out of the data revealed the theme itself. Reoccurring themes throughout the data and across interviews then established trends in the data (Creswell, 2013; Merriam, 2002; & Glense, 2011).

Trustworthiness

Trustworthiness consists of the following components: credibility; transferability; dependability; and confirmability. Creswell (2013, p 201-203) addressed pertinent procedures to contribute to the researcher's trustworthiness. Trustworthy approaches used in this study were

- "prolonged engagement" (p. 201) through the interview process;
- use of "multiple data-collection methods" to triangulate information (p. 201) via interview and follow-up for clarification;

- debriefed all observed interviewees;
- looked consciously for "negative cases and unconforming evidence" (p. 202) to refine perspective;
- clarified researcher bias;
- promised to share final report with participants;
- followed up with the participant for understanding and clarity of topic;
- used robust description to allow the reader to enter the context;
- allowed academic committee to do external audits as warranted.

According to Creswell (2013), Glesne (2011), and Merriam (2002), these steps increased trustworthiness as a researcher.

Limitations

It was a limitation to be an observer since I was not perceived as an active participant. Another limitation was choosing to participate in the course for short periods that have front country access for convenience. One limitation occurred due to the change in employees before the second research phase could occur. This resulted in lacking a relationship with the new employee, and research was conducted with willing agents.

Researcher's bias. I am a graduate of the industry standard setter and hold an undergraduate degree in Parks and Recreation Management with an emphasis in teaching wilderness leadership. I am also a certified wilderness leader through another industry standard setter and leave no trace trainer. As a result, I have guided in the wilderness throughout Arizona, Utah, Colorado, Northern California, Oregon, Washington, and Alaska a variety of wilderness settings and climates. I co-operated a backpacking concessionaire in the Grand Canyon. I have taught for an accredited wilderness leadership association, a wilderness medical company, and was a ski instructor, supervisor, and an assistant ski school director. I was involved in the hiring of many employees. Also, as a subordinate, I found myself consistently asking "What were you thinking? Who hired you?" The more I shared this observation with peers and colleagues, I

discovered many people wondered about this phenomenon. Consequently, my passion for people and the recreation industry has led me toward this study. I have a lens for seeing recreation and wilderness leadership in both its optimal and degenerative states. I do have extensive experience in the field I am studying. This industry expertise that I have impacted the lens through which I conducted the research.

Findings

Four major themes emerged from interviewing practitioners to discover how they discern an applicant had judgment, decision-making, and leadership. The predominant themes were: applicant's character and reputation; applicant's holistic approach, awareness, and people skills; applicant's experience, references, certifications, and skills; practitioners observing leadership in action; and applicant/practitioner using mentoring, apprenticeship, and empowerment. Findings are directly quoted from the data. Participant pseudonyms were required by CSU's IRB.

Character and Reputation

Practitioners felt that "character reveals[ed] morality including red flags". Perceptions of an applicant's character included Eric's opinion of one being "well rounded, have a good reputation, show[ed] responsibility, and accountability." Michelle and Nancy had closely similar opinions. Sonja viewed well rounded through the characteristics of "personality, good teaching, social skills, experience, references, professionalism, delegation, and communication" and at times would also "have good technical and interpersonal skills" according to Steve. Bradley felt that an acceptable leader would follow Paul Petzold's adage "know what you know, know what you don't know." In turn, Sonja noted that "match[ing a] situation with type of decision-making need via acquiring information, good communication, safety, and behavior." Overall a group

consensus felt a strong candidate had "experience and critical thinking [that] develop[ed] leadership" skills, as voiced by Margaret.

A deeper examination of character by Roy linked to "reputation in the industry is [was] usually seen by if people trust them and follow their leadership." Character was displayed when "caring for and influencing a group of people to move forward" as observed by Tony. Sometimes future leaders are recognized within their industry through their reputation and Eric consistently identifies applicants through in field observation based on their reputation.

Holistic Approach/Awareness/People Skills

Coupled with reputation and a part of character, is the idea of a holistic approach, which embodies the "entire guide schema," includes great "awareness" of both self and "people skills" according to Margaret and Steve. Eric noted one "can see a natural rise to leadership by [them] working harder than anyone else, their interaction with the crew, and [how they] delegate responsibility" to others within their crew. Roy stated one could have a "seasoned crew through experience and certifications [that] supports[ed] risk management." This idea was both thematic and repetitive throughout the data from the other participants. Margaret felt slightly different, suggesting that "we have no expertise. We learn from our mistakes which leads to a seasoned crew." The applicant according to Eric, "develops group work ethic through example," and as Margaret said was "selfless and [had] the ability to eat humble pie." Tony felt a good wilderness leader would have a "progression of self-awareness to self-monitor other perceptions, to self-care. Low ego leads to growth." Roy detected along wither their ability "to [conduct] self-care" as a result they will "have a good safety record". Margaret mentioned "a critical eye followed by needs expression" was a sign of a desirable employee. Lastly, one juxtaposition to consider from

Margaret, "actions of leadership lead to habits of leadership which equal the transformation of a group. You can also see the contrast of leadership by the absence of leadership."

Judgment and Decision-making Actualized

Additionally, Delila recalled one's character also incorporated "good judgment" that lead "to actions and choices, which equals safety." A few participants agreed with Tony that "judgment and decision-making together equal keeping calm in situations," and like Frank said, "thinking through decision-making" lead to "operationality" and "timeliness". Sonja and Margaret agreed that when scenarios were used to "determine medical, behavioral, and decision-making;" the prospective employee's leadership "style matches [the] needed decision-making" required for the circumstance. Sonja asserted the "amount of variable in decision-making process leads to better judgment calls."

Blending Past Experience, References, Certifications, and Skills

The fourth theme was the combination of experience including references, certifications, and skills. According to Eric, "how they are to work with" and "how [do] they treat and get along with others-creates crew/client synergy" and displays their experience and skill sets. Margaret and Nancy looked for "multiple collaborative feedback including action, references and self-presentation" along with the ability "to learn from their past to edify their future" in a potential employee. Roy looked for "experience with relevant certifications" that was also "calculated risk taker[s]." Interviewees who had "previous experience including more decision-making experience than those you are leading, good info gathering, situational decision-making, [and the ability to] compromise" made an ideal wilderness guide candidate according to Eric. Lastly, Frank, Delila, and Tony had "no pre-hire measures" and chose to "use scenarios instead" to discern a future applicant. The applicant passed the interview by "answering hard scenarios

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and interview questions. Showing [their] guide sense and personality fit into the culture and worked with clients in similar settings," according to Tony.

Michelle stated that "past performances from peer evaluations, references, seeing in action, observations in past job, and their using own judgment," showed the blending of experience, references, certifications, and skills. Sonja, Nancy, Eric, Tony, Margaret, and Roy all made nearly identical statements to Michelle.

Leadership in Action

The theme "leadership in action," encompassed an employee probationary period, observing one in "real-time" as Michelle noted, and the concept of show versus tell observed in the employee. Michelle saw "leadership in action through LOD (leader of the day) training, on-going evaluation and observation"; "real-time assessment through mock guiding, 35 day interview, interview" and "seeing leadership in action through assessment metrics" were real interview tactics used by the participants to determine if an applicant was worth hiring. Nancy and Margaret had similar extended hiring courses and interviews. Often participants like Nancy looked for features of "show vs tell, seeing in action, and having a good feeling". Usually, their observations were "validated by others [and] confirmed by [their] own "hunch" or judgment" before deciding to hire according to Sonja.

When considering hiring, Tony pursued "other people's responses to leadership" in their potential hires, such as past clientele, past co-leads, and past employers. Steve and Bradley regarded "equal effectiveness such as student/peer/client management feedback," as Steve stated. Many participants like Steve, Margaret, Sonja, Michelle, Nancy, Tony, and Roy commonly offered "decision-making parameters that set the employee up for success through observation and supervisory accountability, so the employee can make the decisions they are [were] capable

of," as Eric mentioned. Frank sought prior "employers making judgments about an applicant's personality regarding decision-making via interview, application, and scenario answer." Delila, Bradley, and Steve agreed with him. Margaret considered "real-time apprenticeship equals[ed] mentorship or 'unusual familiarity' in job experience." In real-time settings according to Michelle, it was "unacceptable for one to focus on self, not others." This was considered an impairment in the candidate's judgment, decision-making, and display of leadership to the industry. Nancy, Sonja, Tony, Roy, and Eric all felt the same way when searching for an applicant.

Mentoring, Apprenticeship, and Empowerment

The final emergent theme was leadership with mentoring, apprentice, and empowerment. Michelle asserted that leaders are "motivated to empower others". They display "mutual respect, breed trust, empowerment, and commitment to quality" according to Eric. Often "common sense" is apparent "because of [their] experience" like Nancy observed. Finally, Michelle said through "apprenticeship and education" an "industry standard setter is created." This concept works through "transference and mentoring of leadership via education. Mentorship [always] includes LOD (leader of the day) and clients" conjunctively.

Many participants agreed with Michelle that upon hire a "probationary period along with ongoing assessment and apprenticeship," was important. Nancy agreed and added "real-time assessment and on-going assessment including mentoring" to determine to keep an employee long-term. During the probationary period participants sought to observe if the employee was "professional in action (kind, approachable, flowing, expression in a group, confidence, prepared, safety, on-time, presentable)," said Michelle. Participants felt that "responsibility

fulfillment through probationary period creating[ed] trust and empowerment" and allowed the employee to be retained long-term in Margaret's hiring experience.

Discussion

A synthesis of the emergent themes with the literature contextualized and integrated this study into the wilderness leadership body of knowledge. The synthesis focused on collective themes rather than statements from individual participants. The overall research question "what factors do practitioners consider when assessing the quality of an applicant for wilderness leadership positions" is discussed in this section from the standpoints of the applicant and the seasoned expert.

Does Considering Judgment, Decision-making, and Leadership Help Steer Hiring Strong Applicants, as Proven through Practitioner Inquiry?

Interview questions transpired from the literature to assert the domains of judgment, decision-making, and leadership for the entire study. In phase one, the narrative ethnographic findings resulted in themes, answering all of the research questions comprehensively. Figure 3 is a logic map of the synthesis. The map shows the three driving research questions for this study, as well as the themes that emerged from the analysis of the data.

Figure 3 Logic map of synthesis

Figure 3. The squares represent the three research questions. The rectangle represents the themes that emerged from semi-structured interviews. Each theme is connected to all three research questions. The themes emerged throughout the data rather than under just one particular research question.

Character and Reputation. Dunne (2011) and Preston and Hermann (2006) claimed judgment an experience that reflected one's character. Curtis Sheerin, and de Vries, (2011) supported "particular traits and characteristics…promote[s] leadership". Crumpton Young, McCauley-Bush, Rabelo, Meza, Ferreras, Rodriguez, Millan, Miranda, Kelarestani (2010) listed characteristics that affected an employee's reputation: "knowing where to fit into the

organization,…people skills, negotiation skills, understanding team limits, time management,…resource leverage, being open-minded, the ability to develop a vision, being a good listener,…self-initiative, teamwork abilities, customer relations, and decision making" (p. 18). Buchanan (2012) added characteristics: adaptive; emotionally intelligent; charismatic; authentic; level 5 are goal oriented and humble in nature; mindful; narcissistic; no-excuse; resonant; servant; storytelling; strength-based; and tribal (p. 74-76).

Holistic Approach/Awareness/People Skills. Awareness and people skills segue to a holistic approach in both the novice and expert employee. Harvey and Flewitt (1998) from the wilderness leadership industry and Preston and Hermann (2006) viewed employees as holistic when one gathered multiple types of experience, awareness, people skills, or a broad knowledge base. They noted experts embodied awareness through "deliberate practice" (p.9). Curtis et al. (2011) insinuated awareness and a holistic approach through "the ability to integrate and manage emotions and reason" (p. 308).

According to van Velzen (2010), experts obtained "higher-order thinking skills" (p. 367) were self-aware of their knowledge organization and analyzed problems effectively to problem-solving. Preston and Hermann (2006) reported expert awareness had nuance including "complexity" of a situation; "consider[ed] a range of options"; "open[ed] to information for longer periods of time"; and "differentiate[d] between consistent and inconsistent information" (p.16). This included self-awareness and self-monitoring. Furthermore, experts could "control the trade-off between efficiency and accuracy" (p. 16) when seeking solutions. However, Schimelpfenig (2007), the curriculum director of the Wilderness Medical Institute (WMI), an arm of the National Outdoor Leadership School (NOLS) warned even with robust experience, bad decisions could still be made. To avoid decision-making traps, he suggested: being realistic,

self-aware, seeking feedback from peers, and being thoughtful and careful with judgment

assessments that lead to decision-making (p. 3). Schimelpfenig suggested decision-making traps

were concepts like "assuming the outcome you 'want' is the most likely"; "believing causation

and correlation are the same thing"; "more control = more safety"; or "feeling like you've

'earned' good luck" (NOLS Blog Decision Making, 2019).

Curtis et al. (2011) asserted that relationship skills as the most important skill for any

leader to have. They recommend relationship skills be in leadership training programs and entail

communication and awareness.

Judgment and Decision-making Actualized. Judgment and decision-making in an

active principle noted judgment was "experiential" in nature, including "the capability to make

good judgment-calls reliably" (Dunne, 2011, p. 17). Guthrie (1996) stated judgments were made

when "there was an immediate need for a good decision…or else something bad will happen" (p.

8). Judgment, according to Koesler and Propst (1994) was "based on acquiring the skills,

knowledge, and experience necessary for leading a safe and enjoyable outdoor trip" (p.2).

The findings and NOLS agreed, judgment and decision-making went together as an

active component. Petzoldt defined decision-making as experience combined with available

information to "yield a decision" (Wagstaff & Cashel, 2001, p. 164). Petzoldt saw benefit in

making transparent decisions, so that students see the process of judgment and decision-making

and learn from their instructor's example (p.164). NOLS called for "situationally appropriate

decision-making…[and] harnessing the strengths and knowledge of other group members to

solve problems" (NOLS Leadership Skills, 2018).

Blending Past Experience, References, Certifications and Skills. Wagstaff and Cashel (2001) noted Petzold's philosophy was a combination of information and experience that comprised good wilderness leaders. Skills that "related to the task at hand" (p. 7) and "deliberate practice" connected directly with "experience" (Preston & Hermann, 2006, p. 9). Irving (2012) asserted the industry's evolution currently was [is] based on certification, a specific type of experience. Patrick (2005) declared "reference checks" builds trust with an applicant and an "experience profile…demonstrated leadership competencies" (p. 13). A range of skills, solid certifications and experience, coupled with confident references shaped an expert and ideal applicant (Harvey and Flewitt, 1998; Preston and Hermann, 2006).

Leadership in Action. Galloway (2007) noted wilderness leaders existed in a decision-making environment that included "action/feedback loops" (p. 100), insinuating an employer should observe leadership in action. Preston and Hermann (2006) mentioned that "both negative and positive feedback propel[ed] one down a path towards expertise" (p. 6) along with "extensive observation" (p. 9). Propst and Koesler (2009) pointed out that a review of outdoor leadership literature "places[ed] more emphasis on behaviors and developmental skills (i.e. judgment and decision-making)" including "ongoing feedback" (p. 321) and encouraged "immediate positive feedback" (p. 342) as an evaluative form of leadership in action to determine strong prospective employees. Schimelpfenig (2007) suggested an applicant could "avoid decision-making traps" through "seeking feedback from peers"(p. 3), again through observing leadership in action in the field. NOLS used a probationary process to observe leaders in action to assess their competency and determine long term job retention. They specifically looked for comprehensively good "expedition behavior," "competence," "communication,"

"judgment and decision-making," "tolerance for adversity and uncertainty," "self-awareness," and "vision and action" (NOLS Leadership Skills, 2018).

Mentoring, Apprenticeship, and Empowerment. Hicks (2011)"mentorship is often considered one of the best ways to develop leadership potential". Hicks declared that self-reflection from both the protégé and mentor created a successful mentoring relationship. Curtis et al. (2011), Crumpton-Young et al. (2010), and Propst and Koesler (2009) agreed that mentorship is one of the best methods to develop leaders. Preston and Hermann (2006) mentioned training such as apprenticeships and mentoring lead to creating expertise. In providing apprenticeships through the role of mentoring it "enhance[ed] self-efficacy…thus increasing[ed] the potential for continued outdoor participation" (Propst and Koesler, 2009, p.341). Apprenticeship and mentorship appeared hand-in-hand throughout the literature.

Curtis et al. (2011) stated that empowerment was the top element needed to create a strong leader. Specifically, supporting sound judgment practices "of on-program goal-setting, using a student leader-of-the-day, facilitating group decisions when possible, allowing students to travel unaccompanied by an instructor, and generally running programs with a less autocratic style" (Sibthorp, Paisley, & Gookin, 2007, p. 15). They encouraged the empowerment of both the student and the leader or guide during wilderness travel.

Recommendations for the practitioner

Three research questions complied together asked: how do wilderness industry employers discern good judgment; good decision-making; and good leadership in applicants? Data from semi-structured open-ended interviews developed 6 themes. The themes indicated what industry practitioners were looking for in applicants. Applicants were considered exclusively through interviews and/or probationary hiring. The synthesis indicated the literature supported the

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identified research problem of the gravity relating to perilous judgments, decisions, and leadership in the field. The first half of the overarching research problem "does considering judgment, decision-making, and leadership help steer hiring strong applicants, as proven through practitioner inquiry?" was addressed through the development of practitioner themes.

The themes produced practitioner recommendations for industry use and were as follows: character and reputation; holistic approach/awareness/people skills; judgment and decision-making; blending experience, references, certifications, and skills; leadership in action; mentorship, apprenticeship, and empowerment. Ultimately attributes emerged that contribute to a well-rounded prospective employee in the wilderness leadership field. All of the themes are interconnected and can be cross-referenced.

Figure 4 Word cloud featuring findings and synthesis

Figure 4. A word cloud representing main ideas from both findings and synthesis. Dominant concepts are larger.

This research intends to provide practitioners standards to assist in the hire of quality applicants who embody judgment, decision-making, and leadership. These recommendations offered are a conglomerate of 11 current practitioners' habits in practice. The recommendations advise the practitioner what to seek in a quality applicant informed by this study.

Character and Reputation. One's character informs their reputation. Their reputation can be discovered by reference checks, through informal networking within the guiding community, and clientele reaction to their leadership. Character can be revealed through listening to practitioner intuition, interview, and interactions during trial or probationary periods.

Holistic Approach/Awareness/people skills. Holistic implies approaching guiding as a complete system rather than compartmentalized into parts. One must have self-awareness and others to embody a holistic approach to guiding. The presence of people skills alongside awareness will indicate the potential for a holistic approach to be present. Some training to foster this quality could set a company tone to guiding.

Judgment and Decision-making Actualized. Good judgment leads to good decision-making and ultimately great leadership. This process is portrayed as an active component. Judgment is an internal process that can only be seen through actions like decisions made or leadership executed, at least in this study's context. Exemplary qualities are paramount and embody safety, keeping calm, operationality, timeliness, and consideration of variability of outcomes to lead to appropriate decision-making.

Blending Experience, References, Certifications, and Skills. Comprehensively these elements complement each other. A strong applicant in the wilderness leadership industry will always have certifications. Currently, they are the only asserted industry standard. However,

certifications can be reinforced with both technical and interpersonal skills. From strong certifications and skills, come experience and good references. Not all applicants will have deep experience. However, references can assert if the applicant will have the drive and initiative to continue to develop skill, experience, and pertinent industry certifications.

Leadership in Action. Leadership in action implies the applicant will work on a probationary basis until credibility is established. Some larger industry standard-setting companies require applicants to perform in a peer-based 30-40-day long expedition. The expedition provides an opportunity to assess multiple applicants' leadership in action and other's responses to their leadership. Each can be assessed in action, practitioners can test applicants receptiveness to empowerment, and eventually offer either mentorship or apprenticeship with sufficient potential and the practitioner is willing to foster the applicant. For smaller operations, one should hire based on the other recommendations and require a probationary period for the applicant to prove their abilities. Ongoing leadership assessments should occur to assure the employee is competent and free of complacency or lack of awareness.

Mentorship, Apprenticeship, and Empowerment. Mentorship, apprenticeship, and empowerment can be applied through a leadership in action phase, probationary circumstances, or upon hire. Gifting the opportunity for new hires to engage in a growing and professional manner with seasoned employees who have expertise, fosters a healthy and synergistic work culture.

Limitations for Phase One

In the original pilot study, a limited scope of hiring surfaced because all of the participants are considered industry standard setters. However, the private Alaskan guiding company served as more of a small-scale operation, one of many throughout the industry. Thus,

more variety in small operation organizations was chosen to temper data with aforementioned participants. Furthermore, one long-standing agent with Grand Canyon National Park became part of the participant list. Many more could be added to this study; however, the limitation is to choose to have the industry standard setters, some small-scale organizations, and a few long-standing National Park Service Agents/Concessionaires. Regarding the qualitative in nature of this study, 6-11 participants are considered robust by Creswell (2015), Glesne(2011), and Merriam (2002).

Future Studies

A natural research question for a future study is, "Does considering judgment, decision-making, and leadership help steer hiring strong applicants, as proven through practitioner inquiry and in the field guide observation?" and will be addressed in a later article. A future parallel study could look at if the recommendations for the practitioner in this phase, exist in wilderness leaders in action. Another study should also examine how to foster sound judgment practices on wilderness leadership courses. It would also be interesting to follow through with Petzold's sentiment of one's limitations and how they relate to one's judgment. In contrast, how do practitioners determine a wilderness leader's judgment, decision-making, and/or leadership has caused grounds for termination.

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CHAPTER 4 ARTICLE 2

Judgment, Decision-making, and Leadership in a Wilderness Leader

Wilderness leadership industry pioneers such as the National Outdoor Leadership School (NOLS), Outward Bound, and the Wilderness Education Association (WEA) educate and train tomorrow's wilderness leaders. Paul Petzoldt was the founder of NOLS (1965) and the WEA (1977), he also worked for Outward Bound, and trained in the US Army's 10th Mountain Division. Petzoldt is considered a wilderness leadership dignitary. Regarding wilderness leadership he asserted:

> Having judgment is the most important aspect. Another important aspect is knowing one's limitations and knowing one's ability. Having judgment to accept leadership within one's limitations [sic]. Since faulty planning is responsible for about 75% of deaths, accidents, search and rescue and plain unrewarding trips [sic]. Being taught the knowledge and judgment of how to plan a trip is indispensable to trip leadership. (Wagstaff & Cashel, 2001, p. 164).

Bob Rheault, a 32-year Outward Bound instructor and Vietnam War Green Beret veteran, stated: "the leader has good judgment and the personal restraint and integrity to act on it [good judgment]" (Chatfield, 2004, p. 5). Regarding Propst and Koesler's (2009) review of literature, "the outdoor leadership literature places more emphasis on behaviors and developmental skills (i.e., judgment and decision-making), mentoring, and ongoing feedback as valuable components of the leadership development process (Cain, 1985; Priest, 1990; Hunt, 1984; McAvoy, 1980; Petzoldt, 1984)" (p. 321).

This is phase two of a two-phase study. The first phase looked at the culture of hiring in the industry. Practitioners were asked how they determined if a future employee or applicant had good judgment, decision-making, and leadership; which inferred some level of expertise in the applicant. Expertise is looked at as an umbrella over judgment, decision-making, and leaderhsip in this study. Practitioners intended to hire applicants that:

- Had good character and reputation.
- Could take a Holistic approach and have awareness and people skills.
- Had judgment and decision-making actualized.
- Blend past experiences with references, certifications, and skills.
- Observed leadership in action, often as a probationary period.
- Provide mentoring, apprenticeships, and empowerment to the applicant. (Swetnam, 2019)

In phase two field observation of guides in action were conducted. The research sought to uncover what the guides were thinking, through their judgment process, when they made decisions or executed leadership. Judgment was viewed as part of the Social Judgment Theory from the field of social psychology and focused "on the internal process of a person's own judgement in regard to the relation within a communicated message," such as a decision made or leadership executed (Sherif, Hovland, Hovland, & Iver, 1961). The approach was a phenomenological ethnography that (a) featured the culture of guides in the field and (b) focused on "describing what parts [the guides] have in common as they experience the phenomenon," in this case, their judgment (Creswell, 2013).

Certifications are an industry standard that attempts to safeguard that guiding professionals have appropriate skill sets to perform their jobs safely. Currently, there is not a concurrent formal discussion concerning if a potential or existing employee will execute sound judgment and decision-making or use good leadership skills concerning issues that affect clientele and group dynamics as a whole. This research targeted the problem of gravity, life and

death judgments, decisions, and leadership in the field. That is, does considering judgment, decision-making, and leadership by hiring practitioners result in the hiring of strong wilderness leaders, as identified through field guide observation?

Literature Review

Expertise

Expertise is critical in the experience of judgment, an unseen process; which, leads to decisions made and leadership executed. Preston and Hermann (2006), political scientists, suggested that experts naturally have access to more information and nuance in a particular context than novices; and therefore "consider more attributes when evaluating a problem in their domain of expertise" (p. 17) or search for the "primary cause of the problem" (p. 18) in order to resolve problems.

NOLS felt expertise was a culmination of safety and judgment, leadership and teamwork, outdoor skills, and environmental studies, (NOLS Core Curriculum, 2018). The WEA curriculum developed expertise such as judgment, outdoor living, planning and logistics, risk management, leadership, environmental integration, and education, ("WEA Curriculum," 2019). Outward Bound focused on character building for expertise based on compassion, integrity, acting with honesty, excellence, and inclusion and diversity (Outward Bound Philosophy and Values, 2017). Furthermore, two criteria of an expert was: "the ability to differentiate between similar but not identical stimuli" and "internal consistency" according to the field of psychology's Weiss and Shanteau (2003, p. 107) and Baber and Butler (2012).

Judgment

Sibthorp, Paisley, and Gookin (2007) wilderness leadership experts, conducted a study through NOLS looking at participant development. The study considered the:

"impacts of a participant's age, sex, previous similar experiences, personal perceptions of empowerment, group perceptions of challenge of terrain, group functioning, instructor rapport, and course length on perceived gains in communication, leadership, small group behavior, judgment in the outdoors, outdoor skills, and environmental awareness (p. 12).

Two major findings of their study were that previous experience and a sense of empowerment in the students were significant predictors of judgment in wilderness leadership courses (p. 11).

Petzoldt (1974) defined judgment as "the ability to relate a total experience to a specific activity. Learning judgment, assessing priorities, is as important as perfecting techniques; in fact the teaching of techniques (without commensurate judgment) can be dangerous" (p. 25). NOLS defines judgment as "the ability to arrange all available experiences, resources and information in a common-sense way to get positive results" (NOLS Toolbox, 2011).

The WEA defines judgment as "the act of intergrading previously learned information with situational factors to arrive at a decision" (WEA Curriculum, 2019). Guthrie (1996) describes the WEA judgment educational process as follows:

the leader recognizes a need to make a decision, collects all available relevant information, identifies and analyzes potential options for actions, and identifies consequences of those actions. Then the leader (or group) selects an option. The option is executed, and the results are evaluated (p. 6).

Guthrie mentions that a shortcoming of the WEA model for judgment is that it does not explain "how a leader knows the most appropriate options, nor does it explain how a leader knows which

is the best decision" (p. 6). Outward Bound offers "Instructor Judgment Training," that implies the significance of judgment for their instructors (Outward Bound Employment, 2018).

Decision-Making

According to Rennie, Rij, Jaye and Hall (2011) from the field of nursing, a good decision maker makes well informed and considerate, timely, student/client focused decisions which are backed by sound knowledge and an appropriate evidence base; while recognizing their limitations, the need for collaboration, reflection, and clear communication to bring about appropriate action (p. 1218). Decision-making revealed to be a process perceived as strongly dependent on the concept of judgment (Wagstaff & Cashel, 2001; Galloway, 2007; Preston, 2007).

Experiential experts' Priest and Gass (1997) viewed judgment as an experiential process:
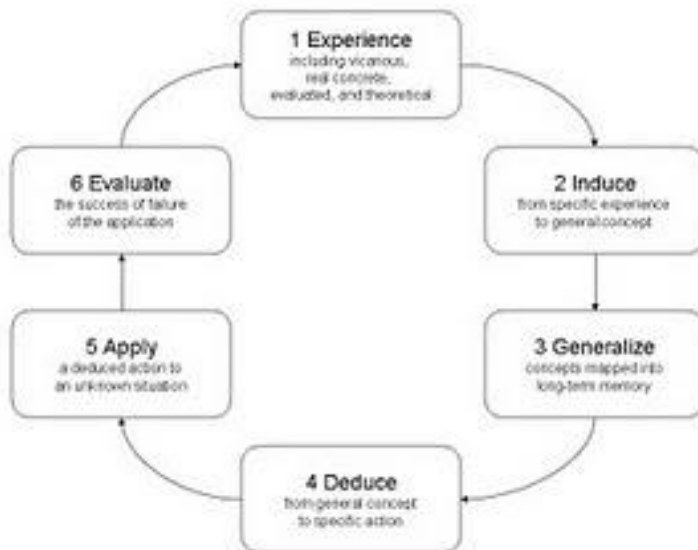
Figure 1 Priest model

Figure 1 describes experiences stored in memory; next, the experience is recognized and

categorized as a general concept; when faced with a problem, retrieval and application of the general concept is applied; a judgment is made concerning the problem at hand; and finally, the judgment is evaluated and used as a reference for future experiences. Circular learning occurs in which experiences and reflections are repeated (Priest & Gass, 1997; Lloyd-Strovas, 2011).

Leadership

NOLS asserts seven leadership skills for development. They are expedition behavior, competence, communication, judgment & decision-making, tolerance for adversity & uncertainty, self-awareness, and vision & action (NOLS Leadership Skills, 2018). According to Farrell (2007), an Outward Bound affiliate, leadership embodied "the capacity to anticipate and adapt to change with the capacity to learn and to keep learning" (p. 7). Farrell asserted that teaching and leading are synonymous acts and listed principles and practices found in teachers/leaders: "managing self, teaching/leading by example, using examples to teach, establishing a culture, knowing and caring about the students/employees/followers, knowing and caring about the content/material/work, building a good team, committing to the mission, focusing, persevering, and stepping back, letting go, and bringing out the best" (p. 9).

A third skill set category surfaced, according to Shooter, Sibthorp, and Paisley (2009) are academics focused on wilderness leadership and referred to as "operational skills" (p. 4) They are interpersonal skills and focus specifically on "judgment and decision-making" (p. 4). "Interpersonal skills … require direct personal interaction with participants through verbal and non-verbal communication" (p. 7). Examples of Interpersonal skills are teaching, group facilitation, and conflict resolution.

Curtis, Sheerin, and de Vries (2011) stated that leadership development included collaboration, communication, and emotional intelligence. Crumpton-Young, McCauley-Bush,

Rabelo, Meza, Ferreras, Rodriguez, Millan, Miranda, and Kelarestani (2010) a group of educators, added more qualities that contributed to leadership development. These qualities included situational awareness, conflict management, effective leadership, the motivation of team members, "knowing where to fit into the organization,…people skills, negotiation skills, understanding team limits, time management,…resource leverage, being open-minded, the ability to develop a vision, being a good listener,…self-initiative, teamwork abilities, customer relations…decision making," (p. 18) effective communication skills, and learning to become approachable. Schuhmann (2010) recommended for leadership programs to "enhance the ability to think innovatively" (p. 61).

Methods

Phase one of this two-phase study explored how practitioners hired guides in the wilderness leadership industry. More specifically, the research explored what factors practitioners consider when assessing the quality of an applicant for wilderness leadership positions. The factors were, character and reputation; holistic approach, awareness, people skills; judgment and decision-making; blending past experiences, references, certifications, skills; leadership in action and other's responses to leadership; and mentoring, apprenticeship, empowerment.

Phase two of the study investigated guides and their experience in the field. The purpose of phase two of this study is to determine the extent to which guides exhibited sound judgments that resulted in good decisions and effective leadership among their clients, students, and co-leads.

Research conducted explored the actions of guides while in the field, and the thought processes behind those actions. Observations of when decisions were made and leadership

executed provided qualitative evidence of when the internal process of judgment occurred. At the end of each observation phase, extensive interviews were conducted with guides, to examine their internal process of judgment. The research unveiled how judgments affect decision-making, leadership, overall expertise, colleagues, and clientele and therefore; substantiate if good judgment was discovered by observing decision-making and leadership.

Population

The population for this study was a deliberate convenience sample. There were six participants, all who were guides/instructors in the wilderness leadership industry. Permission to use subjects' direct quotes was granted from the Institutional Review Board (IRB) at Colorado State University (CSU) and pseudonyms were required. Table 3 describes the participants of the study based on their pseudonym and professional affiliation.

Table 3 Study Pseudonyms and their Professional Affiliation

Pseudonym	Description of professional affiliation
Paul	Chief Operating Officer (CEO) of a Christian wilderness program affiliated with the WEA
Max	Registered Nurse (RN), instructor of wilderness medical company
Sarah	Medical Doctoral Student, instructor of wilderness medical company
Edmund	Wilderness Leadership Instructors from an accredited institution, has instructed in the wilderness for over 30 years, and have direct teaching experience with the three largest industry standard setters and the AMGA (American Mountain Guiding Association)
Kevin	Wilderness Leadership Instructors from an accredited institution, has instructed in the wilderness for over 30 years, and have direct teaching experience with the three largest industry standard setters and the AMGA (American Mountain Guiding Association)
Jeremy	Ski Instructor, skiing is considered a gateway wilderness activity

Research Questions

The research is aimed to address the problem of gravity, life and death judgments, decisions, and leadership in the field. Overall, does considering judgment, decision-making, and leadership help steer hiring strong applicants, as proven through the field guide observation?

1.   Did the guide use good judgment in action in their workplace with both clientele and co-guides?

2.   Did the guide exhibit sound decision-making in their workplace with both clientele and co-guides?

3.   Did the guide exhibit sound leadership in their workplace with both clientele and co-guides?

Research Method

A phenomenological ethnography (Merriam, 2002) was conducted. The phenomenon to be observed was the quality of judgment expressed by guides in decisions made and leadership executed. The ethnography focused on the culture of guides in wilderness leadership positions.

Field observations looked for decisions made, and leadership executed by each guide. Situational circumstances were also recorded as potential impacts on the guide's performance regarding their decisions and leadership. Next, unstructured interviews took place and were directly guided by the observations and were open-ended in nature. This discussion brought to light a broader assessment of the judgment, decision-making, and leadership that existed in the participants.

Data Collection

Participants were observed at work, in action with clients, students, and/or colleagues. I observed:

- a ½ day executive meeting, of the wilderness leadership CEO, in the off-season, direct his company at company headquarters;
- one wilderness first aid course for United States Forest Service (USFS) firefighters and trail crew members, broken down into two days;
- a wilderness first responder course was observed for a full day;
- an accredited wilderness leadership course was observed on a hike and a traditional climbing session;
- a half day, private ski lesson of a family of 3 was observed

All data gathered was robust, through qualitative field notes. Each time a decision was made, or leadership was executed, the event facts were recorded in notebooks. The data gathered was based on availability and willingness of the participants. Through accurate and detailed field notes, meticulous observations were made.

The participants were then debriefed of the researcher's process as required by CSU's IRB. The debrief informed the participant that they were observed in their 'wilderness leadership' role with the use of deception (see Appendix B). They were informed the observations were actually of their decisions being made and their leadership executed. The reason for deception was so the guide continued to make their usual actions despite observation. If the guide knew they were being watched for certain actions to identify moments where the judgment process occurred, the data would be skewed by their behavior of knowing why they were being observed.

Next, their further participation was requested in a recorded conversational interview. Upon their consent, the interview was guided by the field notes, to take a deeper look into their

internal judgment process, which could not be observed. All participants agreed to continue the research. The field notes were detailed enough to bring the participant to memory recall of the precise moment. The participant recalled the moment with the researcher, and then answered the question "what were you thinking at that moment? Why did you make that decision or execute that leadership? What was going on inside of you and your process?"

The interviews asked the guide to share what they thought when particular decisions were made, sometimes but not always, resulting in leadership execution that visibly affected the group dynamic, clientele, and/or co-guides. The interviews flowed in a normal conversational pattern to deeper explore decisions made, leadership executed, and overall professional expertise. There were no right or wrong answers, just an exploratory on the guides internal process in particular moments.

Interview Questions. Semi-structured interviews (Glesne, 2011) were conducted in the following manner. Each question was a result of either decisions made, leadership executed, or unforeseen or significant events that occurred at the time of observation. The event was recreated in detail to the participant based on detailed field notes and observations. It was discerned through literature that judgments were being made before decision-making or executed leadership (Anderson, 2008, p. 102.; Baber & Butler, 2012; Guthrie 1996, p. 6; Lloyd-Strovas, 2011; Priest & Gass, 1997; Weiss & Shanteau, 2003, p. 107). Therefore, the intent of the interview was either to clarify observation or to understand the unseen judgment that was made to determine the quality of the wilderness employee.

Method of Analysis

Interviews were recorded digitally. Early data analysis was conducted throughout the observation process by continuously focusing and reflecting on the data as it was observed in

action, along with detailed notes (Glesne, 2011). Each interview began by describing and

questioning observations made of the participant where either a decision was made, or leadership

was executed. The research identified those as precise points that a judgment was made just

before the action part of decision-making or leadership occurred (Anderson, 2008, p. 102.; Baber

& Butler, 2012; Guthrie 1996, p. 6; Lloyd-Strovas, 2011; Priest & Gass, 1997; Weiss &

Shanteau, 2003, p. 107). The action was recalled, and the guide was asked to reveal their internal

process to discover their judgment process. Often after memory recall occurred, the interview

became conversational. Additional questions were being asked for clarification, honing in on

what the guide was thinking and to discover if an internal judgment was made first. Also,

suggested a rudimentary coding scheme and a thematic review of observations and recorded

interviews (Glesne, 2011) analyzed and synthesized in Nvivo software. This analytical process

revealed similarities, trends, or notable gaps and/or differences in the guide's internal judgment

process.

Trustworthiness

Trustworthiness consists of the following components: credibility; transferability;

dependability; and confirmability. Creswell (2013, p 201-203) addressed pertinent procedures to

contribute to the researcher's trustworthiness. Trustworthy approaches used in this study were

- "prolonged engagement" (p. 201) through the interview process;
- use of "multiple data-collection methods" to triangulate information (p. 201) via interview and follow-up for clarification;
- debriefed all observed interviewees;
- looked consciously for "negative cases and unconforming evidence" (p. 202) to refine perspective;
- clarified researcher bias;
- promised to share final report with participants;
- followed up with the participant for understanding and clarity of topic;
- used robust description to allow the reader to enter the context;
- allowed academic committee to do external audits as warranted.

These steps increased trustworthiness as a researcher according to Creswell (2013), Glesne (2011), and Merriam (2002).

Limitations

It was a limitation to be an observer since I was not perceived as an active participant. Another limitation was choosing to participate in the course for short periods that have front country access for convenience. One limitation occurred due to the change in employees before the second research phase could occur. This resulted in lacking a relationship with the new employee, and research was conducted with willing agents.

Researcher's Bias. I am a graduate of the industry standard setter and hold an undergraduate degree in Parks and Recreation Management with an emphasis in teaching wilderness leadership. I am also a certified wilderness leader through another industry standard setter and leave no trace trainer. As a result, I have guided in the wilderness throughout Arizona, Utah, Colorado, Northern California, Oregon, Washington, and Alaska in a variety of wilderness settings and climates. I co-operated a backpacking concessionaire in the Grand Canyon. I have taught for an accredited wilderness leadership association, a wilderness medical company, and was a ski instructor, supervisor, and an assistant ski school director. I was involved in the hiring of many employees. Also, as a subordinate, I found myself often asking, "What were you thinking? Who hired you?" The more I shared this observation with peers and colleagues, I discovered many people also wondered about this phenomenon. Consequently, my passion for people and the recreation industry has led me toward this study. I have a lens for seeing recreation and wilderness leadership in both its optimal and degenerative states. I do have

extensive experience in the field I am studying. This industry expertise that I have impacted the lens through which I conducted the research.

Thematic Findings Summary

Three major judgment themes emerged from observing and interviewing guides in action in the field. The intent was to discover what the guide was thinking during their internal judgment process, to see how their judgment process impacted the outcome of their decisions made or leadership executed. The collective emergent themes were: communication, safety, and teaching tactics. Due to immense data volume, findings were summarized directly from the data, among the six participants and only a few pertinent quotes are used to enhance meaning. Participant pseudonyms were required by CSU's IRB.

Communication

Often, deliberate communication with intended outcomes was observed. Usually, the participant was given instructions to give guidance to students/clients so that specific tasks or daily outcomes were met. At times this type of communication occurred so that co-leads could assure they were on the same page regarding the activity at hand. This communication assured safety, simpatico with co-leads, trust, and power-sharing among guides.

In contrast, no communications lead to blame of co-leads or of student/client's not being prepared for the day's events. At times some guides did not have the gear they desired because their co-lead had that particular gear, due to poor communication with their co-lead. Once, a large group of students arrived 1 ½ hours late to a backcountry climb. Poor communication was the culprit and was clarified by Edmund and Kevin.

Communication was generally used with student/clients to set course tones, like going outside for a wilderness medical course or create a deliberate learning environment. Sometimes the tone was set to keep the group aware of such impacts as violent weather, providing group base knowledge, or catering to the goals of a paying client.

Building rapport with student/client relationships was a focus of creating a course community. When the group was safe, laissez-faire or relaxed leadership and communication always surfaced. Rapport building according to Sarah, focused "discernment and keeping things not too personal". Edmund, Kevin, Jeremy, and Max agreed that using "humor" or "stories" helped relate personal experience to the student/clientele.

Safety

The majority of reported judgments by the guides regarded group safety. Many decisions and leadership executions were made with extreme focus, and with the intent to keep the group safe. During observations, there were two guides leading serious rock climbing for a large group, in which half of the group showed up over an hour late. Also, the ski instructor's client was hit by a random skier that ended the lesson. In both scenarios, assessment and protocol were followed according to the report of each guide during the interview. Edmund shared that his intuition influenced much of his sense of safety. Kevin, his co-lead, also used intuition, for example, to know a rock was going to come loose, coupled with the knowledge that it had rained the past three days. Kevin and Edmund have worked together for over 30 years, and both admitted they had a keen sense of intuition with one another as well. Jeremy admitted he was afraid his client would be hit on the narrow run. She was taken down with a probable knee injury via Ski Patrol. He also followed protocol.

Implementing company protocols accompanied by group assessment for safety was thematic in all six participants. Paul's entire tone at his company's annual meeting revolved around setting a precedent for his employees, and in-turn his clientele. Sarah and Max both taught wilderness medicine courses. They were clear that the medical industry "expects you to know how to assess a patient and then follow the proper [medical] protocol," exclaimed Max. In contrast, Jeremy acknowledged as a new ski instructor he did not know the "skier's code," a law upholding construct to give rights to safety of users in a snow sports resort.

Teaching tactics

Teaching tactics are teaching strategies, tricks of the trade, or approaches to transferring knowledge; in this study, from the guide to the student/client. Sarah liked to "suggest" rather than tell her wilderness medical students what to do, so they could figure out the proper medical path. Max, also a wilderness medical instructor, relied on guided discovery of information by prompting students to answer questions that would guide them in their process. Every participant continued to check for understanding of their groups throughout the day.

Awareness of both self and students/clientele surfaced as an internal motivator for making decisions and executing leadership. All of the participants were aware of their influence on others, which surfaced in their genuine care for others. Awareness of circumstances like weather, students' motivations, knowing when they could trust students/clientele, or when a break was needed was common. Sarah felt strongly that "waiting for it until it was right" was a combination of her awareness for herself and others. Comparatively, Edmund admitted his "ego took over instead of paying attention to students"; while Kevin felt embarrassed that he did not notice that students arrived late.

Empowerment of self, co-leads, and student/clientele was another internal motivator for judgments leading to decisions and leadership. Max set students up for success through coaching, Jeremy allowed adult clients to make their own decisions, and Edmund empowered eager students to set a tone for their peers. In contrast to empowerment was the motivation of fear, "what if something bad was going to occur," stated Paul. Kevin used mental distractions to help get students out of fear. Edmund looked for his student's fear to help them move out of their comfort zones and grow.

Does Considering Judgment, Decision-making, and Leadership Help Steer Hiring Strong Applicants, as Proven through the Field Guide Observation?

The guide's phenomenon was the internal process that directs their judgment, which lead to decision-making and executed leadership. It was clear judgments affected decision-making, leadership, overall expertise, colleagues/clientele/students. Good judgment was discovered by observing decision-making and leadership. Although there were three research questions, an implication existed that if a guide had sound judgment, it was because they displayed good decision-making or good leadership execution. Since judgment is an internal process (Sherif et al., 1961), the outward display of the process can be seen as decisions made and leadership executed. Therefore, this discussion will address the overarching research question: Did the guide exhibit in their workplace, with both clientele and co-guides: (1) good judgment in action; (2) sound decision-making; and (3) sound leadership.

The research questions emerged from the literature from the concepts of judgment, decision-making, and leadership for the entire study. In phase two, the phenomenological ethnographic findings resulted in themes, answering all of the research questions comprehensively. Figure 5 is a logic map of the synthesis. The map shows the three driving

research questions for this study, as well as the themes that emerged from the analysis of the data.

Figure 5 Logic map of synthesis
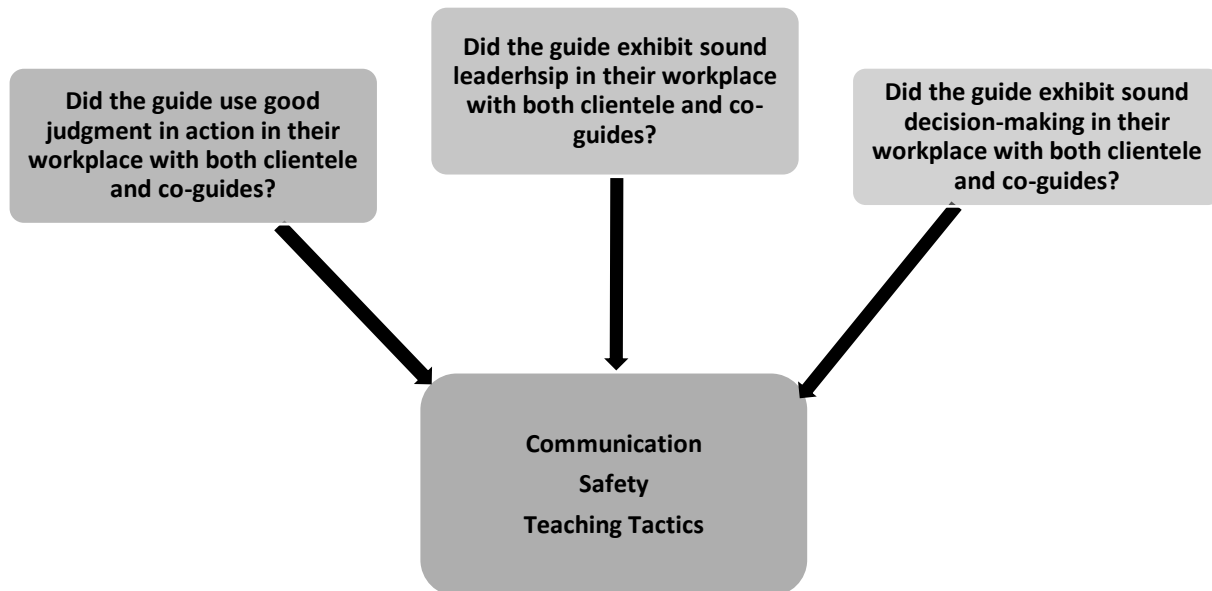
In figure 5, the squares represent the three research questions. The rectangle represents the themes that emerged from unstructured interviews.

Communication

Weiss and Shanteau (2003) asserted that "evaluation + communication = expert instruction" and "expert judgment" could be quantified or qualified with evaluation (p. 106). Sibthorp et al. (2007) stated that experiential group communication coincided with course length (p. 12). Rennie et al. (2011) emphasized communication for strong decision-making to include

collaboration, reflection, and backed by an appropriate evidence base (p. 1218) and Curtis et al. agreed (2011). NOLS viewed "communication" as a pinnacle leadership skill (NOLS Leadership Skills, 2018). Shooter et al. (2009) referred to "operational skills" (p. 4), as interpersonal skills, and focused specifically on "judgment and decision-making" (p. 4). "Interpersonal skills … require direct personal interaction with participants through verbal and non-verbal communication" (p. 7). Examples of Interpersonal skills were: teaching, group facilitation, and conflict resolution. Crumpton-Young et al. (2010) detailed effective leadership containing "people skills, negotiation skills…being a good listener…customer relations…and effective communication skills" (p. 18).

Safety

NOLS perceived expertise in the industry as a culmination of safety and judgment according to their core curriculum (NOLS Core Curriculum, 2018). Furthermore, Sibthorp, et al. (2007) stated:

> Based on its mission, NOLS courses offer a combination of generic outdoor leadership training as well as activity- and context-specific course objectives. The general objectives include safety and judgment, leadership, expedition behavior, outdoor skills, and environmental awareness. The safety and judgment objective includes wilderness hazard knowledge, performance of hazard avoidance techniques, and knowledge of emergency planning (p. 2).

Koesler and Propst (1994) are a duo of wilderness leadership academics that identified through their literature review that "judgment is based on acquiring the skills, knowledge, and experience necessary for leading a safe and enjoyable outdoor trip (Cain, 1985; Green, 1981; McAvoy, 1980; Petzoldt, 1984; Swiderski, 1981)" (p. 2).

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Shooter et al. (2009) discussed early works of outdoor leadership competency assessments. One assessment Shooter et al. discussed, highlighted 12 leadership competency categories and safety was among them (p. 3). Curtis et al. (2011) suggests that safety through communication with colleagues to fosters strong leadership among nurses through programs by "creating a warm, safe and supportive culture and work climate" and sharing leadership with peers lead to a healthy work environment (p. 351).

Teaching tactics

For this study, teaching tactics are considered approaches one deliberately uses to transfer knowledge from one person to another or a group. Petzold (1974) related teaching tactics to judgment, "in fact the teaching of techniques (without commensurate judgment) can be dangerous" (p. 25). Richards and Schimelpfenig (2010) experts in the wilderness leadership risk management sector, commented "the ability to intentionally develop our own judgment, and to pass on the lessons we have learned to our students requires that we spend time reflecting on our decision-making process. How can we expect to teach others if we cannot articulate what we ourselves have experienced?" (pg. 1).

Farrell (2007) an Outward Bound affiliate, stress that leadership embodied "the capacity to anticipate and adapt to change with the capacity to learn and to keep learning" (p. 7). Farrell (2007) declared that teaching and leading are synonymous acts. He listed principles and practices found in teachers/leaders: "managing self, teaching/leading by example, using examples to teach, establishing a culture, knowing and caring about the students/employees/followers, knowing and caring about the content/material/work, building a good team, committing to the mission, focusing, persevering, and stepping back, letting go, and bringing out the best" (p. 9). Shooter et

al.'s (2009) operational/interpersonal skills include teaching, group facilitation, and conflict resolution.

A specific education curriculum component of the WEA stated "the ability to know and implement theories and practices of teaching, processing and transference" is important for teachers to transfer knowledge to others (WEA Curriculum, 2019). For theoretical example, decomposition and conversion have become "the basis for the development of scenarios" for future use, often times executed during training and teaching phases that ultimately correlate to the intentional development of expertise (Preston & Hermann, 2006).

Empowerment and fear motivated the use and discernment of teaching tactics. Often a participant mentioned the use of a tactic to either empower a co-lead/student/client; sometimes a tactic was chosen due to "fear of an outcome", as Max pointed out.

A study on what novices do with planning and managing, and decision-making was conducted (Preston & Hermann, 2006). The results revealed what novices did not know: what to do; when to do a task; what to expect; and lacked interrogational knowledge among variables. Their information is applicable to using teaching tactics both motivated by empowerment and fear, especially of a novice employee. However, the study validated many past studies which stated that there was "a difference in performance even among experts," highlighting that experts executed their expertise proficiently "in domains focused around decisions involving human behavior (e.g., intelligence analysts, clinical psychologists, judges)" and in this case leading others through a wilderness experience (Preston & Hermann, 2006, p. 18; Weiss & Shanteau, 2003)

Concluding Remarks

The focus of the second phase of the study was to learn what guides were thinking in their unseen process of judgment (Shrief et al., 1961) that impacted their decisions and leadership in action. Decision-making revealed to be a process perceived as strongly dependent on the concept of judgment (Wagstaff & Cashel, 2001; Galloway, 2007; Preston, 2007). Wagstaff and Cashel (2001) reminded us Paul Petzoldt saw "judgment [as] the most important aspect" of "outdoor leadership". In fact, they drive the problem of gravity, life and death judgments, decisions, and leadership in the field by quoting Petzold: "since faulty planning is responsible for about 75% of deaths, accidents, search and rescue and plain unrewarding trips [sic]" (2001, p. 164).

Overall, does considering judgment, decision-making, and leadership help steer hiring strong applicants, as suggested by the field guide observations? It appeared the guides observed in this study were appropriately screened and hired with at least sufficient and at times extremely competent judgment, decision-making, and leadership skills. When judgment seemed to fail, communication lacked and at times fear of what would happen next was present. Petzold again reminds us "knowing one's limitations and knowing one's ability" (Wagstaff & Cashel, 2001, p. 164) as a guiding force for good judgment. Finally, Kevin pointed out that "good judgment comes from bad mistakes…[it is] only learned in the real world".

Limitations for Phase Two

It was a limitation to be an observer in these classes since and not perceived as an active participant. Another limitation was choosing to participate in the course for short periods that have front country access for convenience. One limitation occurred due to the change in

employees before the second research phase could occur. This resulted in lacking a relationship with the new employee, and research was conducted with willing agents.

Future Studies

Future studies include more in action field/observation time with more participants and a closer look at risk management concerning judgment and its unseen effects. Guthrie (1996) mentions that a shortcoming of the WEA model for judgment is that it does not explain "how a leader knows the most appropriate options, nor does it explain how a leader knows which is the best decision" (p. 6). How and what does it take for one to determine the most appropriate options for judgment and keep their group safe? How much does good communication affect the safety of a group? How can employers assure clear communication throughout their wilderness leadership organization? How can the wilderness leadership measure accountability? Do communication, safety, and accountability play a role in maintaining a safe wilderness leadership operation? Finally, a study where peers and subordinates were consulted to discover how the employee's performance was perceived by them.

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CHAPTER 5 DISCUSSION AND SYNTHESIS

This study had two phases. In the first phase, practitioners were interviewed in a semi-structured format to determine how they discern if an applicant wilderness leader possessed judgment, decision-making, and leadership. Themes emerged clarifying what the 11 hiring practitioners were looking for in a future employee. The themes were the applicant's character and reputation; applicant's holistic approach, awareness, and people skills; applicant's past experience, references, certifications, and skills; the observation of the applicant's leadership in action; and the use of mentoring, apprenticeship, and empowerment for the wilderness leader and the practitioner.

In phase two guides in action in the field were observed and interviewed regarding their judgments, decision-making, and leadership among their students, clients, and/or co-leads. Three major themes emerged from observing and interviewing guides that revealed their routine judgments in action in the field. This approach exposed what the guide was thinking during their internal judgment process, and the extent to which their judgment process impacted the outcome of their decisions made or leadership executed. The collective emergent themes were: communication, safety, and teaching tactics.

A synthesis of each theme from across the study is considered, including the three emergent implications discovered by the researcher. This synthesis of themes and implications with the literature contextualized and integrated this study into the wilderness leadership body of knowledge. Literature from education, psychology, nursing, political science, business, and the wilderness leadership industry provided a well-rounded review of the concepts of professional expertise, judgment, decision-making, and leadership relevant to this study. Expertise is looked

at as an umbrella over judgment, decision-making, and leaderhsip in this study. Information was sought from other disciplines due to the relatively little research conducted in the wilderness leadership industry on this topic. The synthesis focused on collective themes drawn from statements from individual participants. The analysis is sequential, starting with a synthesis of the practitioner's themes, then the judgment themes of the guides, and finally the implication points were reviewed with the current literature.

Does Considering Judgment, Decision-making, and Leadership Help Steer Hiring Strong Applicants, as Proven through Practitioner Inquiry?

Interview questions transpired from the literature to assert the domains of judgment, decision-making, and leadership for the entire study. In phase one, the narrative, ethnographic findings resulted in themes, answering all of the research questions comprehensively. Figure 3 is a logic map of the synthesis, used in chapter 3, article 1 of this research. The map shows the three driving research questions for this study, as well as the themes that emerged from the analysis of the data.
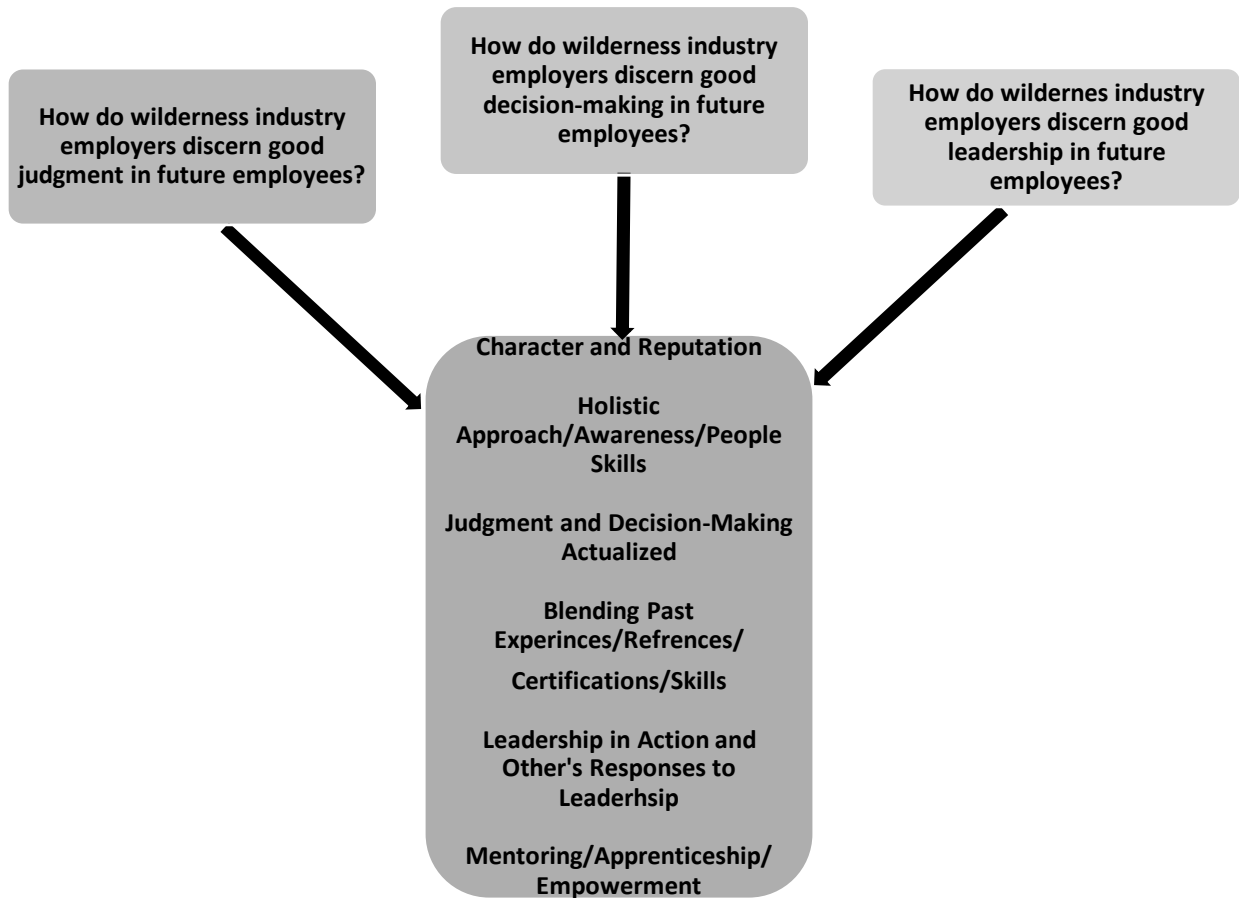
Figure 3 Logic map of synthesis

Figure 3. The squares represent the 3 research questions. The rectangle represents the themes that emerged from semi-structured interviews. Each theme is connected to all three research questions. The themes emerged throughout the data rather than under just one particular research question.

Character and Reputation

Dunne (2011) an educator and Preston and Hermann (2006) political scientists, claimed judgment was an experience that reflected one's character. Curtis Sheerin, and de Vries, (2011b) from the field of nursing supported "particular traits and characteristics…promote[s] leadership". A group of educators that listed characteristics that affected an employee's reputation: "knowing

where to fit into the organization,…people skills, negotiation skills, understanding team limits, time management,…resource leverage, being open-minded, the ability to develop a vision, being a good listener,…self-initiative, teamwork abilities, customer relations, and decision making" (Crumpton-Young, McCauley-Bush, Rabelo, Meza, Ferreras, Rodriguez, Millan, Miranda, Kelarestani (2010) p. 18). Additionally, from the field of business characteristics that reflected one's character: adaptive; emotionally intelligent; charismatic; authentic; goal oriented; humble in nature; mindful; narcissistic; no-excuse; resonant; servant; storytelling; strength-based; and tribal (Buchanan 2012, p. 74-76).

Holistic Approach/Awareness/People Skills

Awareness and people skills shape a holistic approach in both the novice and expert employee. Harvey and Flewitt (1998) from the wilderness leadership industry and Preston and Hermann (2006) political scientists, viewed employees as holistic when one combined multiple types of experience, awareness, people skills, or a broad knowledge base. They noted experts embodied awareness through "deliberate practice" (p.9). Curtis et al. (2011b) suggested awareness and a holistic approach through "the ability to integrate and manage emotions and reason" (p. 308).

Academic educator van Velzen (2010), stated experts obtained "higher-order thinking skills" (p. 367) were self-aware of their knowledge organization and analyzed problems effectively to problem-solving. Preston and Hermann (2006) stated expert awareness had nuance including: "complexity" of a situation; "consider[ed] a range of options"; "open[ed] to information for longer periods of time"; and "differentiate[ed] between consistent and inconsistent information" (p.16); this included self-awareness and self-monitoring. Furthermore, experts controlled the "trade-off between efficiency and accuracy" (p. 16) when seeking

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solutions. However, Schimelpfenig (2007), the curriculum director of the Wilderness Medical

Institute (WMI), an arm of the National Outdoor Leadership School (NOLS) warned even with

robust experience, bad decisions could still be made. To avoid decision-making traps, he

suggested: being realistic, self-aware, seeking feedback from peers, and being thoughtful and

careful with judgment assessments that lead to decision-making (p. 3). Schimelpfenig suggested

decision-making traps were concepts like "assuming the outcome you 'want' is the most likely";

"believing causation and correlation are the same thing"; "more control = more safety"; or

"feeling like you've 'earned' good luck" (NOLS Blog Decision Making, 2019).

Curtis et al. (2011b) felt that relationship skills were the most important skill for any

leader to have. They recommend relationship skills be a part of leadership training programs and

entail communication and awareness.

Judgment and Decision-making Actualized

Dunne (2011) pointed out that judgment was "experiential" in nature, including "the

capability to make good judgment-calls reliably" (p. 17). It is important to note that this

component is actualized in an action taking format. Guthrie (1996) stated judgments were made

when "there was an immediate need for a good decision…or else something bad will happen" (p.

8). Judgment was "based on acquiring the skills, knowledge, and experience necessary for

leading a safe and enjoyable outdoor trip" (Koesler and Propst, 1994, p.2).

The literature review, findings of interviews with the practitioners, and NOLS agreed,

judgment and decision-making went together. Paul Petzoldt, the founder of NOLS and the WEA

(Wilderness Education Association), regarded as a wilderness leadership dignitary, defined

decision-making as experience combined with available information to "yield a decision"

(Wagstaff & Cashel, 2001, p. 164). Petzoldt saw benefit in making transparent decisions so that

students see the process of judgment and decision-making and learn from their instructor's example (p.164). NOLS called for "situationally appropriate decision-making…[and] harnessing the strengths and knowledge of other group members to solve problems" (NOLS Leadership Skills, 2018). The results of this process is seen through the leader taking action from their judgments that result in a decision made.

Blending Past Experience, References, Certifications, and Skills

Wagstaff and Cashel (2001) saw Petzold's philosophy as a combination of information and past experience that comprised good wilderness leaders. Preston and Hermann (2006) stated that "skills related to the task at hand" (p. 7) and "deliberate practice" connected directly with "experience" (p. 9). Irving (2012) emphasized the industry's evolution currently was [is] based on certification, a specific type of experience. In the field of education, declared "reference checks" builds trust with an applicant and an "experience profile…demonstrated leadership competencies" (Patrick, 2005, p. 13). Offering a range of skills, solid certifications, and experience, coupled with confident references shaped an expert and ideal applicant (Harvey & Flewitt, 1998; Preston & Hermann, 2006).

Leadership in Action

One wilderness leadership practitioner noted wilderness leaders existed in a decision-making environment that included "action/feedback loops" (Galloway, 2007, p. 100), suggesting that an employer should observe leadership in action. It was noted that "both negative and positive feedback propel[ed] one down a path towards expertise" (p. 6) along with "extensive observation" (Preston and Hermann, 2006, p. 9). Propst and Koesler (2009), wilderness leadership academics, pointed out that a review of outdoor leadership literature "places[ed] more emphasis on behaviors and developmental skills (i.e. judgment and decision-making)" including

"ongoing feedback" (p. 321) and encouraged "immediate positive feedback" (p. 342) as an evaluative form of leadership in action to determine strong prospective employees. Schimelpfenig (2007) suggested an applicant could "avoid decision-making traps" through "seeking feedback from peers" (p. 3), again through observing leadership in action in the field. A probationary process to observe leaders in action to assess their competency and determine long term job retention is a business practice of NOLS. They specifically looked for comprehensively good "expedition behavior," "competence," "communication," "judgment and decision-making," "tolerance for adversity and uncertainty," "self-awareness," and "vision and action" (NOLS Leadership Skills, 2012).

Mentoring, Apprenticeship, and Empowerment

According to Hicks (2011), "mentorship is often considered one of the best ways to develop leadership potential" (p. 66) as he found in the business industry. Hicks believed that self-reflection from both the protégé and mentor were components that created a successful mentoring relationship. Curtis et al. (2011b), Crumpton-Young et al. (2010), and Propst and Koesler (2009) agreed that mentorship is one of the best methods to develop leaders. Training such as apprenticeships and mentoring lead to creating expertise (Preston and Hermann, 2006). In providing apprenticeships through the role of mentoring it "enhance[ed] self-efficacy…thus increasing[ed] the potential for continued outdoor participation" (Propst & Koesler, 2009, p.341). Apprenticeship and mentorship appeared simultaneously throughout the literature.

Curtis et al. (2011b) indicated that empowerment was the foremost element needed to create a strong leader. Specifically, supporting sound judgment practices "of on-program goal-setting, using a student leader-of-the-day, facilitating group decisions when possible, allowing students to travel unaccompanied by an instructor, and generally running programs with a less

autocratic style" according to wilderness leadership experts Sibthorp, Paisley, and Gookin, (2007, p. 15). They encouraged the empowerment of both the student and the leader or guide during wilderness travel.

Does Considering Judgment, Decision-making, and Leadership Help Steer Hiring Strong Applicants, as Proven through the Field Guide Observation?

The phenomenon of the guides in action was to discover the internal process that directs their judgment, which leads to decision-making and executed leadership. The data clarified that judgments affected decision-making, leadership, overall expertise, colleagues/clientele/students. Good judgment was exposed by observing decision-making and leadership. Again, although there were three research questions, an implication existed that if a guide had sound judgment, it was because they displayed good decision-making or good leadership execution. Judgment is considered an internal process in the field of social psychology (Sherif et al., 1961), and the outward display of the process can be seen as decisions are made and leadership is executed. Therefore, this discussion will address the overarching research problem. The research is aimed to address the problem of gravity, life and death judgments, decisions, and leadership in the field. Overall, does considering judgment, decision-making, and leadership help steer the hiring strong applicants, as proven through hiring agent inquiry and in the field guide observation? Figure 5 is a logic map of the synthesis, used in chapter 4, article 2 of this research. The map shows the three driving research questions for this study, as well as the themes that emerged from the analysis of the data.
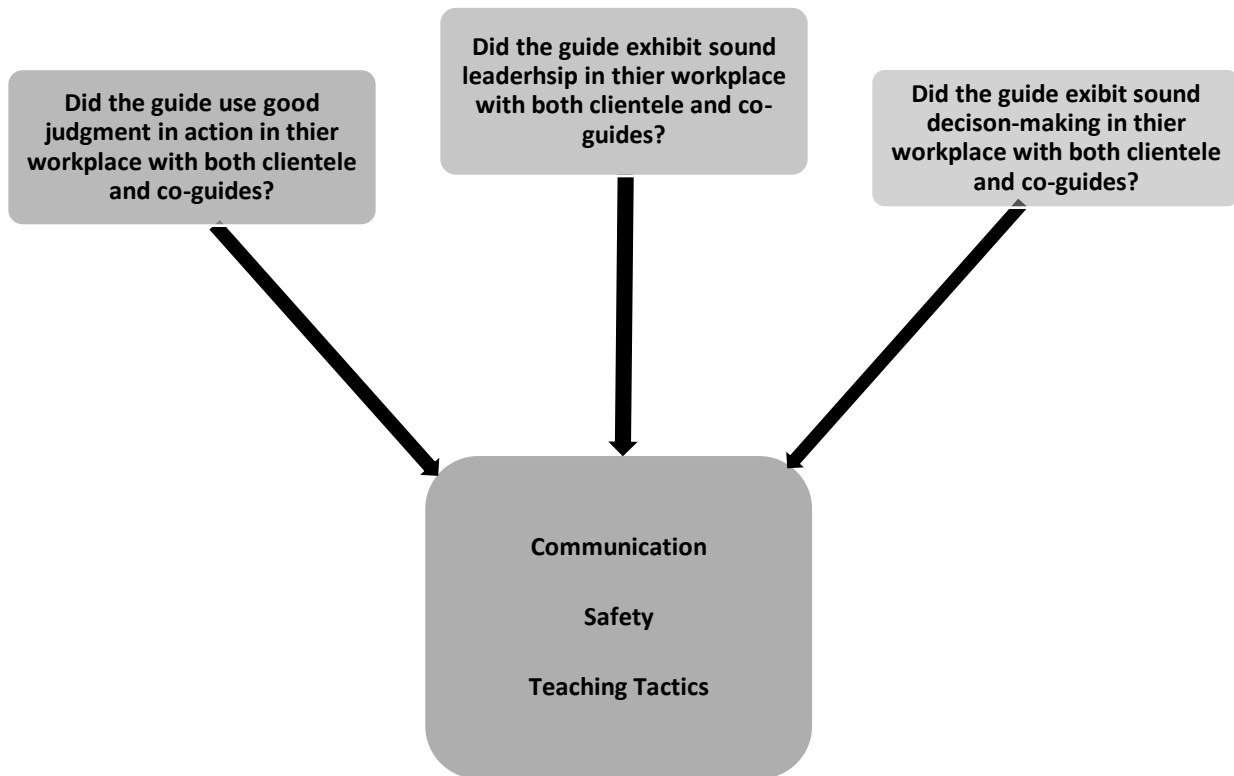
Figure 5 Logic map of synthesis

Figure 5. The squares represent the three research questions. The rectangle represents the themes that emerged from unstructured interviews.

Communication

From psychology, Weiss and Shanteau (2003) asserted that "evaluation + communication = expert instruction" and "expert judgment" could be quantified or qualified with evaluation (p. 106). One study found that experiential group communication coincided with course length (Sibthorp et al., 2007, p. 12). In nursing education, it was emphasized that communication for strong decision-making included collaboration, reflection, and is backed by a strong evidence base (Rennie, Rij, Jaye, and Hall, 2011, p. 1218; Curtis et al., 2011). NOLS viewed

"communication" as a pinnacle leadership skill (NOLS Leadership, 2018). Some academics

focused on wilderness leadership and referred to "operational skills" (Shooter, Sibthorp, and

Paisley, 2009, p. 4), as interpersonal skills, and focus specifically on "judgment and decision-

making" (p. 4). "Interpersonal skills … require direct personal interaction with participants

through verbal and non-verbal communication" (p. 7). Examples of Interpersonal skills were:

teaching, group facilitation, and conflict resolution. Additionally, Crumpton-Young et al. (2010)

detailed effective leadership containing "people skills, negotiation skills…being a good

listener…customer relations…and effective communication skills" (p. 18).

Safety

NOLS saw expertise in the industry as a culmination of safety and judgment according to

their core curriculum ("NOLS Core Curriculum", 2018). Furthermore, Sibthorp, et al. (2007)

stated:

> Based on its mission, NOLS courses offer a combination of generic outdoor leadership
>
> training as well as activity- and context-specific course objectives. The general objectives
>
> include safety and judgment, leadership, expedition behavior, outdoor skills, and
>
> environmental awareness. The safety and judgment objective includes wilderness hazard
>
> knowledge, performance of hazard avoidance techniques, and knowledge of emergency
>
> planning (p. 2).

Koesler and Propst (1994) acknowledged through their literature review that "judgment is based

on acquiring the skills, knowledge, and experience necessary for leading a safe and enjoyable

outdoor trip (Cain, 1985; Green, 1981; McAvoy, 1980; Petzoldt, 1984; Swiderski, 1981)" (p. 2).

Shooter et al. (2009) discussed early works of outdoor leadership competency assessments. One assessment highlighted 12 leadership competency categories and safety was among them (p. 3). Curtis et al. (2011) suggested safety through communication with colleagues to foster strong leadership among nurses through programs were: "creating a warm, safe and supportive culture and work climate" and sharing leadership with peers lead to a healthy work environment (p. 351).

Teaching Tactics

For this study, teaching tactics are considered approaches one consciously uses to transfer knowledge from one person to another or a group. Petzold (1974) directly related teaching tactics to judgment, "in fact the teaching of techniques (without commensurate judgment) can be dangerous" (p. 25). Richards and Schimelpfenig (2010) experts in the wilderness leadership risk management sector, commented "the ability to intentionally develop our own judgment, and to pass on the lessons we have learned to our students requires that we spend time reflecting on our decision-making process. How can we expect to teach others if we cannot articulate what we ourselves have experienced?" (pg. 1).

Farrell (2007), an Outward Bound affiliate, stressed that leadership embodied "the capacity to anticipate and adapt to change with the capacity to learn and to keep learning" (p. 7). Farrell (2007) asserted that teaching and leading are synonymous acts. He listed principles and practices found in teachers/leaders: "managing self, teaching/leading by example, using examples to teach, establishing a culture, knowing and caring about the students/employees/followers, knowing and caring about the content/material/work, building a good team, committing to the mission, focusing, persevering, and stepping back, letting go, and

bringing out the best" (p. 9). Shooter et al.'s (2009) operational/interpersonal skills include teaching, group facilitation, and conflict resolution.

A WEA education curriculum component stated, "the ability to know and implement theories and practices of teaching, processing and transference" is important for teachers to transfer knowledge to others ("WEA Curriculum," 2019). For a theoretical example, decomposition and conversion have become "the basis for the development of scenarios" for future use, often executed during training and teaching segments that ultimately correlate to the intentional development of expertise (Preston & Hermann, 2006).

A study on what novices do with planning and managing, and decision-making was conducted (Preston & Hermann, 2006). The results revealed what novices did not know: what to do; when to do a task; what to expect; and lacked interrogational knowledge among variables. Their information applies to using teaching tactics both motivated by empowerment and fear, especially of a novice employee. However, the study validated many past studies which stated that there was "a difference in performance even among experts," emphasizing that experts executed their expertise competently "in domains focused around decisions involving human behavior (e.g., intelligence analysts, clinical psychologists, judges)" and in this case leading others through a wilderness experience (Preston & Hermann, 2006, p. 18; Weiss & Shanteau, 2003).

The focus of the second phase of the study was to learn what guides were thinking in their unseen process of judgment (Shrief et al., 1961) that impacted their decisions and leadership in action. Decision-making revealed to be a process perceived as strongly dependent on the concept of judgment (Wagstaff & Cashel, 2001; Galloway, 2007; Preston, 2007). Wagstaff and Cashel (2001) reminded us Paul Petzoldt saw "judgment [as] the most important

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aspect" of "outdoor leadership". In fact, they drive the problem of gravity, life and death judgments, decisions, and leadership in the field by quoting Petzold: "since faulty planning is responsible for about 75% of deaths, accidents, search and rescue and plain unrewarding trips [sic]" (2001, p. 164).

Overall, does considering judgment, decision-making, and leadership help steer hiring strong applicants, as proven the field guide observation? It appeared the guides observed in this study were appropriately screened and hired with at least sufficient and at times extremely competent judgment, decision-making, and leadership skills. When judgment seemed to fail, communication lacked and at times fear of what would happen next was present. Petzold reminds us about "knowing one's limitations and knowing one's ability" (Wagstaff & Cashel, 2001, p. 164) is a guiding force for good judgment. Finally, an important idea that arose from this study is that "good judgment comes from bad mistakes…[it is] only learned in the real world".

Emergent Implications

The discussion shares implications realized as the researcher, while immersed in the data; converged with industry expertise through the literature. Figure 6 is a Venn diagram illustrating the two phases of the study, and their convergence. The point of convergence reveals the implications realized as the researcher. The implications show what emerged when considering what practitioners looked for as they hired, coupled with how the guides they hired conducted themselves in the field. The research delved further to ascertain the guide's unseen process of judgment, that led to their decisions made and leadership executed.

Figure 6 Venn Diagram of Practitioners and Guides Themes, Along with Emergent Implications
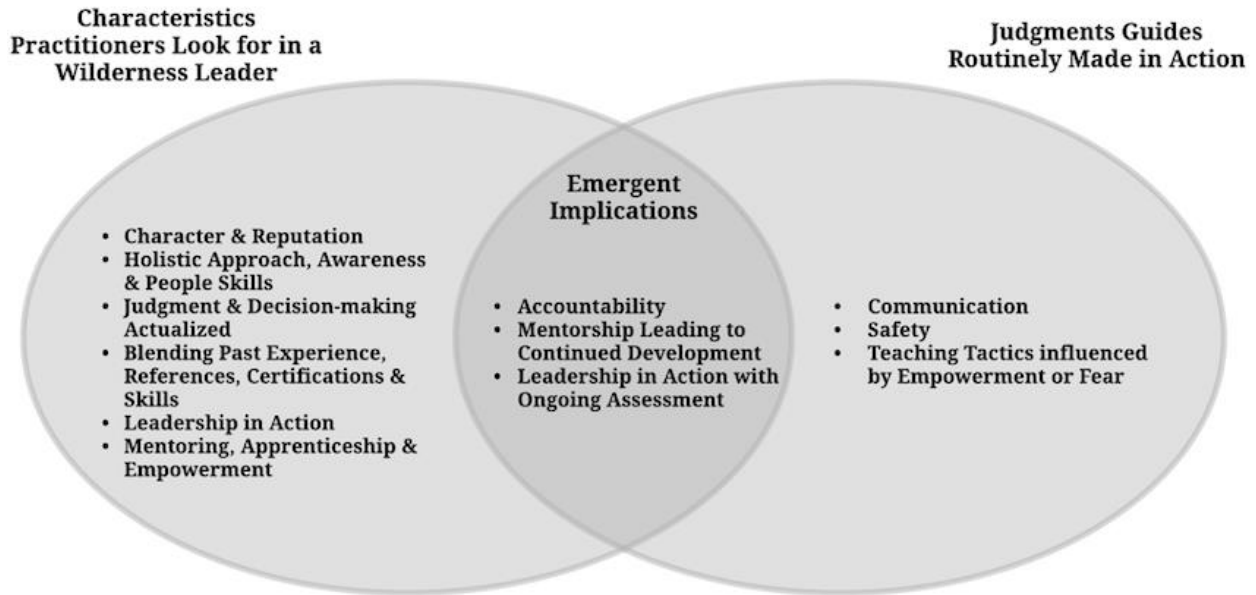

Figure 6 shows the relationship of 'what characteristics practitioners are looking for in a wilderness leader' and Judgments guides routinely made in action', along with emergent implications when the two sets of themes are investigated.

Accountability

Accountability or responsibility is critical to the safety of leaders, clients, and students in the wilderness leadership industry. The Outward Bound curriculum focuses on character building. Their values include "Compassion, demonstrating concern and acting with a spirit of respect and generosity in service to others; Integrity, acting with honesty, being accountable for your decisions and actions; Excellence, being your best self, pursuing craftsmanship in your actions, and living a healthy and balanced life; and Inclusion and Diversity, valuing and working to create communities representative of our society that support and respect differences" (Outward Bound Philosophy and Values, 2017). Integrity includes being accountable for one's

actions and decisions. This also can transfer to the performance of an employee while assessing them in action.

Fostering strong leadership among nurses through programs create "a warm, safe and supportive culture and work climate," and sharing leadership with peers lead to a healthy work environment (Curtis et al., 2011b, p. 351). They revealed how important empowerment was in developing future leaders. Delegation of leadership responsibilities is considered one form of empowerment in leadership. This principle allows people; nurses in Curtis et al.'s case, and wilderness leaders in this study, to feel a part of a team, invest in active collaboration, gain self-respect, and professionalism.

Vokey and Kerr (2011) noted: "professionals must make sound judgements [sic] in the complex contexts of contemporary practice in order to fulfill their manifold responsibilities to their clients, their colleagues, their employers and society at large" (p. 63). They infer the critical necessity of accountability to a sundry of people. The implication in wilderness leadership shows that making sound judgments supports good decisions and effective leadership. This dynamic effect an entire social system of people, with the repercussion of the ripple effect, spreading to unknown limits. Furthermore, Petzold asserts that without accountability, grave outcomes can occur:

> Skill level is not the most important part of outdoor leadership. Having judgment is the most important aspect. Another important aspect is knowing one's limitations and knowing one's ability. Having judgment to accept leadership within one's limitations [sic]. Since faulty planning is responsible for about 75% of deaths, accidents, search and rescue and plain unrewarding trips [sic]. Being taught the knowledge and judgment of how to plan a trip is indispensable to trip leadership. (Wagstaff and Cashel, 2001, p. 164).

Bob Rheault, a long-time Outward-Bound wilderness leader and special forces veteran from the Vietnam War, said "leadership and ethics are [were] not separate" and "that the leader has good judgment and the personal restraint and integrity to act on it [good judgment]" (Chatfield, 2004, p. 5). His comments again weave the ideas of integrity and good judgment, which leads to good decisions and effective leadership. These are all components of accountability in the wilderness leadership field.

Finally, Propst and Koesler's (2009) review of the literature revealed that "the outdoor leadership literature places more emphasis on behaviors and developmental skills (i.e., judgment and decision-making), mentoring, and ongoing feedback as valuable components of the leadership development process (Cain, 1985; Priest, 1990; Hunt, 1984; McAvoy, 1980; Petzoldt, 1984)" (p. 321). Their discovery further supports that the wilderness leadership industry must have good leader development, both in technical and interpersonal skills, supported by mentorship and leadership in action to create a whole, and accountable wilderness leader. Leaders like these are imperative when it comes to skill, leadership, and safety. It takes an entire village of practitioners to create one solid, competent, safe, accountable wilderness leader.

Mentorship

Mentorship was initially identified as a theme in the synthesis of phase one of the study. Additionally, mentorship includes apprenticeship and empowerment as components of the mentee/mentor relationship. Continued conscientious development for the employee is the main aspect of mentorship. However, like a student/teacher relationship, the mentor should residually at least, continue to develop their leadership through assisting in developing another in their field. Mentorship can carry over to occur throughout employment, including during assessment or probationary periods.

Leadership in Action

Leadership in action with ongoing assessment has also been addressed in this discussion. However, the implication for this study is to provide opportunities for the practitioner to witness the employee's abilities in action. This opportunity puts the employee on notice that their performance matters. In the context of wilderness leadership, life and death are at stake.

Recommendations for the Practitioner

This research is intended to provide practitioners standards to assist in the hire of quality applicants who embody judgment, decision-making, and leadership. These recommendations offered are a conglomerate of 11 current practitioners' habits in practice, combined with robustly watching six wilderness guides in action, and lastly discovering implications by considering practitioner desire coupled with guide performance and intent in the field. The recommendations advise the practitioner what to seek in a quality applicant informed by this study.

Character and Reputation

One's character informs their reputation. Their reputation can be discovered by reference checks, through informal networking within the guiding community, and clientele reaction to their leadership. Character can be revealed through listening to practitioner intuition, interview, and interactions during trial or probationary periods.

Holistic Approach/Awareness/People Skills

Holistic implies approaching guiding as a complete system rather than compartmentalized into parts. One must have self-awareness and others to embody a holistic approach to guiding. The presence of people skills alongside awareness will indicate the potential for a holistic approach to be present. Some training to foster this quality could set a company tone to guiding.

Judgment and Decision-making Actualized

Good judgment leads to good decision-making and ultimately great leadership. Judgment is an internal process that can only be seen through actions like decisions made or leadership executed, at least in this study's context. Exemplary qualities are paramount and embody safety, keeping calm, operationality, timeliness, and consideration of variability of outcomes to lead to appropriate decision-making. Ultimately, the process of actualization is shown through judgments made resulting in good decision-making.

Blending Past Experience, References, Certifications, and Skills

Comprehensively these elements complement each other. A strong applicant in the wilderness leadership industry will always have certifications. Currently, they are the only asserted industry standard. However, certifications can be reinforced with both technical and interpersonal skills. With strong certifications and skills come experience and references. Not all applicants will have deep experience. However, references can assert the applicant's drive and initiative to continue developing skills, experience, and pertinent industry certifications.

Leadership in Action

Leadership in action implies the applicant will work on a probationary basis until credibility is established. Some larger industry standard-setting companies require applicants to perform in a peer-based 30-40-day long expedition. The expedition provides an opportunity to assess multiple applicants' leadership in action and other's responses to their leadership. Every theme can be assessed in action, practitioners can test applicants receptibility to empowerment, and eventually offer either mentorship or apprenticeship if potential is discovered and the practitioner is willing to foster the applicant. For smaller operations, one should hire based on the other recommendations and require a probationary period for the applicant to prove their

abilities. Ongoing leadership assessments should occur to assure the employee is competent and free of complacency or lack of awareness.

Mentorship, Apprenticeship, and Empowerment

Mentorship, apprenticeship, and empowerment can be applied through a leadership in action segment, probationary circumstances, or upon hire. Gifting the opportunity for new hires to engage in a growing and professional manner with seasoned employees who have expertise, fosters a healthy and synergistic work culture.

Accountability

Accountability can also be viewed as one's responsibility to self, clients, students, co-leads, colleagues, peers, industry community, and the social community at large. The social community also includes outliers like neighbors, adversaries, and the unforeseen. One must show signs of accountability to assert trustworthy executions of decisions and leadership. Accountability can be determined by an employer through references, reputation, people skills, and certifications. Accountability can be fostered through the use of mentorship, apprenticeship, empowerment and observing the employee through a probationary period or throughout their tenure via leadership in action assessments.

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Limitations

</div>

Limitations for Phase One

In the original pilot study, a limited scope of hiring surfaced because all of the participants are considered industry standard setters. However, the private Alaskan guiding company served as more of a small-scale operation, one of many throughout the industry. Thus, more variety in small operation organizations was chosen to temper data with the

aforementioned participants. Furthermore, one long-standing agent with Grand Canyon National Park became part of the participant list. Many more could be added to this study; however, the limitation is to choose to have the industry standard setters, some small-scale organizations, and a few long-standing National Park Service Agents/Concessionaires. Regarding the qualitative in nature of this study, 6-11 participants is considered robust by Creswell (2015), Glesne(2011), and Merriam (2002).

Limitations for Phase Two

It was a limitation to be an observer in these classes since and not perceived as an active participant. Another limitation was choosing to participate in the course for short periods that have front country access for convenience. One limitation occurred due to the change in employees before the second research phase could occur. This resulted in lacking a relationship with the new employee, and research was conducted with willing agents.

Future Studies

A natural extension for a future study that was not addressed in the first phase of research and was addressed in the second phase of research pertained to guide observation, "does considering judgment, decision-making, and leadership help steer hiring strong applicants, as proven through practitioner inquiry and in the field guide observation?" and was addressed in a later article. A parallel future study could explore whether the recommendations for the practitioner character and reputation; applicant's holistic approach, awareness, and people skills; applicant's experience, references, certifications, and skills; the observation of the applicant's leadership in action; and the use of mentoring, apprenticeship, and empowerment exist in wilderness leaders in action. Another study should examine how to foster sound judgment practices on wilderness leadership courses. It would also be interesting to follow through with

Petzold's sentiment of one's limitations and how they relate to one's judgment. In contrast, how do practitioners determine a wilderness leader's judgment, decision-making, and/or leadership has caused grounds for termination. Other future studies that were not addressed in this research should also examine how to foster sound judgment practices on wilderness leadership courses in both the leader and the client/student. An alternative study could include more in action field/observation time with additional participants. Perhaps a study could take a closer look at risk management concerning judgment and its unseen effects. Future studies include more in action field/observation time with more participants and a closer look at risk management concerning judgment and its unseen effects. Guthrie (1996) mentions that a shortcoming of the WEA model for judgment is that it does not explain "how a leader knows the most appropriate options, nor does it explain how a leader knows which is the best decision" (p. 6). It would also be interesting to follow through with Petzold's sentiment of limitations and how they relate to one's judgment. How and what does it take for one to determine the most appropriate options for judgment and keep their group safe? How much does good communication affect the safety of a group? How can employers assure clear communication throughout their wilderness leadership organization? How can the wilderness leadership measure accountability? Do communication, safety, and accountability play a role in maintaining a safe wilderness leadership operation? How and what does it take for one to determine the most appropriate options for judgment and keep their group safe? Finally, a study where peers and subordinates were consulted to discover how the employee's performance was perceived by them. All future studies stemming from this dissertation should focus on the gravity that mistakes can have in the wilderness leadership industry. They can be literally life and death.

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APPENDICES

APPENDIX A

Interview Questions

Expertise Interview Questions:

4. Does your organization have expertise in judgment? Please elaborate.

5. Does your organization have expertise in decision making? Please elaborate.

6. Does your organization have expertise in leadership? Please elaborate.

Judgment Interview Questions:

4. How do you determine if a prospective employee has judgment?

5. How do you determine the quality of the individual's judgment?

6. If you use scenarios to acquire this information, please provide a common example of the scenario you offer to the prospective employee, examples of their answers, and please comment on your expectations of an answer that would be acceptable to your organization.

Decision Making Interview Questions:

4. How do you determine if a prospective employee has decision making?

5. How do you determine the quality of the individual's decision making?

6. If you use scenarios and/or observations to acquire this information, please provide a common example of the scenario or observations you offer to the prospective employee, examples of their answers, and please comment on your expectations of an answer that would be acceptable to your organization.

Leadership Interview Questions:

4. How do you determine if a prospective employee has leadership?

5. How do you determine the quality of the individual's leadership?

6. If you use observations to acquire this information, please comment on your expectations of observable measures of leadership that would be acceptable to your organization.

Organizational Interview Questions:

7. On average how many new hires do you have each year?

8. How many field staff do you have total?

9. How many clients do you serve a year?

10. How long have you been in the industry?

11. How long have you been hiring in the industry?

12. What is your position?

Debriefing Script

Thank you for participating in our study. Now that your portion of the study is complete I would like to disclose with you the big picture of our study. Our study's title is "What were you thinking? Do Wilderness Leadership guides actions match their employer's intents of hiring a good employee?" Again, I am Sunshine Swetnam a doctoral candidate from Colorado State University and the Co-Principal Investigator of this study. The Principal Investigator is Professor Alan Bright, Ph.D., also from Colorado State University.

The first phase of this study I interviewed hiring agents or wilderness leadership professionals industry-wide. My participants included industry leaders, members of the wilderness education association, mom and pop organizations, and two large and long-standing concessionaires in the Grand Canyon and Denali National Parks. I interviewed these participants to explore if they felt their operation had expertise in the industry. From there I explored how they determined if their future employees in the interview phase had good judgment, decision-making, and leadership skills.

My next step was to observe guides in action. First I acquired permission from your agency to observe you. Then, as you know, I was granted your permission to observe you in the field and then interview you. Again, thank you for your participation. I did not inform you of the entire purpose of my observations so that I did not influence your behavior. From my field notes, I

asked you questions prompted by any decisions you made in the field or the execution of leadership observed.

Now I will take comments that you made in your interview, along with others from this agency and three other agencies, and look for common threads and trends in your answers and actions. I hope to determine if the wilderness leadership industry is hiring people who do have good judgment, decision-making, and leadership skills. Your information will be combined with information from other people taking part in the study. When we write about the study to share it with other researchers in my dissertation or other publications, we will write about the combined information we have gathered. You will not be identified in these written materials. We may publish the results of this study; however, we will keep your name and other identifying information private.

While I will not be including your name or business affiliation in my dissertation, you should know that because of the low number of participants in my study and the small community of organizations involved, there is a risk that you could be identified by your employers as my dissertation will be publicly available. It is not possible to identify all potential risks in research procedures, but the researcher(s) have taken reasonable safeguards to minimize any known and potential, but unknown, risks.

Since you are now aware that you were deceived in this study, you have a choice to withdraw your data. If you would like to have your data withdrawn, please sign the second page of this document and return to me.

Do you have any questions?

If you have further questions feel free to contact my Principal Investigator or me:

Alan Bright, Ph.D.   Sunshine Swetnam

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Alan.Bright@colostate.edu   Sunshine.Swetnam@colostate.edu

Study Title: What were you thinking? Do Wilderness Leadership guides actions match their

employer's intents of hiring a good employee?

If you no longer want to have your information included in the study please sign here:

_____

Participant Signature   Date