Since the earliest days of the organized camp movement more than 150 years ago, leaders advocated that the outdoors was an influential site of learning for youth and that the camp experience was a valuable educational tool to promote nature-based learning. The evolution of camps was similar within the US and Canada, while a great many camps were established within the former USSR, in the years following WWI. Now, in the 21st century, camps have become a global phenomenon. At summer camp, children are motivated by the fun and camaraderie of peer and staff interaction, interesting settings, and physically dynamic activities. Additionally, the pace of learning is accelerated through personal insights, social interaction, mentorship, and skills development that overlap can occur within a short span of time.

In this chapter, we will provide a context for exploring the value of the camp experience, provide a broad overview and analysis of key research efforts that highlight camps’ contributions to outdoor learning, and offer suggestions on directions and issues in the future. In this time of scrutiny of educational institutions and systems, acknowledgement of the increasing disconnect between children and nature, and concern about the apparent loss of a legacy toward environmental stewardship in this generation of young people, the camp experience may offer a realistic solution for authentic learning that develops the whole child through outdoor experiences.

Background
Since its beginning camp has been a context for learning and a site for outdoor education. Camp activities emphasized outdoor knowledge and skills through small group living that offered opportunities to develop a variety of social, emotional, and cognitive skills that contribute to the total development of campers regardless of age. From the late 19th century and into the early 20th, camps in the US were focused primarily on getting young people out of cities and into healthier rural environments. Concerns were for the poor, immigrant children who had fewer formal educational opportunities, were often in ill health, and usually lived in urban environments cut off from the natural world. By the 1930s, the progressive reforms in education advocated by US educators such as John Dewey (1916, 1925) had taken hold with visibility given to experiential education in general and outdoor education in particular. The pragmatic philosopher, William H. Kilpatrick, believed that camping and traditional schooling could benefit one another and was associated with early research undertaken at Taylor Statten's Camp Ahmek in Ontario, Canada. On the educational efficacy of camping, Kilpatrick (1929) stated: "Not being counted educative, in the traditional sense, the camp is free - if it will - to be honestly and seriously educative in the true sense" (p. ix).

The camp experience, often offered as school camping, became the perfect context for experiential learning with more emphasis on the educational values of camp and a particular focus on the natural sciences as integral to instructional camp activities. As camping education became popular and aligned with general progressive aims, a rapid rise “in school camping, and the term outdoor education began to be applied more generally...” (Eells, 1986, p. 129). This focus on learning through the outdoors in camps became highly valued for the total development of youth as evidenced by Mason (1930) when he wrote
that, if camp is worthy, it can be one of the greatest socializing, humanizing, and civilizing factors in a child's life.

Over the next several decades, the progressive educational reform movement in the US lost some prominence, but camps continued to expand into non-profit youth organizations like the Girl Scouts, Boy Scouts, and the YMCA/YWCA as well in many religious organizations (Carlson, 1957; Smith 2006). These large organizations began to export their belief that camp was a valuable context for learning through the outdoors. Camps were set up in countries around the world where these youth organizations were located. Governments of various countries also explored using the camp experience for learning and youth development, which explains the current oversight of camps in many countries as resting with their governmental departments of education. Perhaps most clearly seen in Australia, camps became embraced as an integral part of school life with a strong emphasis on outdoor education and the application site for many forms of outdoor studies (Brookes, 2002).

The continued development of the camping movement in the mid 20th century to today finds an ebb and flow in its prominence. Irwin (1950) saw great promise for school camping programs in the future of education. Between the years of 1931 and 1947 the states of "California, New York, Michigan, and Virginia enacted legislation which permits school districts to use public school funds for the establishment of public school camps" (p. 15). By 1947, over five hundred school boards in the U.S. were operating camping programs in outdoor education (p. 155). The environmental movement of the 70s and 80s brought visibility to the camp experience with research emerging that documented the value of these outdoor learning opportunities not only within environmental education, but also on the psycho-social, cognitive, physical, and intellectual development of the children. Adventure and challenge programs gained popularity in camps as the Outward Bound model developed in England spread to the US and other countries. This model capitalized on learning that occurs while engaged in challenging activities in outdoor environments.

Throughout all of these historical periods, the camp experience maintained a tight connection with its educational roots. Although the methods, organizational structures, staffing practices, and the establishment of standards have evolved over time, the mainstay of the camp experience has continued to be the value placed on education in the outdoors. Learning through nature-based experiences and the authenticity of the relationships, particularly under the supervision of caring adults who themselves are committed to the outdoors, has helped bring camp experiences to youth and adults around the world.

Camp as a Learning Context
Within the current discourse and critique of formal education, the value of informal learning environments in out-of-school-time (OST) settings has taken on new importance. OST opportunities such as the camp experience have begun to be recognized as contributing to the total learning of children and as validating learning that occurs outside of traditional classroom walls. In light of recent advancements in brain research, experts recognize that learning occurs in a variety of ways within developmental staging triggered by physiological changes (Madrazo & Motz, 2005; Worden, Hinton, & Fischer, 2011). These findings provide evidence that supports what outdoor educators have touted for decades-- “kids learn best by doing.” The research suggests that a village is needed to educate children to their full potential.
Research on the Camp Experience

When examining the literature about camp experiences, a substantial body of work has evolved over the decades. The research often reflected the social issues of the time as well as outdoor studies frameworks found in adventure education, environmental education, and school camping. The early research on camp and the principles upon which many camps were founded highlighted common pedagogical influences associated with a child-centered, communitarian, and experiential approaches to educational philosophy (Dimock & Hendry, 1929; Sharp, 1930). The evidence supplied by this body of research lends credibility to camp experiences that aim to promote physical activity, caring relationships, and emotional, social, cognitive, and spiritual growth in campers and staff.

Contemporary camp related research has focused on developmental outcomes of the camp experience, characteristics of high quality camp settings, camps designed for special medical needs, connecting children with nature and the environment, global cross-cultural experiences, and the relationship between camp and learning. The American Camp Association (ACA) described camp as an experience that

...encourages children to value their uniqueness and to understand and appreciate their part in the larger community. [Camp community] helps children develop self-esteem, character, courage, responsibility, resourcefulness and cooperation...camp experiences help children develop the healthy emotional and social skills necessary to grow into strong, considerate, competent adults (ACA, 2004, p.1).

In 2005, the ACA released Directions, their initial report on youth development outcomes and the first part of a three-phase national study to “better understand children’s experience at camp” (ACA, 2005, p. 2). Subsequently, Inspirations (ACA, 2006a), examined the efficacy of camp experience in relation to the extent of developmental processes. Together these studies provided the blueprint for Innovations (ACA, 2006b), which advanced a design for program improvement and intentional programming to increase outcome achievement.

Since the mid 200’s, further U.S. studies as diverse as developmental outcomes and program innovations (Garst, Browne, & Bialeschki, 2011), the benefits of intentional programming (Henderson et al., 2006), and multidimensional growth through camp experience (Thurber, Scanlin, Scheuler, & Henderson, 2007) have all been informed by findings from these original ACA studies. Contemporary camp research has investigated the facilitation of increased independence, improved self-confidence, leadership development, friendship skills, interest in adventure and exploration, identity construction, global citizenship, the influence of the peer community at camp as well as the supportive relationships formed between youth and adults (Bialeschki & Sibthorp, 2011; Fine, 2012). The positive influences of camp extend beyond campers to include young adult staff. Camp counselors have attributed developing marketable job skills, identity exploration, leadership skills, and the ability to work as part of a team to their experience working at camp (Johnson, Goldman, Garey, Britner, & Weaver, 2011).

Camp programs achieve developmental outcomes by focusing on structural elements such as program quality assessments, staff behaviors, and formal outcome measurements. Program quality assessments help camp administrators identify potential areas for program improvements. Research-based quality assessments have been developed for use in the unique settings and environments of camp. Some of the most important components to achieving high levels of quality are related to the behaviors of camp staff. Creating a welcoming and inclusive environment, facilitating appropriate levels of challenge, and encouraging self-reflection are staff behaviors that have been linked to outcome achievement (Larson, Rickman, Gibbons, & Walker, 2009). These outcomes are increasingly measured through formal
outcome measurement. Reliable and valid tools such as the ACA Youth Outcomes Battery (YOB) have been developed specifically for camp administrators interested in documenting the impact of their program. The YOB includes age-appropriate camper self-assessment tools as well as counselor and parent perceptions of camper learning versions (Sibthorp, Bialeschki, Morgan, & Browne, 2013).

Camp experiences have been found to be a positive influence for people with special medical needs, chronic illnesses, disabilities, and psychological issues. Outdoor studies may offer a novel way for these participants to learn. Specially designed camps provide accessibility, treatment, and support in a fun and caring environment. In addition to research on camps serving people with specific medical conditions or disabilities, an increasing number of camp programs serving veterans as well as families of recently deployed soldiers have been established in the US during the last decade. The character of the camp setting and the potential learning through outdoor studies are intentionally used as a vehicle through which healing and understanding can be addressed (Ashurst et al., 2014).

The value of nature-based settings like those found in most camps is well documented. Benefits include the development of a sense of wonder (Louv, 2005), cognitive development (Pyle, 2002), better concentration (Wells, 2000), and creative outdoor play that fosters language and collaborative skills as well as critical thinking and problem-solving (Fjortoft, 2001). The outdoor education philosophy of learning by doing fits with current educational trends where project-based learning is touted for its connection to real world situations and learners are encouraged to work together to creatively solve problems (English & Kitsantas, 2013). Researchers have explored the connection between educational experiences in outdoor settings and future attitudes related to the preservation of natural, wild places (Ewert & Sibthorp, 2005) and making environmentally responsible choices (Collado, Staats, & Corraliza, 2013).

There are a number of challenges to conducting research on outdoor studies within the camp experience. These challenges include instrumentation, intrusiveness, units of measurement, and sampling. Due to the uniqueness of the camp experience, standardized instruments adapted from other fields have potential reliability and validity issues. Intrusiveness issues include challenges around parental permission (and for research about camp programs in schools, getting school approval) and perceptions by camp administrators that data collection will alter and detract from camper experiences. As a result, evaluation and research processes are often missing from many camp programs. The focus on individuals as the unit of measurement is common but may overlook the influence of peers, staff, and/or program structure on related outcomes. The variability of these factors are not easily controlled or measured. Lastly, sampling across a number of camps is challenging because of program and staffing differences that can affect fidelity. Trying to meet the experimental standard of intervention and control groups is almost impossible. Qualitative data offers some solutions to these challenges, but individual experiences may be difficult to generalize to larger populations.

Global and cross-cultural aspects of camp research present additional challenges. Researchers may feel ill equipped in international contexts due to deficiencies of language, cultural knowledge, social understanding, and an insufficient awareness of the research traditions and processes that are followed within different national contexts (Hantrais & Mangen, 1996). Consideration must also be given to methodologies designed in one culture that may not readily transfer to a cultural context different from the original. There is a need to assess the equivalence of specific constructs and curriculums across cultures (Chang, 2010; Brookes, 2002). The challenge for global and cross-cultural researchers is to design theories and instruments that have the ability to remain sensitive to local contexts (Ho & Cheung, 2007).
Education, Learning, and Outdoor Studies

The role of camp as a context for learning has important implications in today's global economy. The camp experience has the capacity to foster interest and motivation that transfer to later life accomplishments (Fine, 2005; Garst, Browne & Bialeschki, 2011). Skills such as problem solving, collaboration, leadership, communication, curiosity, and imagination have been identified as being critical for the "new" world of work in the 21st Century (Wagner, 2010). These 21st Century skills are closely aligned with non-cognitive measures for predicting academic achievement (Farington et al., 2012). These non-cognitive skills are often found within components of outdoor studies in camps and have been associated with positive outcomes for young people. For example, perceptions of personal abilities and the extent to which an activity is valued may influence a young person's motivation and persistence, which can lead to improved academic outcomes and future workforce development (Gutman & Schoon, 2012).

Throughout the world, camp programs have been used to facilitate education. International studies have addressed camp as a context for informal learning and learning transfer (Dahl, Sethre-Hofstad, & Salomon, 2013; Fine, 2005; Glover et al., 2013) and globally-minded citizenship in North America and Mongolia (Fine & Tuushin, 2010), for example. Gender issues at Girl and Boy Scout camps have been explored in Denmark, Portugal, Russia and Slovakia (Bjerrum Nielsen, 2004). Many thousands of "Young Pioneer" camps that were established in the former USSR now continue within the Russian Republic and former satellites through government sponsored, NGO, and private camps. Within government sponsored camps a strong emphasis on nationalism is maintained. However, in addition to sports and other outdoor studies and activities, a new educational focus is now on economics, the promotion of business initiatives, and entrepreneurship (Comai, 2012). In Finland, outdoor education is concomitant with basic education and is provided through camp schools (NCC, 2004). Student camper experiences in rural camp schools offer possibilities for learning and teaching both school subjects and sustainable living (Smeds, Jeronen, Kurppa, & Vieraankivi, 2011). Outdoor camp programs also have been used to combat summer learning loss, such as in Canada where combining the fun of summer camp with curriculum enhances the teaching of mathematics (Tichenor & Plavchan, 2010).

Camp-based environments are also being used to serve the science, technology, engineering and mathematics (STEM) communities. STEM camps, more commonly known as "science" camps, use constructivist approaches that interweave the social and experiential phenomena common to camp settings. Burgeoning summer science programs are offered throughout the world (Brown, 2014; Chen et al., 2012; Crombie, Walsh, & Trinneer, 2003; Miliszewska & Moore, 2010), encouraging young women, marginalized youth, and uninspired middle-schoolers, as well as gifted students, to consider STEM related career choices.

The field of educational psychology offers insights of particular interest to ongoing studies into the camp experience as a catalyst to success in both academics and in later life. Stankov, Morony and Lee (2014) identified confidence as "the best (known) non-cognitive predictor of achievement on cognitive tests" (p. 24). Although closely associated with self-efficacy, "in assessing self-efficacy the participant is not required to work out a solution to a problem whereas in assessing confidence, the solution has to be recorded" (p.25). Results from a Canadian national study on science camps concluded that "presenting science in a hands-on, interactive way may be an important factor contributing to the increases in confidence and valuing of science and technology found in the present study" (Crombie, Walsh, & Trinneer, 2003, p. 267). Confidence equals "I can do it!" and camp programs offer many opportunities
The Future
The role of outdoor learning in camps is an important component to this youth development opportunity found through the world in the camp experience. While the education field struggles to define outdoor learning (i.e., academic-based learning that occurs in the outdoor classroom vs learning about nature and outdoor skills through nature-based experiences), outdoor learning within both contexts occurs within a wide range of outdoor ativities fundamental to the camp experience. While a solid base of research exists, plenty of questions remain to be answered. While a comprehensive discussion of the future research agenda for camps is beyond the scope of this chapter, we would like to suggest several areas for potential study:

- Conduct longitudinal projects. Few examples of longitudinal studies exist in the camp literature, which means little is known about the impact of the experience over time. While findings from aggregated one shot data collection are important, tracking individuals for 5-10 years would undoubtedly cast light on how youth as well as adults can grow through outdoor camp experiences.

- Move from camper specific outcomes to setting level outcomes. Much has been learned about individual outcomes from varied outdoor learning experiences at camp. However, little is known about outcomes at the setting level.

- Assess practices behind successful program models. The “black box” of the camp experience has started to have the lid taken off as researchers try to determine best practices, but much remains to be learned. If camps are to be most effective, then identifying and implementing these practices rests on the evidence gathered through solid research efforts.

- Explore the health and wellness benefits of camp – i.e., physical activity and summer learning loss. Outdoor studies in camp may seem tangential to this research recommendation but a number of findings suggest that outdoor learning may offer intersections among varied components including healthy lifestyle choices, stress reduction, learning readiness, and a variety of “soft skills” learned in camp that emphasize the mind-body experience.

- Investigate the role of camp experiences as “turning points.” Certain life experiences that awaken a latent interest/motive in a young person and subtly alter their life trajectory (Gotlib & Wheaton, 1997) may emerge from camp experiences. Given the concerns about developing environmental stewardship, career interests in STEM areas, and healthy lifestyles, the concept of turning points attributed to camp is important to explore related to later career and life impact.

- Conduct more critical analyses of the camp experience. Little research exists that explores potential negative impacts of the camp experience. For example, under Hitler’s reign, youth camps were used for political indoctrination with mass manipulation of impressionable youth—yet little examination of these types of camp experiences can be found. While we don’t advocate negative manipulations of the experience, more critically posed questions may offer
other views about the camp experience as well as a greater understanding of the vulnerabilities that could exist as a part of camp.

- Explore developmental cascades found in the camp experience. These “cascades” are cumulative impacts of experiences of youth over the lifespan that are necessary for both attaining and maintaining positive life trajectories (Lewin-Biza, Bowers, Lerner). While many camp professionals believe that developmental cascades occur within the camp experience, little evidence exists to support that belief.

The camp experience has always been associated with learning and human development. This learning often takes place in fun informal outdoor experiences that has a holistic, child-centered approach. The outdoors becomes a “classroom” or “laboratory” where questioning, exploration, and problem-solving is encouraged with healthy doses of supportive adults and peers, opportunities to build perseverance, resilience, and coping skills. This approach to whole child learning through the camp experience was built on a rich history of youth development in the nature-based settings of camp--- and the future of camp continues to innovate around these time-tested outdoor skills, behaviors, and concepts built into camp programs.

References


Notes