Benefits of Outdoor Skills to Health, Learning and Lifestyle: Literature Review

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The collective voice of North America’s fish and wildlife agencies at every level of government.

**AFWA Mission:**
To protect and support state, provincial and territorial authority for fish and wildlife conservation; promote sound resource management; and strengthen federal, state, provincial, territorial and private cooperation in conserving fish and wildlife and their habitats in the public interest.
North American Conservation Education Strategy

Designed by AFWA to unify and strengthen conservation education efforts of AFWA member agencies and partners in a manner that effectively advances the Association’s Strategic Plan and the North American Model of Fish and Wildlife Conservation.

AFWAs vision for conservation education is to strengthen formal and non-formal educational efforts to progress beyond the recruitment and retention of citizens to merely participate in outdoor recreation endeavors (Flowers, 2009).
The purpose of this review of literature was to determine the extent to which positive impacts of outdoor skills education and wildlife related outdoor education are documented with respect to health, lifestyle and student learning and contribution to hunting and fishing participation.
Methods

- Review of 100+ documents (from 1990-2010) on adult learning, education (i.e., adventure, boating, conservation, experiential, hunting, fishing, outdoor, physical education and wilderness), health, leisure, recreation, sport, therapy, and at-risk-youth highlighting evidence of positive contributions of outdoor skills education on hunting, fishing and other outdoor activity participation.
Overall Results

- Opportunities offered by outdoor skills education within natural and social environments illustrate positive connections made with the self, others and the environment.

- Outdoor skills activities such as hunting and fishing provide opportunities for the connection with nature/outdoors, with social networks, and more importantly, with themselves.

- Specifically, the benefits of these connections lie in the strength and placement of these connections from the leisure context to everyday lives.
Benefits to Health

Outdoor education promotes *lifelong physical, emotional and spiritual well-being*

- Outcomes for physical, emotional and spiritual well-being were enhanced when more time is spent outdoors in nature. *i.e., Improvements in nutrition, physical activity, reductions in crime and ADD as a result of outdoor education.* (Holmes, 2007)

- In a program directed toward minorities, Hispanic adolescents showed positive gains in conflict resolution skills, stewardship of the environment, and knowledge and understanding of science concepts (after a week-long residential outdoor education program for youth at risk (AIR, 2005).
Benefits to Health (cont’d)

Outdoor Education (OE) educates for character
OE provides opportunities for personal and interpersonal growth, particularly when trained outdoor educators are involved in all aspects of the program.

- Character traits and social skills are enhanced, including creativity, enthusiasm, self-motivation, self-understanding, maturity, independence, cooperation, effective communication, decision making, problem solving, social competence etc.

OE provides improvements in behavior
especially for special populations such as at risk youth. Retention and continued growth in these areas is evident as a result of such hands-on experiences

Outdoor pursuits do more than combat obesity and benefit the economy; spending time outside benefits overall wellness and academic achievement. Playing outside improves concentration, motor development, coordination, mental acuity, and mood.

Time outdoors also reduces attention deficit disorder (ADD) symptoms, lowers blood pressure, and alleviates stress and anxiety (CDCP, 2010).

Benefits to Learning

- Spending time in the open air and learning outside increases students’ ability to think creatively and improves problem-solving skills.

- Students who play and learn in outdoor settings perform better on tests, have higher grade point averages (GPAs), and cause fewer classroom disruptions.

- Rickinson et al., (2004, p. 27) - there is “considerable evidence to suggest that outdoor adventure programs can impact positively on young people’s attitudes, beliefs and self-perceptions.”

- Other benefits include improved academic abilities, awareness of nature and the environment, problem solving, outdoor skills, and values clarification.
Benefits to Learning (cont’d)

- Students who participated in outdoor education with the local environment as a comprehensive focus and framework for curricula:
  - Increased engagement with and enthusiasm for learning, improved academic performance, and better language skills; greater sense of pride and ownership in accomplishments and a variety of substantially increased critical thinking skills (Holmes, 2007).

- Reconnecting children through outdoor education, 2007 – (report of evidence-based research on outdoor and experiential education (OEE) in Canada) a relationship between outdoor and experiential education and real-life situations.
Benefits to Learning (cont’d)

- Children engaged and active outdoors are involved in greater physical activity as youth and later as adults (CDCP, 2010).

- Student physical activity may improve academic performance including academic achievement; academic behavior; and factors that influence academic achievement (CDCP, 2010).

Recommended level of physical activity, at least 60 minutes daily.
Benefits to Lifestyle

- Children growing up interacting with nature more likely to develop a conservation ethic, volunteer, recycle, participate in outdoor recreation as an adult, and work in natural resources-related professions. (Flowers, 07’)
- Outdoor recreation programs influence perceived development of life effectiveness skills among adolescent outdoor participants. Enhanced life effectiveness skills may enhance healthy lifestyles (Allen-Craig & Miller, 2007)
- Participant (+) gains from place-based education (Hooked on fishing) in Montana – knowledge about fish and fishing skills, etc. (Flowers, 2007)
Benefits to Lifestyle (cont.d)

- Meaningful engagement with nature as a child has a direct correlation with involvement in environmental issues in the future (the next generation of environmental leaders and activists)
- People who participate in outdoor activities tend to be happier than those who do not
- Active living may lead to a healthier lifestyle
- Those who are active in their school years are more active as adults as well as in high calorie burning activities
Hunting & Fishing Participation

- For hunting participation, the most important opportunities for youth and parents in a hunting education program are opportunities to learn how to hunt and find game with others, to learn from an experienced hunter (mentorship), and to apply what was learned in the hunter education course.

- Active boaters and anglers vs. nonparticipants had higher levels of ownership and personal responsibility for the environment and more likely to exhibit lifestyle and active stewardship behaviors (McMullin et al., 2007).

- Outdoor recreation participants are more likely to participate in stewardship tasks that protect their recreational resources than they are to protect the environment in general (Cottrell, 2003a; Dienno, 2009)
Hunting & Fishing Participation (cont’d)

- Higher appreciation, affiliation, and health motivations, greater limitations related to cost, and being a married male or married female positively predicted intended fishing participation in the next year. Age, discrimination, and discomfort outdoors were negative predictors.

- “Individuals who attribute multiple valued outcomes like appreciative, social, and health benefits to angling are those who intend to fish in the future. People who attribute more limited benefits from fishing might opt for hiking, bicycling, or other forms of outdoor recreation to efficiently deliver desired benefits” (Schroeder et al., 2008, p.13).

- Study of ‘minority’ attitudes about and participation in fishing - a key inducement to fishing would be “an invitation to fish from a child or friend” (Roper, 2002)

- Minority groups continue to consistently fish less than Anglos nationally - the greatest percentage increase in participation will be among these groups due to population increases (Murdock et al., 1992; Hunt & Ditton, 2002; Pullis, 2000).
Success Stories

- The Community Fisheries Program (CFP), Utah Division of Wildlife Resources, has graduated 10,000 youth over a 7-year period. The program was created to provide fishing opportunities close to urban centers and recruit youth to fishing. The CFP illustrates successful partnerships between city and county governments (Penne & Cushing, 2008).

- The Alabama Division of Wildlife and Freshwater Fisheries offers youth hunts for dove, turkey, and squirrel. Of the youth that participated in these hunts, Alabama reports one-third of them were first-time hunters. Encouraged by this success, Alabama is moving forward with other youth-focused hunts for deer and waterfowl.

- The Arizona Game and Fish Department initiated a Scholastic Clay Target program in 2004 to target young shooter recruitment. After the first year, this program became the 2nd largest scholastic clay shooting program in USA.

- Boater education courses tend to enhance appropriate safety behavior as well as a more frequent participation in safety practice (wearing a lifejacket, checking equipment, etc) (Responsive Management, 2010).
Conclusions

- Outdoor adventure/skills programs are founded on the belief that outdoor experience enhances learning resulting from cognitive, behavioral, and environmental factors where learning takes place when a person interacts with the environment.

- Substantial evidence over the years shows numerous benefits of outdoor education programs for adolescents.
Conclusions

- Some of the main benefits of outdoor skills education include **interpersonal** and **intrapersonal skills developed** through engaging in nature based activities in meaningful ways.

- Benefits for the natural environment are indirectly noted as developing more sensitive individuals and communities towards the environment, and the development of environmental awareness and stewardship ethics.

- Health and learning benefits evident in the physical, psychological and spiritual context, specifically with regards to developing self-efficacy, intellectual flexibility, personal skills, and relationship building.

- Benefits resulting from outdoor activity participation are enhanced through appropriate facility provision and access to natural resources and design of outdoor skills education programs working towards specific objectives.
Recommendations

- Research results suggest that appreciative, social, and health motivations are associated with intended participation in fishing, so managers could emphasize these benefits to encourage participation (Shroeder, Fulton et al., 2008).

- Support for use of green space and natural areas as safe havens for nature experience is necessary to encourage adult acceptance of child play in more wild places (ILI, 2010).

- Resource managers should simplify communications, use new media mechanisms, mediate discriminatory law enforcement, and develop innovative outdoor skills programs to address the unique barriers to outdoor activities faced by minorities (Schroeder et al., 2008).

- Well structured fishing and hunter education programs that capture the essence of personal growth and facilitate the numerous benefits or awareness of may lead to increased recruitment and retention (AIR, 2005).

- In order for outdoor education to make a good contribution to students overall education and healthy lifestyles, a program must be structured to include continuous and progressive outdoor education throughout the educational experience (Woodhouse, 1987).
Future Research

- Changing demographics (community of color)
  How to program and attract more minorities to outdoor recreation? How to increase family unity (among Caucasians) via outdoor recreation participation?
- Changing household dynamics (e.g. household size and family structure)
  How to mediate the relationship between outdoor recreation and environmental views.
- Study of non-active participants in fishing and hunting and in outdoor recreation participation in general.
- Studies investigating the potential of outdoor education to enhance academic achievement.
- Effect of outdoor education programs on school climate and student culture
- Comparative studies of outcomes from different outdoor education programs
- Focus on formation of anti-activity (anti-hunting) attitudes (Backman & Wright, 1993).
- More longitudinal studies of program participants to examine participation patterns.
  Which programs lead to 1st time participation and retention? – is it the activity oriented or broader based such as camping and outdoor skills.
References


Chawla, Louise, and Myriam Escalante. Student Gains From Place-Based Education. University of Colorado at Denver and Health Sciences Center. 2007.

