# The Relevance of Campus Outdoor Recreation Programs to Higher Education: A University of Utah Example

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## Abstract

This paper illustrates the relevance of campus recreation to higher education through a University of Utah case study. Offering Utah's Experiential Learning and Outdoor Recreation Education (U-EXPLORE) program as our exemplar, we advance four lines of thought. First, we establish the relationship between an active body and an active mind. Second, we describe the manifestation of this relationship through U-EXPLORE. Third, we discuss the practical benefits of offering campus recreation programs that include a strong educational focus. Fourth, we conclude by emphasizing why recreation in particular is an ideal context for nurturing pastimes that unite mind and body and promote lifelong human growth and development.

KEYWORDS: cognitive functioning; experiential learning; physical activity; recreation

Are campus outdoor recreation programs a good investment? We think so. Campus recreation programs vary at colleges and universities across the country, but we focus on a specific program with an intentional educational component—a program that carries course credit, involves classroom instruction, and includes outdoor recreation experiences. But before we make our case for this kind of program, it is important to understand the historical context from which campus recreation became viewed as an extracurricular matter.

Relegating campus recreation to auxiliary status is an outgrowth of mid-20th century concerns. With the launching of *Sputnik* in 1957, the United States became preoccupied with staying ahead of the Russians in math and science, and attention turned to making sure school children received heavier doses of the "hard" sciences. Something in the curriculum had to give, and in many schools it was the fine arts (music and art), home economics, shop, physical education, and other "peripheral" subject matters. The emphasis on math and science continues to this day as reflected in the recent science, technology, engineering, and math (STEM) movement (Drew, 2011; Lemonie, 2013; Moomaw, 2013), a widely embraced initiative to prepare students better for a job market characterized by rapidly developing technology.

Emphasis on the technical or hard sciences at the expense of other subject matters has permeated higher education as well (U.S. Commission on Civil Rights, 2010). The STEM disciplines are touted as proving grounds for tomorrow's entrepreneurs and scientists alike, and the existence of physical education curricula in colleges and universities is one of the few academic concessions higher education makes to the fact that the human brain is encapsulated by a human body. Put differently, higher education focuses more on exercising the brain than on exercising the body. A resulting mind–body split is one of the principal shortcomings of higher education, a shortcoming we believe can be remedied through well-thought-out and well-designed campus outdoor recreation programs.

#### The Mind–Body Connection

There is a growing body of scientific literature demonstrating the mind-body connection in new and convincing ways. For example, in Spark: The Revolutionary New Science of Exercise and the Brain, Harvard psychiatrist John Ratey (2008) establishes a link between physical activity and enhanced brain power. Ratey opens his treatise by describing an innovative physical education program in Naperville, Illinois. Since the inception of the program in 1990, 19,000 students in Naperville District 203 have become some of the United States' fittest and smartest youngsters (Ratey, 2008). Studies have confirmed that programs such as the district's Zero Hour Physical Education (before school begins each morning) boosts students' reading ability and performance in other subject matters (Reynolds & Nicolson, 2007). Even more compelling, in 1999, 97% of Naperville's eighth graders participated in the Trends in International Mathematics and Science Study (TIMSS), a test designed to compare students' knowledge levels from different countries in two key subject areas-math and science. As Ratey reports, "On the science section of the TIMSS, Naperville's students finished first, just ahead of Singapore . . . Number one in the world. On the math section, Naperville scored sixth, behind only Singapore, Korea, Taiwan, Hong Kong, and Japan" (p. 14). Physical activity, as Ratey and many others conclude (Etnier, Nowell, Landers, & Sibley, 2006; Hillman, Castelli, & Buck, 2005; Sibley & Etnier, 2003; Tomporowski, 2003), is associated with stimulation of the brain.

While conceding that many other factors likely influence academic performance, Ratey (2008) delivers a detailed and compelling scientific case for the role of physical activity in promoting heightened brain power, not only with respect to learning, but also with respect to a variety of other cognitive processes, including the management of stress, anxiety, depression, attention deficit, addiction, hormonal changes, and aging. In sum, Ratey rejects the mind-body split and supports the proposition that what is good for the body is good for the brain.

Ratey's (2008) mind-body conclusions have been reinforced by a growing number of empirical studies, including several conducted by the California Department of Education (2005), and several others that consistently show that students with higher fitness scores have higher test scores (Castelli, Hillman, Buck, & Erwin, 2007; Coe, Pivarnik, Womack, Reeves, & Malina, 2006; Daley & Ryan, 2000; Dwyer, Sallis, Blizzard, Lazarus, & Dean, 2001; Sallis et al., 1999; Shephard, 1996; Tremblay, Inman, & Willms, 2000).

#### **U-EXPLORE**

Collectively, the aforementioned studies provide the underlying rationale for the University of Utah's U-EXPLORE program that offers a menu of 60 outdoor recreation skill development courses for credit to Utah's student body throughout the calendar year. U-EXPLORE's coordinators understand that the University of Utah is concerned primarily with providing the best possible learning environment for its students and that U-EXPLORE's contributions to learning must be demonstrated to the university administration. Ratey's (2008) confidence in the positive effect of physical activity on the functioning of the brain makes such claims possible. While acknowledging and appreciating the recreational and health benefits that accrue to student participants, U-EXPLORE emphasizes the educational benefits first and foremost. In other words, the U-EXPLORE team communicates how physical activity in the out-of-doors in the form of outdoor recreation helps ignite the brainpower that is required to excel in disciplines and departments across the university.

A good illustration of U-EXPLORE's philosophy is reflected in its Wilderness With Honors program (Dustin, Furman, Dickinson, & Bricker, 2015). Every fall approximately 30 freshmen honors students begin their matriculation at Utah by participating in a 4-day river trip on Utah's Green River through the Gates of Lodore. The river trip bonds the students and orients them to the University of Utah and the state's natural and cultural history. Upon their return to campus, the students live in a section of the Residential Honors College that is designated the "Outdoor Education and Leadership Floor," and they spend half of their first semester continuing to take a classroom/field course through U-EXPLORE that focuses on acquiring new outdoor recreation skills, honing leadership skills, and gaining substantial knowledge of the land that is Utah. The semester ends with the students demonstrating what they have learned about outdoor recrreation, outdoor leadership, and natural resource management through a community engaged learning project, typically with elementary school students from the inner city.

The Wilderness With Honors program illustrates the mind-body connection. It combines vigorous outdoor activity with challenging intellectual problem solving through experiential education. U-EXPLORE has thus evolved from an extracurricular appendage to the Department of Health, Kinesiology, and Recreation (HKR) at Utah to the primary laboratory through which HKR demonstrates its relevance to the larger university.

Wilderness With Honors is but one of several initiatives U-EXPLORE coordinators have undertaken to demonstrate the centrality of the program to enhancing the learning process. A second collaborative program with the David Eccles School of Business, the First Ascent Scholars program, offers incoming ethnically diverse students from the Salt Lake Valley a similar opportunity to transition to university life through a U-EXPLORE program that makes attending a large university less daunting. The First Ascent Scholars spend 4 days in the field together near Moab, Utah, climbing, hiking, and canyoneering during the day, eating hearty evening meals, and then sharing academic aspirations around the campfire at night.

Feedback from the Wilderness With Honors and First Ascent Scholars programs has been so positive that the University of Utah law school and medical school have now inquired about establishing similar orientation programs for their incoming students. Other U-EXPLORE initiatives include using outdoor recreation skill development classes as contexts for writing assignments in the Honors College and the Nutrition Department; developing an orientation program similar to Wilderness With Honors and First Ascent Scholars for Utah's returning veterans, many of whom face significant challenges transitioning from military to university life; and developing outdoor recreation experiential learning opportunities for cancer patients at Utah's Huntsman Cancer Center.

#### **Practical Benefits**

Campus recreation programs such as the one at the University of Utah contribute to the betterment of college and university life, and this is supported by empirical evidence. As Williams (2014) noted, campus recreation programs may help increase grade point averages (Brown, 1998), increase retention (Gass, 1987), and contribute to greater levels of student development (Vlamis, Bell, & Gass, 2011). Campus recreation may also reduce stress and anxiety among students (Kanters, Bristol, & Attarian, 2002) and contribute to increased emotional control (Frauman & Waryold, 2009). Campus recreation may further influence lifelong health and fitness (Forrester, Arterberry, & Barcelona, 2006) and help students develop lifelong time management and task leadership skills (Flood, Gardner, & Cooper, 2009; Frauman & Waryold, 2009). Finally, campus recreation may lead to increased environmentally sustainable attitudes and behaviors (Jackson, 1986; Tarrant & Green, 1999).

Considered together, these beneficial outcomes of campus recreation programs make a case for their relevance to higher education. We believe the mind-body connection provides a rationale for programs such as U-EXPLORE. Campus recreation advocates can articulate the science behind Ratey's (2008) claims that physical fitness sparks mental fitness and then go about designing programs that demonstrate it.

At Utah, the U-EXPLORE program is attracting interest from disciplines and departments across campus that recognize its academic value. U-EXPLORE now serves as one of HKR's centerpieces for illustrating the department's relevance to the larger university (Schwab, Greenwood, & Dustin, 2014). U-EXPLORE's accomplishments also generate considerable goodwill and positive press and engage the department in the larger university. We cannot overstate the significance of this transformation from a department at the periphery of the university to the center of several university-wide initiatives. U-EXPLORE strengthens HKR's standing in the university because its programs connect the department with several other academic units, resulting in increased interdisciplinary cooperation and collaboration. In sum, U-EXPLORE has not only shown positive effects on students, but it has also been good for HKR's image as an important contributing member to the University of Utah's overall academic mission.

#### **Recreation's Special Contribution**

The relationship between enhanced physical fitness and enhanced mental functioning has provided a strong foundation upon which to claim U-EXPLORE's relevance to the University of Utah's academic mission, yet there is one more aspect of U-EXPLORE that demonstrates it is a wise investment. Research shows that one of the principal weaknesses of physical fitness as an end state is that people typically do not stick with fitness routines unless they find them inherently enjoyable (Chow, 2007; Godbey, 2009). For improved fitness to contribute to improved learning over time, fitness activities must be fun. This, of course, is the essence of recreation. When people choose what they do for the joy of it, enhanced fitness and learning become by-products of that enjoyment. The intrinsically enjoyable nature of recreation engagements is more likely to lead to long-lasting involvement in them. Campus outdoor recreation may thus be seen as a gateway to a lifetime of physical activity disguised as recreation. As one high school principal recently put it, "My daughter hates gym class, but she loves hiking" (Schwab & Dustin, 2014, p. 26).

#### Conclusion

Any suggestion that campus recreation does not belong in higher education is misguided (Arum & Roska, 2011; Brandon, 2010; Hacker & Dreifus, 2010; James, 2013). To view campus recreation programs as frivolous, frosting, or mere frills adorning what is an otherwise serious academic enterprise denies the mind-body connection and the pivotal role of physical activity in sharpening mental acuity. An active learner is an active mover, and administering higher education as if the mind and body were unrelated is counterproductive. On the contrary, campus recreation programs such as U-EXPLORE belong at the heart of the academic enterprise. Properly designed and conducted in a way that links the mind to the body, physical activity to enhanced brainpower, and intrinsically enjoyable outdoor recreation pursuits to lifelong leisure involvement, campus recreation plays a critical role in educating the whole person.

### References

- Arum, R., & Roska, J. (2011). Academically adrift: Limited learning on college campuses. Chicago, IL: University of Chicago Press.
- Brandon, C. (2010). *The five-year party: Why colleges have given up on educating your child and what you can do about it.* Dallas, TX: BenBella Books.
- Brown, D. (1998). Does an outdoor orientation program really work? *College and University*, 73(4), 17–23.
- California Department of Education. (2005). California physical fitness test: A study of the relationship between physical fitness and academic achievement in California using 2004 test results. Sacramento, CA: Author.
- Castelli, D., Hillman, C., Buck, S., & Erwin, H. (2007). Physical fitness and academic achievement in third- and fifth-grade students. *Journal of Sport Exercise Psychology*, 29, 239–252. https:// doi.org/10.1123/jsep.29.2.239
- Chow, H. (2007). *Physically active leisure among older adults—Measurement, comparison, and impact*. Saarbrucken, Germany: VDM Verlag.
- Coe, D., Pivarnik, J., Womack, C., Reeves, M., & Malina, R. (2006). Effect of physical education and activity levels on academic achievement in children. *Medicine and Science in Sports and Exercise*, 38, 1515–1519. https://doi.org/10.1249/01.mss.0000227537.13175.1b
- Daley, A., & Ryan, J. (2000). Academic performance and participation in physical activity by secondary school adolescents. *Perceptual Motor Skills*, 91, 531–534. https://doi.org/10.2466/ PMS.91.6.531-534
- Drew, D. (2011). *STEM the tide: Reforming science, technology, engineering, and math education in America.* Baltimore, MD: Johns Hopkins University Press.
- Dustin, D., Furman, N., Dickinson, T., & Bricker, N. (2015). Wilderness with honors. *International Journal of Wilderness*, 21(2), 38–41.
- Dwyer, T., Sallis, J., Blizzard, L., Lazarus, R., & Dean, K. (2001). Relationship of academic performance to physical activity and fitness in children. *Pediatric Exercise Science*, 13, 225– 237. https://doi.org/10.1123/pes.13.3.225
- Etnier, J., Nowell, P., Landers, D., & Sibley, B. (2006). A meta-regression to examine the relationship between aerobic fitness and cognitive performance. *Brain Research Reviews*, 52(1), 119–130. https://doi.org/10.1016/j.brainresrev.2006.01.002
- Flood, J., Gardner, E., & Cooper, N. (2009). One-day challenge course impact on student life effectiveness skills. *Journal of Outdoor Recreation, Education, and Leadership*, 1(1), 55–75. https://doi.org/10.7768/1948-5123.1009
- Forrester, S., Arterberry, C., & Barcelona, B. (2006). Student attitudes toward sports and fitness activities after graduation. *Recreational Sports Journal*, 30(2), 87–99. https://doi. org/10.1123/rsj.30.2.87

#### http://www.ejorel.com/

- Frauman, E., & Waryold, D. (2009). Impact of wilderness orientation program on college student's life effectiveness. *Journal of Outdoor Recreation, Education, and Leadership, 1*, 191–209.
- Gass, M. (1987). The effects of a wilderness orientation program on college students. *Journal of Experiential Education*, *10*, 30–33. https://doi.org/10.1177/105382598701000208
- Godbey, G. (2009). *Outdoor recreation, health, and wellness: Understanding and enhancing the relation.* Washington, DC: Resources for the Future.
- Hacker, A., & Dreifus, C. (2010). *Higher education? How colleges are wasting our money and failing our kids—and what we can do about it.* New York, NY: St. Martin's Press.
- Hillman, C., Castelli, D., & Buck, S. (2005). Aerobic fitness and neurocognitive function in healthy preadolescent children. *Medicine and Science in Sports and Exercise*, 37, 1967–1974. https://doi.org/10.1037/a0022167
- Jackson, E. (1986). Outdoor recreation participation and attitudes to the environment. *Leisure Studies*, 5, 1–23. https://doi.org/10.1080/02614368600390011
- James, F. (2013, August 20). Obama's college-cost tour is a chance to get past climbing walls [Blog post]. Retrieved from http://www.npr.org/blogs/itsallpolitics/2013/08/19/213605532/ obamas-college-cost-tour-climbing-walls-or-complexities
- Kanters, M., Bristol, D., & Attarian, A. (2002). The effects of outdoor experiential training on perceptions of college stress. *Journal of Experiential Education*, 25, 257–367. https://doi. org/10.1177/105382590202500203
- Lemonie, N. (2013). Science, technology, engineering, and math (STEM) education: Elements, considerations, and federal strategy. New York, NY: Nova Science.
- Moomaw, S. (2013). Teaching STEM in the early years: Activities for integrating science, technology, engineering, and mathematics. St. Paul, MN: Redleaf Press.
- Ratey, J. (2008). *SPARK: The revolutionary new science of exercise and the brain.* New York, NY: Little, Brown and Company.
- Reynolds, D., & Nicolson, R. (2007). Follow-up of an exercise-based treatment for children with reading difficulties. *Dyslexia*, *13*(2), 78–96. https://doi.org/10.1002/dys.331
- Sallis, J., McKenzie, T. L., Kolody, B., Lewis, M., Marshall, S., & Rosengard, P. (1999). Effects of health-related physical education on academic achievement: Project SPARK. *Research Quarterly for Exercise and Sport*, 70, 127–134. https://doi.org/10.1080/02701367.1999.106 08030
- Schwab, K., & Dustin, D. (2014). Changing reality: A park and recreation professional reinvents physical education in the public schools. *Parks & Recreation*, *49*(11), 23–27.
- Schwab, K., Greenwood, B., & Dustin, D. (2014). Service first: Embracing the scholarship of teaching and learning through active engagement in park and recreation education. *Schole: A Journal of Leisure Studies and Recreation Education*, 29(1), 26–36.
- Shephard, R. (1996). Habitual physical activity and academic performance. Nutrition Reviews, 54(4), S32–S36. https://doi.org/10.1111/j.1753-4887.1996.tb03896.x
- Sibley, B., & Etnier, J. (2003). The relationship between physical activity and cognition in children: A meta-analysis. *Pediatric Exercise Science*, 15, 243–253. https://doi.org/10.1123/ pes.15.3.243
- Tarrant, M., & Green, G. (1999). Outdoor recreation and the predictive validity of environmental attitudes. *Leisure Sciences*, 21(1), 17–30.
- Tomporowski, P. (2003). Cognitive and behavioral responses to acute exercise in youths: a review. *Pediatric Exercise Science, 15,* 348–359. https://doi.org/10.1123/pes.15.4.348
- Tremblay, M., Inman, J., & Willms, J. (2000). The relationship between physical activity, selfesteem, and academic achievement in 12-year-old children. *Pediatric Exercise Science*, 12, 312–323. https://doi.org/10.1123/pes.12.3.312

- U.S. Commission on Civil Rights. (2010). Encouraging minority students to pursue careers in science, technology, engineering, and math careers: A briefing before the United States Commission on Civil Rights held in Washington, DC. Washington, DC: U.S. Commission on Civil Rights.
- Vlamis, E., Bell, B., & Gass, M. (2011). Effects of a college adventure orientation program on student development behaviors. *Journal of Experiential Education*, *34*, 127–148.
- Williams, N. (2014). Advocacy and the AORE: Ensuring the future of campus outdoor recreation. In W. Taylor, P. Theodore, & G. Marchand (Eds.), *Proceedings of the Association of Outdoor Recreation and Education conference* (pp. 94–97). Ann Arbor, MI: Association of Outdoor Recreation and Education.

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