

ADVENTURE EDUCATION

Perceptions of Universally Designed Adventure Education in High School Physical Education

Nick Faulds and Zack Beddoes

Abstract

Adventure education (AE) is a student-centered curricular model built upon acceptance where various types of learners can experience challenge, success, emotional growth, and peer interaction. Most studies focus exclusively on the perspectives of the instructors, whereas this study includes parental perspectives of children with disabilities and peer mentors. This research investigated a regionally well-known high school inclusive AE program to better understand how participants conceptualized its impact on their lives. A case study design was used. Data collection included semistructured formal interviews, informal interviews, observations, document analysis, and narrative descriptions. Participants were alumni of an AE program, parents of students with disabilities who engaged in the program, and faculty members of a school district who initiated the program. Emerging themes were generalization of teachable moments, sense of community, and changing life perspectives. Findings depicted long-term engagement involving physical activity, adapted physical education, and adventure education among multiple populations of individuals. Participation in universally designed adventure education programming during high school physical education can enhance positive feelings among individuals of varying populations that transition into life after graduation. Given the nature of the model, AE may be optimal for fostering peer interaction and lasting friendships among students with and without disabilities.

Nick Faulds, Department of Exercise and Sport Science, University of Wisconsin-La Crosse. Zack Beddoes, Department of Teacher Education, Brigham Young University. Please send author correspondence to Zack_beddoes@byu.edu

Adventure education (AE) is an experiential learning process where knowledge is constructed from direct experience, skill practice, and value enhancement (Shih & Hsu, 2016). This instructional model comprises seven stages designed to enhance collaboration and communication among students: (a) acquaintance activities, (b) ice breakers, (c) communication activities, (d) problem-solving activities, (e) trust activities, (f) low elements, and (g) high elements (Bisson, 1999). AE provides a framework that facilitates teamwork, trust, cooperation, and self-confidence. A unique aspect of AE is its noncompetitive nature given that it is structurally designed to facilitate an inclusive learning environment for students of varying ability levels.

AE positions participants in situations designed to enhance exploration and valuing of outdoors, while facilitating the development of self-confidence and leadership skills (Sibthorp et al., 2011). Likewise, AE incorporates cooperative, problem-solving, and decision-making activities with the objective of enhancing participants' unique skills and abilities through peer and teacher support (Sutherland & Legge, 2016). Adventure-based learning (ABL) is part of AE and is a student-centered approach emphasizing hands-on experiences. The key components of ABL include (a) experiential learning, (b) sequence and flow of activities, (c) student-centered facilitation, (d) processing through briefing and debriefing, (e) emotional and physical safety, and (f) cultural responsiveness. AE enhances participants' intra- and interpersonal skills and interdependence (Rhodes & Martin, 2014; Quay et al., 2003) as a result of frequent peer interactions.

AE activities develop an atmosphere of acceptance in an experiential manner where participants take risks, share, collaborate, and problem solve together (Forgan & Jones, 2002). Furthermore, the non-competitive nature of AE can enhance motivation, self-perception, and positive social behavior (Gibbons et al., 2010; Forgan & Jones, 2002). The foregoing research suggests that AE has the potential to support the mental and emotional growth of students given that it is a curricular model that provides all participants with multiple opportunities for peer interaction. The use of peers to assist learning in AE has the potential to benefit students of all ability levels in areas of

socialization and leadership (Quay et al., 2003; Zmudy et al., 2009; Forgan & Jones, 2002; Sibthorp et al., 2011).

Inclusive Physical Education

The notion of including students with disabilities (SWD) alongside their nondisabled peers in a physical education (PE) setting is not new (Baker et al., 1995; Vogler et al., 2000). Frequent interactions among students with and without disabilities can create a positive learning environment within a PE setting as long as these interactions are perceived as positive (Park et al., 2014). SWD can develop a sense of belonging from supportive interactions (e.g., encouragement and physical support) with nondisabled peers (Goodwin & Watkinson, 2000). Conversely, negative experiences can occur within inclusive PE when SWD perceive social isolation and lack of engagement in class activities (Goodwin & Watkinson, 2000). In addition, many schools incorporate some type of inclusive PE setting with similar structure.

PE teachers must take an active rather than passive role in planning for and facilitating the engagement of SWD in the learning process and use a variety of instructional methodologies. The notion of planning and implementing a Universal Design for Learning (UDL) where all students can experience active engagement, expression, and flexibility throughout the curriculum (Rose & Meyer, 2006) is important for SWD. For example, SWD reported positive inclusive experiences when they perceived they had gained entry to play, felt like a legitimate participant, and had peer support (Spencer-Cavaliere & Watkinson, 2010). Inclusive PE may likewise be beneficial for students without disabilities. These students might develop a more favorable view of SWD after participating in an inclusive PE environment—especially with well-established support services (Block & Zeman, 1996). Additionally, assistance and praise from peers enhances positive feelings and decreases feelings of dependence upon adult support among SWD (Klavina, 2008).

One of the drawbacks to many inclusive PE environments is the large class sizes. Teachers may have difficulty individualizing instruction in overcrowded classes due to not having the ability to circulate and attend to every student (Park et al., 2014). In oversized classes, the PE teacher may lack opportunities for providing as much individualized instruction as the student needs to be successful. In

such circumstances, quality peer tutoring may be a viable option. However, it is important for PE teachers to intentionally provide individualized opportunities for SWD to interact with both the teacher and their peers (Cervantes et al., 2013; Lieberman & Houston-Wilson, 2009). With appropriate training and direction, a peer tutor may facilitate a successful learning environment for SWD in PE. Research suggests that utilizing peer tutoring in general PE can assist SWD by providing additional support (Cervantes et al., 2013). The structural nature and objectives of the AE model, with its focus on peer and experiential learning may be particularly suitable for successful inclusion in PE.

Although implementing forms of peer tutoring can benefit SWD and their nondisabled peers, it is the teacher who must ultimately prepare for and manage the learning environment if successful inclusion is to occur. It is likely for this reason that the majority of the research to date considers the perspectives of the teachers while a relative few studies explore parental perspectives of children with disabilities (Wilhelmsen & Sørensen, 2017). The purpose of this research was to investigate a regionally well-known high school universally designed adventure education (UDAE) program to better understand how participants conceptualized its impact on their lives. UDAE is an educational environment where SWD engage in various adventure and outdoor pursuit activities with their nondisabled peers in a cooperative learning setting. The program was referred to as UDAE by the instructor and all participants as a reference to the nature of the unique inclusive AE program under study. The research questions guiding this investigation were (1) How do instructors, parents, and nondisabled participants experience an inclusive UDAE program? and (2) How do student perceptions of a UDAE program transfer to life experiences beyond the program?

Method

An instrumental case study methodology (Stake, 2005) grounded this investigation. Participant experiences were bounded by a specific school setting and program, which is the study of a case to provide further insight on a particular topic and develop generalizations and build theory. An instrumental case study methodology was appropriate for this work because we sought to explore lived experiences as well as provide possible transferability to other educational

settings (Creswell & Poth, 2018). This study was approved by the IRB at the University of Wisconsin–LaCrosse.

Participants

Following university IRB approval, a purposive sample of participants was selected for this study on the basis of several criteria designed to obtain a variety of perspectives. Participants were provided a consent form they filled out prior to the start of data collection. Participants were selected from (a) alumni (A) of a UDAE program during their high school career; (b) parents (P) of a child with a disability who was currently or had previously participated in a UDAE program; and (c) faculty members (F) who supported or implemented a UDAE program.

Twelve participants (all provided with pseudonyms in this report) consented to this study. The age of the participants ranged from 22 to 60 ($M = 36$, $SD = 12.6$). Three participants (1 male, 2 female) were parents of persons with disabilities who had or were then participating in a UDAE program at a high school in the Midwestern United States; five alumni (1 male, 4 female) from the said school who were peer mentors in a UDAE program; and four (1 female, 3 male) were current faculty members from a high school where a UDAE program took place and who volunteered to various degrees. As part of a larger investigation, past participants were selected as the central focus for this study. A follow-up study targets participant experiences. The premise of this approach was to ascertain the program's perceived lasting effects on participants including carryover into other life domains. Past participants can reflect on the entirety of their experience and these findings can be compared and evaluated with those currently participating in the program.

This study was conducted at a high school with a regionally well-known inclusive AE program known as UDAE. The AE program had demonstrated considerable innovation and sustainability over the previous decade under the direction of a PE teacher with expertise in both AE and adapted physical education. The program is referred to as UDAE given the student's engagement in the curriculum. Moreover, each of the components of adventure-based learning (experiential learning, sequence and flow of activities, student-centered facilitation, processing through briefing and debriefing, emotional

and physical safety, cultural responsiveness) are observable and points of emphases in the setting.

For the past 10 years from the time of initiation of the program, 10 to 15 SWD and 15 students without disabilities were enrolled in an AE course. The SWD cohort had a range of mental and physical disabilities. Nondisabled students were admitted to the course through a competitive application process that included a two-page written paper on why they believe they would be a good fit for the class. The course is unique in that it is customized to train typical developing peers on modifications from the lead instructor as part of the course. This class differs from other inclusive AE PE courses because of its high inclusion (roughly equal number of SWD and students without disabilities), high and low elements courses, and selective admittance policy for students without disabilities. This study was conducted over 5 months.

Data Sources

Four qualitative techniques were employed for data collection. Data sources that provide a rich understanding of participant perceptions were selected.

Formal Interviews

Formal, open-ended interviews of parents, alumni, and faculty members were conducted. Interview questions were piloted and subsequently revised according to feedback from the expert reviewers. Interviews were conducted on the phone or in person on the basis of participant preference. All interviews were 30 to 45 min in length, audio recorded, transcribed verbatim, and sent to participants for member checking. The primary investigator, Nick Faulds, called each participant to ensure accuracy of interview notes and clarify any additional information that was needed. See Table 1 for a breakdown of sample alumni, parent, and faculty questions. In addition to formal interviews, follow-up informal interviews were completed with all participants by phone to clarify answers and obtain additional insight. Faulds took notes for each participant response followed by reading the notes back to ensure an accurate depiction of the responses from participants

Observations

Six formal course observations of students with and without disabilities were conducted on the campus of a high school where a UDAE program was housed at various time points throughout the year. These documented what specific progressions, teaching practices, and inclusive moments were implemented and had taken place during a current program. Each observation lasted between 60 and 90 min. Observations did not include children of parents who were interviewed within this study. Field notes were documented during observations and then written out electronically on a computer.

Reflection Journals and Teaching Materials

Peer mentors kept reflection journals as part of their participation in the program. Reflection journals captured the perceptions and experiences of peer mentors as previously recorded during the time of their participation in the program. For example, some peer mentors illustrated that taking this course altered their viewpoints of their peers with disabilities. Reflection journals and other teaching materials of previous peer mentors were copied and supplied in person by the physical educator who facilitated the UDAE program.

Narrative Descriptions

Alumni who had previously served as peer mentors in the UDAE program completed narrative descriptions of an “ideal UDAE program” that they would implement based on their views, philosophies, and experience with the program. The purpose of this data collection instrument was for previous peer mentors to reflect on the entirety of their experiences participating in a UDAE program and how it impacted their current life occupations such as becoming a special education teacher. Instructions for completing narrative descriptions were delivered and the narrative was returned electronically.

Data Analysis

Initially, UDAE program perspectives of parents, alumni, and faculty members were examined through open coding techniques designed to obtain a general understanding of the data. Open coding revealed general patterns and relationships among the data.

Each of the subsets were coded and categorized through the techniques of analytic induction and constant comparison (Goetz &

LeCompte, 1984). To do this, we read through all collected data carefully to find comparisons among various data sources and to develop themes on the basis of commonalities. Interview data, field-journal notes, narrative description, and supporting documents were coded and comparisons were made across all data sources. A coding manual was developed with quotes and other illustrations depicted from all data sources. After development of a coding manual, a group of professionals with expertise in qualitative research reviewed it and provided feedback to Faulds. Modifications were made as necessary and the coding manual was sent back to the reviewers for clarification and feedback. After initial coding, 151 coded items from all data sources were selected for inclusion in the codebook. Codes were subsequently applied to all data sources (e.g., the data sources were coded with the codebook). We discussed and reviewed the codebook and made modifications throughout the data collection process. Sample coding, developing themes, and sample raw data were then reviewed by national experts in adapted physical education and qualitative methodology. Correspondence was ongoing until there was agreement among us and the external experts relative to data saturation (e.g., further data analysis was not producing additional insight per addressing the research questions; Glesne & Peshkin, 1991). Data analysis revealed the emergence of nine units (e.g., emerging themes and subthemes). These were consolidated and reduced to three overarching themes.

We utilized multiple data sources for the purpose of triangulation and obtaining an in depth understanding of the research questions (Creswell & Poth, 2018). All interview questions were critically analyzed by experts and subsequently revised. In addition, Faulds searched for discrepant and negative cases throughout the data analysis process. Member checks were completed where participants were asked to provide clarification or confirmation toward their responses to interview questions. Two external university adapted physical education professors with backgrounds in qualitative research provided feedback for the coding manual, which was subsequently applied.

Trustworthiness and Credibility

Standards of quality and verification are key issues in qualitative research (Creswell, 1998). The trustworthiness of this study was

verified in various ways. First, Faulds implemented triangulation of data collection sources to gain a deep understanding of the content within this study. Prior to the start of data collection, Faulds sent interview questions designed for each group of participants to professors in adapted physical education with in-depth backgrounds in qualitative research for peer review. Revisions to interview questions were made. In addition, Faulds searched for discrepant and negative cases throughout the analysis of data collection. During the process of semistructured formal interviews, as well as after the analysis was completed, Faulds completed member checks through informal interviews where participants were asked to provide clarification or confirmation toward their responses to interview questions. Two university adapted physical education professors with backgrounds in qualitative research reviewed the data analysis coding manual developed by Fauld. Their comments were incorporated into the final reporting of the findings.

Findings

The research questions guiding this investigation were (1) How do instructors, parents, and nondisabled participants experience an inclusive UDAE program? and (2) How do student perceptions of a UDAE program transfer to life experiences beyond the program? Three overall themes emerged from analysis of the five data sources: (a) changing of life perspectives, (b) community and caring, and (c) generalization of teachable moments. This section gives representative examples of the findings associated with each theme, organized according to each respective research question.

Changing of Life Perspectives

With respect to the first research question, multiple data sources suggested that perceptions of participants experienced changing life perspectives as a result of membership in the UDAE program. With regard to peer mentors, involvement provided unique opportunities to view their peers with disabilities through a person-first lens. Participants unanimously spoke to this theme. All names in this work are pseudonyms. The primary instructor Jason-F mentioned in a formal interview, “I think it really helps people see past those differences and view the person rather than the disability.” During a formal interview conducted with a former participant, Lizzie-A

explained, “I took a boy with Down syndrome to prom with me and the community was happy.” Moreover, a former student mentioned in a reflection journal, “I have never been a part of a group that is this focused on team success and aware of everyone’s physical and emotional needs.” When recounting the most important benefits a UDAE program had for his child with a disability and for all children, a parent of a SWD described,

Some of the popular [kids] in school, you know, athletes that are going through this [UDAE] or other kids that are doing really well that take this class, you know, know him [child with a disability] and think of him as their friend and so he, um, I think it’s huge for other kids to get exposure to disability to special needs that they know it’s not something to be scared of because that’s just how [his son] is. . . . he has to go over here and flap his arms a little bit now right now or he’s not going to answer you right away, but you just have to wait for an answer. They just know him they don’t think anything of it [having a disability]. (Don-P, Formal Interview)

The UDAE program may have not only changed the perspectives of nondisabled participants. Though SWD were not interviewed in this study, parents provided insight into their perceptions of how their children with disabilities experienced the program. Jillian-P described during an informal interview that she believed participating in this program helped her son become more confident. She illustrated that the specific activities within this class provided opportunities to demonstrate to SWD that their nondisabled peers have barriers they have to overcome as well, such as being afraid of heights. Jillian felt that the unique adventure activities all students participated in together helped them mutually learn from one another given that all students were participating in novel activities. Jillian explained that she believes this is what made her son more confident in attempting to teach others.

Community and Caring

Along with the changing of perspective, the data suggested that experiential learning activities enhanced perceived community and caring for others within the UDAE program. Participants expressed

the benefits for themselves or their children of forming friendships with peers through AE and outdoor education. For some, feelings of friendship developed over time. Anna-A said during a formal interview that participating in a UDAE program during her high school career “helped [her] kind of um, be comfortable with building friendships in college.” Jillian-P explained during a formal interview that her child with a disability connected with his peers in school because of the UDAE program. Reflecting on her son participating in the program with his nondisabled peers during his high school career, Jillian-P said, “It gave him a better connection in school to other kids that he would see that he maybe wasn’t so used to seeing” and “It just gave him some friendships and stuff that he typically didn’t have.” Furthermore, when describing her experience in a UDAE program, Reese-A mentioned in her narrative statement, “In this class [UDAE] you will not see cliques.”

Reflection journals also identified that the UDAE program provided opportunities for participants to meet people they may not have in any other school settings. One student stated in a reflection journal, “I have met some people that I would probably have never talked to, if it wasn’t for being in this class.” Others forged friendships that lasted well-beyond the school setting. Another student mentioned, “Watching everyone bond and become closer than I thought we ever would was terrific” (Reflection Journal). During a formal interview, Don-P described how his son with a disability has been afforded the opportunity to interact with nondisabled peers outside of school:

He’s wanting to do social things with his friends, um, it’s not real interactive he still doesn’t have those skills as well as other kids, but the kids that are picking him up that know that and they know how to interact with him enough to make him feel like part of the group.

Along with community, data analysis revealed a sense of enhanced caring as a result of the program. Multiple data sources such as reflection journals, formal interviews, narrative descriptions, and observations showed that the sense of caring was developed via peers helping one another. Caring appeared to grow out of the opportunities to engage in novel and noncompetitive activities such as

snowshoeing, caving, winter shelter building, bouldering, and hiking. For example, Lizzie-A explained that involvement with UDAE “just made [her] realize that not only to think of [herself], but always others and their feelings toward, um, different goals that they have and the fears that come along with that.”

During observations, there were numerous instances when students with and without disabilities demonstrated feelings of caring toward their peers. In one instance, a student warned her peers with and without disabilities of hazardous areas to ensure their safety. In another instance, a student cut down a tree branch that fell and hit a classmate and the student expressed great concern for her safety. The administrator also described a sense of caring demonstrated by students, when reflecting on his previous experiences in participating with the UDAE program during different group outings:

Yeah, I definitely seen a level of compassion and wanting to involve in or include students with disabilities in experiences they wouldn't typically get to do. You really see a joy in our typically developing students when they are able to help.
(Formal Interview)

Reflection journals reinforced the administrator's statement. For instance, a former student described that she appreciated the willingness of peers to help each other whenever needed. Participants offered further support to this claim during formal and informal interviews. For example, Cynthia-A discussed in a formal interview how this program motivated nondisabled peers to care for their peers with disabilities. Cynthia described, “I've seen regular ed kids stand up to their peers in defense of these [students with disabilities].” Further, the primary instructor explained how students demonstrated feelings of caring from nondisabled peers through interaction outside of the UDAE program. He explained, “As you walk down the hall, you'll see the students who were in the [UDAE program] interacting, which you didn't see before” and “[The nondisabled peers are] going to watch [the students with disabilities'] adapted sports league games, which they wouldn't have done before”

Generalization of Teachable Moments

The findings for the theme of generalization of teachable moments primarily addressed the second research question and represented lifelong lessons learned through participation in the UDAE program as well as how participation influenced subsequent career decision making and other experiences. Adam-F mentioned during a formal interview that participating in this type of program is beneficial for all students because “I think [UDAE] really opens their mind and how it should be included in our society.” Moreover, a student mentioned in a reflection journal that participating in this type of program “has shown [them] some things that [they] can keep doing even when [they are] finished with school” in terms of working with diverse groups of people. In addition, the data were a derivative of positive mentoring—feelings of working in unison to achieve group-oriented objectives including rock climbing, bouldering, snowshoeing, and caving, which transferred to life after graduation. Tom recorded in a reflection journal, “I’ve really become more adventurous and outgoing because of this class, and this summer I am going to try and apply this class to my real life.” Moreover, Reynolds-A explained in his narrative description that participating in UDAE during his high school career benefited him in his life because “overall this class [UDAE] has impacted [him] by showing [him] that some people just need a helping hand and some guidance and [he] really enjoyed being able to do that.” Further, Reynolds-A explained during a formal interview,

I also wouldn’t have been able to be a mentor if I didn’t join the universal PE program because that program really shaped me and prepared me to be able to mentor, uh, kids or, you know, guys that I work with that are younger than me, um, [it’s] something I enjoy doing whether it’s someone with a disability or someone without a disability, it doesn’t bother me one bit.

Participants described how personal perceptions of AE with their peers carried over into their everyday life. The nature of the activities and the diversity between participants seemed to foster an interest in pursuing special education, physical education, and AE

as a career. At the time of data collection, Lizzie-A was finishing a degree in special education. She said,

I, um, feel like I can make goals easier for, um, kids setting their goals and not only setting them, but achieving them in the long run and just seeing progress is always something that can take a long time. (Formal Interview)

Anna-A described during a formal interview that being a member of this class encouraged her to continue working with SWD and be “more vocal and independent” and because of this program she was able to transfer the “communication piece” into her career. Reese-A explained during her formal interview that the content she learned in UDAE gave her the leadership skills required to “have the ability to lead out a group of freshmen girls that will be on a . . . 9-week backpacking trip this summer up in the mountains of Canada.” Further, during an observation while a bouldering class was taking place, a former student came to the class and stated that participating in UDAE gave her the motivation to continue participating in competitive bouldering events as an adult.

Discussion

This study investigates the perceptions of current instructors, parents of a child with disabilities, and nondisabled students affiliated with a UDAE program. Notable delimitations for this initial study include the omission of the voices of the SWD themselves with reliance on perceptions of parents of children with disabilities, alumni, and instructors. The three themes that evolved—(a) changing of life perspectives, (b) community and caring, and (c) generalization of teachable moments—illustrate how participation in an integrated AE setting provides students of all abilities with opportunities to develop life skills. The results of this study enhance the knowledge base relative to understanding the potential long-term benefits of AE for students of various ability levels.

Previous research describes SWD participating in parallel lesson activities with their nondisabled peers (Haegele & Zhu, 2017). This study explores a different avenue in which all students achieve lesson objectives through process-oriented activities designed to maximize participation. It appears that participation in this type of

program is maximized because students engage in lesson activities that focus on the needs of the group rather than winning and losing. The findings align with other research suggesting that participation in lesson activities within the context of AE can enhance intra- and interpersonal skills (Rhodes & Martin, 2014; Shih & Hsu, 2016). Although SWD may develop negative feelings associated with PE when SWD are not active participants (Bredahl, 2013; Goodwin & Watkinson, 2000; Haegele & Sutherland, 2015), this study suggests that active and deliberate inclusion of SWD facilitates positive perceptions for the participants. These findings accord with similar extant research (Zmudy et al., 2009) in which participants engage in process-oriented lesson activities.

Aligned with the findings of Spencer-Cavaliere and Watkinson (2010) in which SWD develop lasting friendships with their non-disabled peers, the findings of this study show participants likewise through the UDAE program form relationships that extend well beyond high school. Similar to participants in previous literature (Spencer-Cavaliere & Watkinson, 2010; Davidson, 2001), participants in this study formed relationships through the UDAE program that extended well beyond high school. Parents also reported their children as being more social outside of school following involvement in the program. This may be attributed to the class affording opportunities for people to focus on peer abilities rather than disabilities (Seymour et al., 2009). Altered perceptions between students of varying ability levels may likewise have been accelerated by the curricular model because of its primary focus on social growth and equality (Forgan & Jones, 2002; Garst et al., 2001).

Potentially as a result of a change of life perspective, SWD and their nondisabled peers develop friendships through concomitant participation in UDAE lesson activities such as bouldering, ice fishing, winter shelter building, and rock climbing. Such participation in AE during PE may provide relative inclusivity of social groups in comparison to other PE and school settings (Fernandez-Rio & Suarez, 2016; Smith et al., 2010; Sutherland & Legge, 2016; Zink & Burrows, 2008). In this study, there is no indication from participants of experiencing hierarchical social status within the program.

The findings of Goodwin and Watkinson (2000) are similar to those in this study in that SWD develop positive perceptions when

they perceive activities with nondisabled peers as meaningful. When meaningful experiences are coupled with a sense of support, personal growth and reduction of potential risk factors may result (Berman & Davis-Berman, 2005). In addition, participants in this study describe how lessons learned in the program transfer to other life domains. This too could be an outgrowth of an AE instructional model that provides purposeful applicability to other life activities and related occupations (Cooley et al., 2015; Zmudy et al., 2009). Alumni of a UDAE described how the content taught in the UDAE gave them the skills and knowledge to work with a variety of populations.

Learning mechanisms taught in AE can be transferred to multiple contexts (Sibthorp et al., 2011). Findings from this study support this notion.

Implications

This study suggests that participating in UDAE during high school can enhance feelings of community among SWD toward their nondisabled peers. What was particularly striking to us is the transferability of lessons learned from the educational to the general life context (Sibthorp et al., 2011). Former participants and parents of a child with disabilities repeatedly referred to the program as a means of enhancing confidence for attending social events and embarking in leadership opportunities.

This purposively selected program represents a unique context in which the PE teacher is an expert in AE and APE and teaches roughly the same number of students with and without a disability. This provides an opportunity for frequent interaction and exposure among students across a variety of ability levels. Frequent exposure or contact, under positive and interactive conditions, can significantly enhance nondisabled student experiences and attitudes toward their peers with disabilities (Keith et al., 2015).

The AE model is designed to facilitate noncompetitive and cooperative learning. This research provides another affirmative example of the potential for AE programs to foster positive and sustainable learning experiences among a variety of learners. Therefore, the results of this study have merit and are encouraging for adapted and general PE professionals considering the implementation of a similar program. However, while the data from this investigation suggest general positive experiences from participants in the AE program

under study, it is important for observers to remember that the positive class environment was intentionally cultivated. It is possible that simply including SWD in an AE course alongside their nondisabled peers may produce negative rather than positive experiences, unless the appropriate conditions are in place (Haegele & Sutherland, 2015).

Future research may explore the meaning of a UDAE within an inclusive PE class that requires no screening process for nondisabled peers to participate. To join the class, nondisabled peers participating in the UDAE in this study were required to complete an application process, which included a letter of intent and reference provided by a previous PE teacher. It may be insightful for research to compare perspectives of student volunteers and students automatically enrolled in similar settings.

Limitations

The nature of this PE setting may limit the generalizability and applicability of the findings. This study investigated a UDAE program that took place at one school with one lead teacher facilitating the program. Additionally, we were not able to obtain the necessary authorization to interview SWD. Future research should explore the voices of SWD. Notwithstanding these limitations, this study provides unique parental, instructor, and participant insights relative to the potential merits of incorporating inclusive AE in schools.

References

- Baker, E. T., Wang, M. C., & Walberg, H. J. (1995). The effects of inclusion on learning. *Educational Leadership*, 52(4), 33–35.
- Berman, D. & Davis-Berman, J. (2005). Positive psychology and outdoor education. *Journal of Experiential Education*, 28(1), 12–24. <https://doi.org/10.1177/105382590502800104>
- Bisson, C. (1999). Sequencing the adventure experience. In J. C. Miles & S. Priest (Eds.), *Adventure programming* (pp. 205–214). Venture Publishing.
- Block, M. E., & Zeman, R. (1996). Including students with disabilities in regular physical education: Effects on nondisabled children. *Adapted Physical Activity Quarterly*, 13(1), 38–49. <https://doi.org/10.1123/apaq.13.1.38>

- Bredahl, A. M. (2013). Sitting and watching the others being active: The experienced difficulties in PE when having a disability. *Adapted Physical Activity Quarterly*, 30(1), 40–58. <https://doi.org/10.1123/apaq.30.1.40>
- Cervantes, C. M., Lieberman, L. J., Magnesio, B., & Wood, J. (2013). Peer tutoring: Meeting the demands of inclusion in physical education today. *Journal of Physical Education, Recreation, & Dance*, 84(3), 43–48. <https://doi.org/10.1080/07303084.2013.767712>
- Creswell, J. W. (1998). *Qualitative inquiry & research design: Choosing among five approaches*. Sage.
- Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches*. Sage Publications.
- Cooley, S., Burns, V., & Cumming, J. (2015). The role of outdoor adventure education in facilitating groupwork in higher education. *Higher Education*, 69(4), 567–582. <https://doi.org/10.1007/s10734-014-9791-4>
- Davidson, L. (2001). Qualitative research and making meaning of adventure: A case study of boys' experiences of outdoor education at school. *Journal of Adventure Education and Outdoor Learning*, 1(2), 11–20. <https://doi.org/10.1080/14729670185200041>
- Fernandez-Rio, J., & Suarez, C. (2016). Feasibility and students' preliminary views on parkour in a group of primary school children. *Physical Education and Sport Pedagogy*, 21(3), 281–294. <https://doi.org/10.1080/17408989.2014.946008>
- Forgan, J. W., & Jones, C. D. (2002). How experiential adventure activities can improve students' social skills. *Teaching Exceptional Children*, 34(3), 52–58. <https://doi.org/10.1177/004005990203400307>
- Garst, B., Scheider, I., & Baker, D. (2001). Outdoor adventure program participation impacts on adolescent self-perception. *Journal of Experiential Education*, 24(1), 41–49. <https://doi.org/10.1177/105382590102400109>
- Gibbons, S. L., Ebbeck, V., Concepcion, R. Y., & Li, K. (2010). The impact of an experiential education program on the self-perceptions and perceived social regard of physical education students. *Journal of Sport and Exercise Psychology*, 32(6), 786–804. <https://doi.org/10.1123/jsep.32.6.786>
- Glesne, C., & Peshkin, A. (1991). *Becoming qualitative researchers*. Longman.

- Goetz, J. P., & LeCompte, M. D. (1984). *Ethnography and qualitative design in educational research*. Academic Press.
- Goodwin, D. L., & Watkinson, E. J. (2000). Inclusive physical education from the perspective of students with physical disabilities. *Adapted Physical Activity Quarterly*, 17(2), 144–160. <https://doi.org/10.1123/apaq.17.2.144>
- Haegele, J., & Sutherland, S. (2015). Perspectives of students with disabilities towards inclusive physical education: A qualitative inquiry review. *Quest*, 67, 255–273. <https://doi.org/10.1080/00336297.2015.1050118>
- Haegele, J., & Zhu, X. (2017). Experiences of individuals with visual impairments in integrated physical education: A retrospective study. *Research Quarterly for Exercise and Sport*, 88(4), 425–435. <https://doi.org/10.1080/02701367.2017.1346781>
- Keith, J. M., Bennetto, L., & Rogge, R. D. (2015). The relationship between contact and attitudes: Reducing prejudice toward individuals with intellectual and developmental disabilities. *Research in Developmental Disabilities*, 47(C), 14–26. <https://doi.org/10.1016/j.ridd.2015.07.032>
- Klavina, A. (2008). Using peer-mediated instructions for students with severe and multiple disabilities in inclusive physical education: A multiple case study. *European Journal of Adapted Physical Activity*, 1(2), 7–19. <https://doi.org/10.5507/euj.2008.005>
- Lieberman, L. J., & Houston-Wilson, C. (2017). *Strategies for inclusion: A handbook for physical educators* (3rd ed.). Human Kinetics.
- Park, S., Koh, Y., & Block, M. (2014). Contributing factors for successful inclusive physical education. *Palaestra*, 28(1), 42–49.
- Quay, J., Dickinson, S., & Nettleton, B. (2003). Students caring for each other: Outdoor education and learning through peer relationships. *Australian Journal of Outdoor Education*, 7(1), 45–53.
- Rhodes, H. M., & Martin, A. J. (2014). Behavior change after adventure education courses. *Journal of Experiential Education*, 37(3), 265–284. <https://doi.org/10.1177/1053825913503115>
- Rose, D. H., & Meyer, A. (2006). *A practical reader in universal design for learning*. Harvard Education Press.
- Seymour, H., Reid, G., & Bloom, G. A. (2009). Friendship in inclusive physical education. *Adapted Physical Activity Quarterly*, 26(1), 201–219. <https://doi.org/10.1123/apaq.26.3.201>

- Shih, J., & Hsu, Y. (2016). Advancing adventure education using digital motion-sensing games. *Educational Technology & Society*, 19(4), 178–189.
- Sibthorp, J., Furman, N., Paisley, K., Gookin, J., & Schumann, S. (2011). Mechanisms of learning transfer in adventure education: Qualitative results from the NOLS transfer survey. *Journal of Experiential Education*, 34(2), 109–126. <https://doi.org/10.1177/105382591103400202>
- Smith, E., Steel, G., & Gidlow, B. (2010). The temporary community: Student experiences of school-based outdoor education programmes. *Journal of Experiential Education*, 33(2), 136–150. <https://doi.org/10.1177/105382591003300204>
- Spencer-Cavaliere, N., & Watkinson, E. J. (2010). Inclusion understood from the perspectives of children with disability. *Adapted Physical Activity Quarterly*, 27(4), 275–293. <https://doi.org/10.1123/apaq.27.4.275>
- Stake, R. E. (2005). Qualitative case studies. In N. K. Denzin & Y. S. Lincoln (Eds.), *The Sage handbook of qualitative research* (pp. 443–466). Sage.
- Sutherland, S., & Legge, M. (2016). The possibilities of “doing” outdoor and/or adventure education in physical education/teacher education. *Journal of Teaching in Physical Education*, 35(1), 299–312. <https://doi.org/10.1123/jtpe.2016-0161>
- Vogler, E. W., Koranda, P., & Romance, T. (2000). Including a child with severe cerebral palsy in physical education: A case study. *Adapted Physical Activity Quarterly*, 17(2), 161–175. <https://doi.org/10.1123/apaq.17.2.161>
- Wilhelmsen, T., & Sørensen, M. (2017). Inclusion of children with disabilities in physical education: A systematic review of literature from 2009 to 2015. *Adapted Physical Activity Quarterly*, 34(3), 311–337. <https://doi.org/10.1123/apaq.2016-0017>
- Zink, R., & Burrows, L. (2008). ‘Is what you see what you get?’ The production of knowledge in-between the indoors and outdoors in outdoor education. *Physical Education and Sport Pedagogy*, 13(3), 251–265. <https://doi.org/10.1080/17408980701345733>
- Zmudy, M. H., Curtner-Smith, M. D., & Steffen, J. (2009). Ecology and task structures in adventure education. *Journal of Experiential Education*, 31(3), 319–340. <https://doi.org/10.1177/105382590803100302>