ABSTRACT

COREY, B.F. Usability of specific low ropes course elements and adaptations that can be made to make each element more universal for populations with a disability. MS in Special Physical Education, August 2001, 20pp. (P. DiRocco)

Ten ropes course elements were studied to determine how usable each is for persons with a disability. The ten elements that were used are the inclined log, the swinging log, the spider's web, the triangle traverse, the wild woozy, the t.p. shuffle, the wall, the fidget ladder, the trust fall, and the nitro crossing. The first consideration for each element was whether or not it is usable for a person with a disability as it is. The second consideration is what adaptations can be made to that element so that a person with a disability can have a similar experience without changing the intent of that element if it was not usable as it is. Some of the elements are easily adjusted to make them more usable for all populations without changing the adventure experience. Other elements cannot be adjusted but adaptations to the rules can be made to allow a person with a disability the opportunity to experience success at a specific element. Some other elements were not usable at all for persons with a disability but they could share in the group bonding process of problem solving and spotting to help their group accomplish the goal of certain elements that may be physically impossible for them to conquer on their own. Instructor attitudes towards persons with a disability may also determine the success that they will experience on a ropes course. The examination of more ropes course elements and the adaptations that can be made to make each element more universal will help aid in the construction of ropes courses.

COLLEGEOF HEALTH, PHYSICAL EDUCATION, AND RECREATION

UNIVERSITY OF WISCONSIN-LA CROSSE

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SPECIAL PHYSICAL EDUCATION CRITICAL ANALYSIS PROJECT

FINAL APPROVAL FORM

Candidate: Brent F. Corey

We recommend acceptance of this Critical Analysis Project in partial fulfillment of the candidate's requirements for the degree:

Master of Science in Exercise and Sport Science: Special Physical Education

The candidate has successfully completed the Critical Analysis Project final presentation.

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USABILITY OF SPECIFIC LOW ROPES COURSE ELEMENTS AND ADAPTATIONS THAT CAN BE MADE TO MAKE EACH ELEMENT MORE UNIVERSAL FOR POPULATIONS WITH A DISABILITY

A MANUSCRIPT STYLE CRITICAL ANAYLIS PRESENTED

TO

THE GRADUATE FACULTY

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SECTION I

INTRODUCTION

To adventure is to venture forth into the unknown, to undertake an activity that has an uncertain outcome for the adventurer and may be risky or dangerous (Miles & Priest, 1990). Adventure education is goal orientated. Participants must take risks to attain a goal in an adventure program. Adventure programs provide positive experiences for each person in a group in settings that allow them to expand perceived limitations. Adventure can take place indoors, outdoors, in the wilderness, in the city, almost anywhere. Ropes challenge courses will be the area of adventure focused on in this critical analysis.

A ropes challenge course is constructed of rope, cables, and wood. Courses are constructed outdoors in trees (or using telephone poles) and indoors in gymnasiums (Webster, 1989). A ropes course is made up of high elements, low elements, and initiatives, which are used for individual and group physical challenges that require teamwork skills and individual commitment. The challenge course experience will help individual and groups to work better as teams, facilitate communication skills within groups as well as help build confidence in individuals (Timber Ridge Publications, 1997).

The Project Adventure student goals as stated by Webster (1989) are:

1. To increase the participant's sense of personal confidence.
2. To increase mutual support within a group.
3. To develop an increased level of agility and physical coordination.

4. To develop an increased joy in ones physical self and being with others.

5. To develop an increased familiarity with the natural world.

These goals allow participants to learn the importance of respecting the effort of participation not necessarily the failure or success of accomplishing an activity. Sugarman (1996) said, rather than finding weaknesses in what individual members cannot do, the group finds strengths in their cooperation, trust and ability to maximize each member's abilities. A key concept of a ropes adventure course is challenge by choice. Challenge by choice is a concept that encourages all participants to choose their own level of involvement, at their own pace, as determined by themselves (Havens, 1992). Because ropes course activities revolve around the concepts of challenge by choice, trust, cooperation, and focus on strengths of group members rather than on weaknesses this would be an appropriate setting to include people with disabilities.

The Americans with Disabilities Act (ADA) allows people with disabilities the right to equal access to all services provided by local, state, and federal government (P.L. 101-336, 1990). The ADA mandates full and equal access by people with disabilities to any place of public accommodation (governmental or private). When a facility complies with the specified standards of the ADA to accommodate individuals with disabilities it is considered to be accessible. Smith, Austin, and Kennedy (1996) said accessibility refers to the elements in the constructed environment (site or building) that allow approach, entrance, and use of facility by persons with disabling conditions. Usability refers to a constructed environment providing the opportunity for maximum use by those with sensory or mobile impairments (Smith, Austin & Kennedy, 1996). Individuals often use

usability along with accessibility to indicate that a facility meets accessibility standards and is actually usable with a disability.

Inclusion in adventure course activities will provide people with disabilities an opportunity to participate with a group of peers in challenge activities that they may otherwise never experience. Integrated adventure programs have a number of benefits to participants in such groups, including increased levels of social interaction between persons with and without disabilities, increased peer acceptance, a decrease in socially inappropriate behaviors, and an increase in learning life-long skills (Schleien, McAvoy, Lais & Rynders, 1993). Integrated adventure programs will also benefit the facilitator by challenging them to become more creative in providing activities for people who have a wide range of interests and abilities.

Need for this study

Adventure courses are supposed to be accessible for all people because of the ADA. Many times people with disabilities are not included in adventure programs because of difficulty in using equipment, access to elements once they are on an adventure course is difficult or impossible, or lack of facilitator knowledge. What type of programming can be done to make a usable environment for persons with a disability? How can people with a disability be integrated into an adventure program to get the same benefits as a person with no disability? Solutions to these questions will help to progress the usability of adventure rope courses for all populations. The many opportunities for individuals with disabilities to enhance their social skills and physical capabilities through adventure education should not be delayed any longer (Havens, 1992).

Purpose of this study

The purpose of this critical analysis project is to determine the usability of specific low rope course elements and to determine adaptations that can be made to make each element more universal for populations with a disability.

Definitions

Accessibility

Accessibility refers to the elements in the constructed environment (site or building) that allow approach, entrance, and use of facility by persons with disabling conditions (Smith, Austin & Kennedy, 1996).

Challenge by choice

Challenge by choice allows participants to choose their own level of involvement, at their own pace, as determined by themselves (Havens, 1992).

Disability

According to the Americans with Disability Act (ADA) a disability is (a) a physical or mental impairment that substantially limits one or more of an individual's life activities; (b) a record of such impairment; and (c) being regarded as having such an impairment (Smith, Austin & Kennedy, 1996).

Initiative

An initiative is a group of problem solving activities presented to a group whose task it is to utilize all of the group members in completing, or attempting completion, of a specified task (Webster, 1989).

Low elements

A low element is an unbelayed activity that focuses the challenge on individual's achievement, while the other members of the group act as spotters (Webster, 1989).

Non-ambulatory

A person who is non-ambulatory does not have the use of their legs for movement. They generally use a wheelchair.

Ropes course

A challenge ropes course is a series of individual and group physical challenges that require a combination of teamwork skills and individual commitment (Webster, 1989).

Usability

Usability refers to a constructed environment providing the opportunity for maximum use by those with sensory or mobile impairments (Smith, Austin & Kennedy, 1996).

SECTION II

CURRENT INFORMATION

In order to accomplish the purpose of this paper two aspects will be explored. One will be an examination of current literature on rope course instruction. There are good books available on ropes course instruction. Each book has a good explanation of the purpose and benefits of participation in a quality adventure program. These books also discuss the importance of having quality leadership in an adventure experience. The attitude and effort of the instructor can mean the difference between a positive or negative adventure experience. An instructor needs to be adaptable so that they can modify activities or elements so that various groups of people can achieve success. Being adaptable is extremely important when instructing a group of persons having a disability. The instructor needs to be able to select and sequence activities that will be appropriate for a particular group. The common themes in the literature is that for a ropes course experience to be positive for all ability levels of participants the instructor needs to be flexible and keep an open mind about what each person may accomplish.

The second aspect will be to examine ten elements of a low ropes course to determine if each element is usable for a person with a disability. Factors to consider will be 1) is the element usable with no adaptation, and 2) what adaptation can be made without changing the experience of that particular element. The final product of this

critical analysis project will contain ten low elements and adaptations that make each one user friendly for a person with a disability. The ten elements that will be examined are:

1. Inclined log
2. Swinging log
3. Spiders web
4. Triangle traverse
5. Wild woozy
6. T.P. (low log)
7. The wall
8. Fidget ladder
9. Trust fall
10. Nitro crossing

Inclined Log

The inclined log is a log or beam that is leaned on or fastened to a stationary support. The objective of this element is to walk up the log.

For your typical population this element is very easy. For someone with a disability who lacks balance control or who may be non-ambulatory this could be an impossible task. This element is also very easy to make adaptations with. Adaptations for students who are ambulatory may include being able to adjust the height of the log. By decreasing the grade of the log, students with balance problems may achieve the objective of getting to the top with much less difficulty. Another option is to add another log so that the student can walk with one foot on each log. Some students may need to

have a spotter to assist them walking up the beam. Having beams with different widths available is also an easy adaptation. Remember the goal of this element is to get to the top. Some students may need to slide, push, pull, or crawl to get to the top. Each student should be encouraged to accomplish this objective however they can. A person who uses a wheelchair may also attempt this element by using two beams and spotters to make sure that the wheels of the chair stay on the beams. Adjustable logs will make this element more usable for disabled populations.

The inclined log is a good element to start with for a group that may have some physical disabilities because the adaptations can be made quickly and each person will reach some level of success to start their adventure experience.

Swinging Log

The swinging log is a 25-30 foot log or beam suspended 8-10 inches above the ground by support cables connected to each end of the element. The objective of the swinging log is to walk as far as possible across the log without stepping off.

The swinging log will be a difficult element for a person with a handicapping condition to successfully cross on his or her own. Spotters may be used to help assist a person across the element. A person may choose to slide, push, pull or crawl themselves across the log. A beam can be used in place of a log to make the element easier to move across. The width of the beam can be adjusted to change the difficulty of the task. Another adjustment that might be made to make this element easier is to make it stable at one end. This will allow it to only swing from one end. Two beams can be used to make this element usable for persons who use wheelchairs.

The swinging log on its own is very difficult for a person with a disability. With the addition of spotters and a few modifications the swinging log becomes usable for nearly all populations.

Spider's Web

The spider's web is a customized web made out of fabric to look like a spider has spun a web between two trees or poles. The objective of this element is to get team members through the web without touching any of the web.

The spider's web needs few if any adaptations to the element. Adaptations to the rules and objectives will allow this element to be conquered by a person with a disability. The first adaptation that can be made is to allow a student with a disability to use an opening more that one time. Allow the person with a disability to touch the web a certain number of times before having to start again. Adjusting the web so that easier openings to access are low to the ground so that a person with a movement impairment can still step through the web.

The spider's web is extremely usable as it is for a person with a disability. Considerations to making this element more usable are making rule change to allow each person with a disability to successfully pass through the web.

Wild Woozy

The wild woozy is two cables that gradually widen out strung between supports about two feet above the ground. The objective for this element is for two people to traverse as far as they can on the cables using only each other for support.

This element on its own is probably not very usable for populations with varying disabilities because if there is a difference in strength, size, and ability between the two participants success traversing the cables will be very difficult. Persons with physical disabilities generally have some balance problems and lack physical strength. The wild woozy requires balance and strength because participants cannot stand-alone and succeed at this element. A person with a disability may not be able to physically attempt the wild woozy but they can be an active part of an integrated group. The person with a disability may help in the problem solving for the team or they may become spotters for participants trying to cross the cables. One adjustment that may be made to help some students with disabilities would be to replace the cables with wood planks to account for balance problems.

The wild woozy is not appropriate for most populations with disabilities because of the balance and strength requirements needed to traverse the cables successfully. However, persons with disabilities can benefit by being part of a team that has success traveling across the cables because of the team effort that is required to encourage someone across the cables. Although a person with a disability may not be able to physically participate in this element they can still gain benefits by being an active part of a successful team.

Triangle Tension Traverse

This element is a cable strung taut in the shape of a triangle with a stationary length of rope in the middle. The objective of this element is for a participant to make it around the triangle using only the stationary piece of rope to aid in balance.

This element is going to require balance and strength for any person to successfully traverse the triangle. Persons with disabilities generally lack balance and or strength making this a very difficult element. A person with a disability may have some success here if they were to have two spotters, one in front and one in back to physically support and help encourage him/her around the element. Replacing the cables with wood planks may also help those students that have balance difficulty. Even with spotters a person will experience difficulty trying to maintain their balance while holding onto only the stationary rope.

This element is going to be difficult for a person who has a disability. They may still gain something from being involved in the experience but chances are that this element will be too difficult.

T.P. (low log)

This element is a 25–30 foot telephone pole laid on its side about two feet off of the ground. The objective of the T.P. shuffle is to have 10-20 students standing on the horizontal pole change ends without touching the ground.

This element can be used as it is. Adaptations to the rules will allow participants with disabilities to be successful. Allowing spotters to assist a person with a disability will aid those who have a balance problem. Give a person with a disability the option to touch the ground a certain number of times without a penalty. Allow the participants with balance difficulties the opportunity to use a staff to aid in balance. Another option may be to provide movable platforms for participants to step on to aid in balance. The adaptations will vary depending on what each individual person's disability may be.

The wall

This element is an 8–14 foot wall. The objective of this element is to get from one side of the wall to the other by physically moving over it.

The wall is a fixed object at a fixed height so adapting the element is not possible in most cases. If it is possible, try to have three walls all at different heights so that participants can have challenge by choice. Depending on a person's disability, making adaptations to the rules may allow this element to become more usable. Upper body strength and coordination are necessary to get over the wall even with spotters. One option to helping a person with a disability over is to allow more than four people on the wall for one person to cross. Another option, if it is available, is to have a pulley system to help students who may lack the strength to get over the wall on their own. For persons who are physically not able to attempt the wall because of their disabilities, they may aid in the problem solving to be an active part of the group and still experience the success of being part of the overall process.

Fidget Ladder

This element is a ladder that is suspended between two supports and is able to rotate over. The objective of this element is to move from the ground onto the ladder and then, using only your hands and feet for support, move the length of the ladder and touch the far support.

The fidget ladder itself does not need any adjustments. Adaptations to the rules will make this element a cinch for almost all persons if they can physically move themselves. The first rule adaptation might be to allow the person knee contact to aid in

balance. The second adaptation might be allowing occasional full body contact for resting. The third adaptation is to allow full body contact by sliding across the ladder. The fourth adaptation and easiest way to cross the ladder might be to allow a person full body contact while spotters hold the ladder so that it will not spin while the participant is trying to cross.

Trust Fall

This element is a four-foot high platform from which a person falls backwards into the arms of a group of spotters. The objective of this element is to develop a sense of trust, a sense of community within a group, and to deal with effects of perceived risk.

The trust fall is an element that needs few if any adaptations. The height of the platform may be adjusted to make this element seem less risky for participants. This is another element almost anyone willing to try can do successfully. Whether a participant is ambulatory or not he/she can fall off of the platform even if in a wheelchair. The spotters must be strong enough to handle the situation. Safety should be a major concern involved in this element. This is not an element that should be done as a first adventure experience for any group. Trust must be developed first between participants because of the perceived risk of falling and landing on the ground. When done in the proper sequence the trust fall will bring a group closer together. Having a close group where participants trust each other will allow the group to achieve success on elements with which they may have had difficulties in the past.

Nitro Crossing

This element is a swinging rope suspended between two points. The objective of this element is to swing a group of people from one safe area to another without touching the middle area of the obstacle.

This element itself does not need any adaptations. Upper body strength is needed to hold onto the rope while swinging. A participant who lacks upper body strength may need to aid in the problem solving and or spotting of other participants in order to be part of the group. Varying the width of the crossing can increase or decrease the difficulty of this element. Using a sling-type chair will help those participants who lack strength get across the designated area. Adapting the rules will give a greater chance for success to participants that have disabilities. Allowing one touch in the restricted area may be enough to help a person with a disabling condition.

Many low elements can be adjusted to make them usable for populations that have disabilities. If the element itself is not adjustable, adaptations to the rules may be made to give a person with a disadvantage the opportunity to reach a common goal with a similar experience on a rope course.

Many professional adventure leaders may not feel comfortable with persons who have disabilities. This can inhibit them from offering experiences that are integrated (Havens, 1992). Rope course instructors usually get assigned a group to work with and do not get to choose who is in their group. Instructors need to be prepared to make adaptations so that they can offer positive challenges to all participants. To lead a successful adventure experience for participants the instructor needs to examine the

group's balance and the sequencing of the elements so that all participants can have similar experiences on the elements.

An instructor might pair up a person who has no disability with a person who has a disability to try to get group balance. Group balance becomes more important as diversity within the group increases. Pairing up strengths and weaknesses will allow participants the ability to help each other through situations that they may not otherwise attempt.

Sequencing of the activities means selecting the correct activities at any given time for any given group. An instructor who knows that a group contains participants with disabilities needs to look at all the elements and activities that are available then build the curriculum from those activities. The instructor needs to determine which activities will or will not work with this group. Gaining as much prior knowledge as possible about a group will assist the instructor in handling group balance and sequencing of activities before problems may arise for a particular group.

To give a person with a disability a chance to experience a positive adventure challenge, the instructor needs to plan activities that allow each participant to be successful as a group member and as an individual. Having both able-bodied and persons with disabilities in a shared adventure group, will allow individuals with disabilities the chance to utilize appropriate aid in accomplishing tasks while giving the able-bodied students an opportunity to relate to a population that is quite often ignored (Rohnke, 1989).

SECTION III

CRITICAL ANALYSIS

Universality is an important notion within adventure activities and implies creating experiences that embrace individual differences from the standpoint of attitude, programming, and structure (Terry, 1995). Essentially, universality refers to creating recreational and educational programs that holistically include people with and without disabilities (Reader, 1996). The principle 'challenge by choice' (Rhonke, 1989) ensures that participants are working within their own limits. This principle also accepts differences and integrates them into the group as additional challenges for meeting specified goals. Inclusion is an extremely important concept. Because the ADA is making accessibility to all public places possible we need to extend this in education. We need to work towards inclusion in all classes and environments to break down barriers between individuals with and without disabilities so that we can coexist in society. The unique benefits from the ropes course experiences are well suited to a population that is often undermined by society's general lack of tolerance for individual differences (Reader, 1996).

The original ropes courses were designed and built to enhance physical capabilities (agility, balance, and coordination), whereas today's courses address problem-solving skills, as well as group dynamics issues (Rohnke, Tait & Wall, 1997). Because today's courses focus on group dynamics and problem solving skills rather than on agility, balance, coordination, and strength, many persons with disabilities are able to

participate to a greater degree on low elements. A person with a disability can always participate in solving a problem. Now, with the help of group spotting, a participant with a disability may also be able to physically meet the goal of a certain element. The purpose of this critical analysis project was to determine the usability of specific low ropes course elements and adaptations that can be made to make each element more universal for populations with a disability.

Too often, we alter the environment to compensate for a person's disability rather that recognizing their capabilities and adapting the environment to support and enhance those strengths (Havens, 1992). Each person within a group may have different strengths, it is important that the group focuses on each individual's strengths so that each person feels that he or she has contributed to the success of a particular experience. Rather than finding weakness in what individual members cannot do, the group finds strengths in their cooperation, trust, and ability to maximize each member's abilities (Sugarman, 1996). Although many of the low elements may be able to be slightly altered to assist individuals with disabilities, they may not need to be if their strengths are focused on rather than their weaknesses.

Facilitator/Instructor characteristics may be the single most important factor for persons with disabilities to achieve a positive adventure experience on a ropes course. The facilitator's function is to create a safe and supportive environment that encourages exploration, risk taking, and personal growth (Rohnke, Tait & Wall, 1997). An instructor needs to be technically proficient so that he or she can make the necessary adjustments, if possible, to an element so that an individual with a disability may reach that element's

goal. An instructor must be patient and not assist participants before the group or individual has exhausted all possibilities. An instructor must also be willing to learn and grow as a professional. Many times the best way to learn how to help a person with a disability is to simply ask him/her. If the instructor is knowledgeable and technically proficient, that person will be able to make minor adaptations to an element that may make a major difference in the success rate of persons with handicapping conditions in rope course experiences. It is important for an instructor to always be positive, focus on participants strengths, and be willing to adapt when necessary to help a participant reach some level of success in an adventure experience.

The underlying assumption of adventure, that you can do more than you think you can, continues to apply to students with disabilities, but the assumption requires special thought, and at times, special apparatus (Rohnke, 1989). Participants with disabilities may need additional spotting to make low elements usable for them; the use of special apparatus is probably not necessary on the low elements. If adaptations can be made on a low element, they need to be made so that they still challenge the person with a disability.

The popularity of ropes courses is increasing with all populations. Because of these current trends in their usage and, since measurable results are produced, it is safe to say that they will soon be adapted for virtually every type of population (Rohnke, Tait, Wall, 1997). The Association of Challenge Course Technology (A.C.C.T.) investigates current practices within the ropes course industry. The A.C.C.T. has adopted a set of standards for the construction of ropes courses. With the help of these standards, rope

courses will be built with the capability to be adapted to give persons with a disability an experience similar to that of a person with no disability.

The two factors that will make a low ropes course more usable are instructor characteristics and the sequencing of activities. Instructors must be willing to work with populations with special needs. They need to be willing to learn about the limitations that specific disabilities may exhibit. The need to provide encouragement and challenge participants to try just a little more than they think that they can is part of an instructor's responsibility. Once the instructor knows the extent of a participant's disability, he/she can then sequence activities that will bring a positive and challenging adventure experience for this person. A good instructor who is organized and does his/her homework on participants before an adventure experience begins can eliminate the possibility of sequencing elements that are not usable for populations with disabilities.

Many of today's ropes courses are usable just the way they are. The ropes course is inherently versatile, and experiences are actually designed to meet the varying degree of need in various populations (Reader, 1996). To what extent each element is usable is up to the individual participant and the ability of the instructor to make adequate adaptations for a successful adventure experience.

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