A study examined the impact of a Wilderness Education Association Wilderness Stewardship course on students' leadership skills development. Twelve students at Western Kentucky University completed the Leadership Skills Inventory (LSI) before and after a 2-week Wilderness Stewardship course that included ten days of field experience in camping, hiking, and canoeing. Each student assumed the leadership of the group for one day, including planning and communicating the day's activities, teaching lessons from course texts in the field, and helping to debrief and process the experiences of the day. Students were required to keep journals, with specific mention of decisions made during the day, and to complete peer and self-assessments. All nine LSI categories showed increased ratings from pretest to posttest, but the changes were significant in only four categories: fundamentals of leadership, speech communication skills, character-building skills, and group dynamics skills. (SV)
Introduction

This study was conducted during a Wilderness Education Association (WEA) Wilderness Stewardship (WS) Course taught at Western Kentucky University (WKU) located in Bowling Green, Kentucky. The purpose of the study was to determine what change, if any, the course had on leadership skill development as perceived by the student involved in the course.

History of the WEA at WKU

In May of 1992, WKU began offering the WEA Wilderness Stewardship Course to students. The course emphasized experiential leadership and helped to fill the need for an experiential education component within the Recreation curriculum. At that time, the WS Course was 14 days long and incorporated field experience at Mammoth Cave National Park.

Today's WSP at WKU

Today, the WS Course is a total of 15 days. It is broken down into 1 initial meeting a month prior to the course. This meeting takes place in April and students are instructed on fees for the course, a basic outline of the course and assigned lessons that they are to teach. In May, students are to meet in the classroom for 1 day to go over format of the course and requirements. On this day there is also a gear check and food distribution. Following the classroom day there are 2 shakedown days. Students practice paddling skills and camp set up in the Barren River Area. Students then spend 10 days of field experience hiking and canoeing in the Big South Fork National Recreation Area. Upon return from the field portion of the course there is 1 debriefing day. Students complete evaluations and clean gear on this day.

Although the length of the course has changed the objectives remain the same. These objectives for this course are as follows:

The student will be able to:

--use and enjoy the wilderness with minimum impact.
--apply safe practices for groups in outdoor recreation activities.
--begin to recognize leadership abilities and limitations.
--demonstrate a basic standard of outdoor user knowledge and experience based on the WEA curriculum.
--receive WEA Wilderness Stewardship certificate for course completion.
Requirements

The WS course is considered a leadership training experience. Because of this, students are assigned a day to be the leader of the day. As leader they are encouraged to do the following:

1. Take charge and let others know they are the leader.
2. Lead by example.
3. Expect nothing but be prepared for anything, plan ahead and be ready.
4. Communicate; let others know what the plans are.
5. Practice mature decision-making skills.
6. Help debrief and process the day’s activities.

Students are also required to teach lessons during the field portion of the course. Lessons are on a variety of topics. Many of the lesson plans for the lesson topics are found in The Backcountry Classroom by Drury and Bonney.

Other texts used for the WEA course are Wilderness Stewardship Field Manual – by Dr. Steve Spencer. This manual provides students with course information, leaders of the day materials, risk management information and information of the Big South Fork. The NOLS Outdoor Cookery – by Claudia Pearson is also used during this course.

Evaluation

Evaluation is a major component in the WS course. Students are required to journal daily with specific mention of decisions made during the day. Students also complete a peer review with the Student Observation Tool. The Self-Ability Assessment is also used. On this assessment students state their abilities and limitations as relating to leadership.

Purpose of the Study

The purpose of this study was to examine the change, if any, students had in their leadership skills after participating in the WEA WS course.

The skills measured in this study are the “soft” skills of leadership. Included in the “soft” skills of leadership are interpersonal skills, organizational skills, instructional skills, and decision-making skills. Though soft leadership skills are more difficult to assess they are nevertheless essential to safe effective instruction in the outdoors. The hard skills of leadership are solid, tangible, measurable skills. Hard skills are easier to teach, assess and are often technical in nature.

The information from this study may be beneficial to outdoor educators, those who train outdoor educators and those who develop curricula for the purpose of training future instructors in outdoor education. Assessing student perceptions of self-efficacy as an outdoor leader is one way to monitor the effectiveness of a course focused on the development of leadership skills.

Leadership Skills Inventory

The Leadership Skills Inventory (LSI) was used in this study as a pretest and posttest tool to measure perceived ability within areas of leadership. The LSI was
established in 1985 by Frances Karnes and Jane Chauvin and was developed to assess leadership skills in individuals ages 9 to adult and to determine areas needing additional development and those that are already developed. The inventory is an self-paced, self-administrated, self-scored inventory of personal leadership skills, with broad-based utility. The LSI is a 125-item Likert-type measure that takes approximately 20-40 minutes to complete. Reliability and validity of the inventory have been established. Individuals are required to respond to questions that have been separated into 9 leadership categories. Strengths and weaknesses of the individual are measured by their answers. The categories are:

**Fundamentals of Leadership** – skills which include defining terms and identifying various leadership styles.

**Written Communication Skills** – skills which include outlining, writing a speech, and doing research reports.

**Speech Communication Skills** – skills which include defining one’s viewpoint on issues, delivering a speech, and offering constructive criticism.

**Character-Building Skills** – skills which include understanding the importance of free choice, identifying things that one values and prizes, and affirming one’s choices.

**Decision-Making Skills** – skills which include gathering facts, analyzing consequences of certain decisions, and reaching logical conclusions.

**Group Dynamic Skills** – skills which include serving as a group facilitator effecting compromise, and achieving consensus.

**Problem-Solving Skills** – skills which include identifying problems, revising strategies for problem-solving, and accepting unpopular decisions.

**Personal Development Skills** – skills which include self-confidence, sensitivity, and personal grooming.

**Planning Skills** – skills which include setting goals, developing timelines, and formulating evaluation strategies.

The LSI was used in this study based on the relevancy of the leadership sub-categories to the WEA course.

**Methods and Procedures**

Participants involved in the WEA Wilderness Stewardship course were required to sign an informed consent the first classroom day in May. At that time students were given the LSI. No names were used on the inventory, only sex, age, race, and previous leadership classes. Each test had a number in the corner. Pretests and posttests were
labeled with coinciding numbers. The informed consent was attached to the participant’s pretest to ensure each student received the posttest with the same number. Upon return from the field portion of the course students were given the posttest LSI on the final debriefing day of the course. Students were pre- and post-tested without interruption from outside sources.

**Findings**

Results were analyzed using a paired-samples t-test. Mean difference from pre to posttest scores for all LSI categories showed higher posttest than pretest ratings, but not all proved statistically significant. A significant (p<0.05) difference was found between pre and posttest in the areas of Fundamentals of Leadership, Speech Communication Skills, Character-Building Skills, and Group Dynamic Skills.

**Discussion**

Why were significant differences found in only these four categories of leadership (Fundamentals of Leadership, Speech Communication Skills, Character-building Skills and Group Dynamic Skills), when all LSI categories were addressed on the WEA course? Possibly the length of the course played a factor. A longer course may have caused a greater change in more areas. Students would have further opportunities to practice the skills they know, and work on those they have not developed.

Specific instruction on the fundamentals of leadership may have lead to a change in this category. A lesson plan from the Backcountry Classroom was taught which focused on the background of leadership theory. The course focused on participants leading the group and evaluation of that leadership.

Change in speech communication skills may have taken place as a result of daily opportunities to speak in from of the group. The opportunity to practice the skill may have affected participant’s perception of their ability.

Character-building skills and group dynamic skills were not specifically listed in the course outline. However the nature of the course encouraged growth in these areas. Extended time with others in a semi wilderness setting fosters development of group dynamic skills and character-building skills.

The category of decision-making skills did not show significant change despite the daily journal opportunities to reflect on decisions made during the day. A factor involved is the high self-rating on the pretest in this category. Participants still had opportunities to practice this skill on the course.

Perhaps low scores on decision-making and problem-solving are a function of limited opportunities for student practice in these aspects of leadership. As an example, because of the current availability of trail signs, navigation opportunities in the Big South Fork Wilderness Area are no longer necessary. Consequently students have reduced opportunities to solve problems and make decisions related to the use of map and compass.

Having 12 students in the WSP course allows for only 1 Leader of the Day opportunity. A smaller class size would allow for more opportunities and possibly greater perceptions of personal efficacy where certain dimensions of leadership are concerned.
Conclusions

The WEA Stewardship Course provides an opportunity for students to begin recognizing their leadership abilities and limitations. Within the limits of this study, the findings suggest that students perceived a change in their abilities in four areas. These areas included: (1) fundamentals of leadership, (2) speech communication skills, (3) character-building skills, and (4) group dynamic skills.

Recommendations

Evaluation of the results suggests the need to place more emphasis on those leadership skills that did not show significant change. Assigned teaching opportunities could be modified to address areas of leadership that need improving for the group.

Additionally, further study is recommended. Such study needs to take place with the WKU WSP, with a larger sample size, at different institutions and with different instructors to determine the role course content and course instructor play. Furthermore, it is recommended that future studies exam student perceptions of their leadership efficacy in learning experiences where a greater number of leadership opportunities are available to students.

The results of this study provide the beginning framework for future evaluation of WEA courses. It is important to constantly evaluate courses to determine if future outdoor leaders are learning the skills necessary to be successful leaders.
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