

THE EFFECTIVENESS OF A FOUR-HOUR CHALLENGE COURSE ON LEADERSHIP EFFICACY AND WORK EFFICACY

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Abstract.—This study examines the effects of participation in a 4-hour challenge course on leadership efficacy and work efficacy of college students. The findings of this research indicate that both leadership and work efficacy increased significantly after participation in a challenge course and that increased levels of the participants' self-efficacy remained 6 weeks after the completion of the challenge course.

1.0 LITERATURE REVIEW

Adventure-based programs have become increasingly popular for groups that want a different and unique way of achieving specific goals. Some of the goals of these programs include building confidence, becoming more assertive, developing problem-solving skills, increasing motivation, and improving leadership skills (Long et al., 2003). Personal benefits include an increase of work and leadership efficacy, enhancing personal growth, particularly in the areas of increasing one's sense of self-competence and risk taking (Paxton, 1998; Snow, 1992).

Although participation in these activities is growing, research in this area remains limited. Of the research

found with respect to challenge courses, most researchers have explored longer programs (e.g., 3 days or more) (Glass, 1999; Hart & Silka, 1994; Wu, 2004) rather than the shorter, half-day program. In addition, research needs to address how the benefits of these programs have an impact on an individual's view of themselves through their leadership efficacy and work efficacy.

1.1 Self-Efficacy

Bandura (1994) developed the self-efficacy theory in 1977. Self-efficacy was defined as "people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives" (Bandura, 1994, p. 81). The theory states that an individual's self-efficacy level is based on information derived from internal or external sources. The self-efficacy level then influences future mastery attempts through choice, effort, and persistence (Paxton, 1998). These perceptions of self-efficacy levels are central to the motivational process.

According to Bandura (1994), there are four ways to influence or develop perceptions of self-efficacy. The first is through enactive mastery experiences. These are experiences related to an individual's past successful performances. A second influence is vicarious experiences, which are observations of someone similar to themselves being successful. A third way of creating and strengthening self-beliefs of efficacy is through verbal persuasive messages, which are defined as positive support from people the individual feels are credible in that area. The final influence is physiological and affective states, which are the last sources of information where performance is optimal. This also includes an increase in awareness and ability to respond in certain situations.

Leadership efficacy is defined as an individual's belief in his or her abilities to take on the role of a

leader within a group or setting and to be successful in that role. Self-efficacy has been found to assist in understanding the leadership development process because competency, efficacy, and judgment were considered important prerequisites for leadership (Cain & McAvoy, 1990; Green, 1990). Eden (1992) argued that leadership was the mechanism through which managers raised performance expectations and enhanced self-efficacy which, in turn, increased performance. An increase of performance can also be related to work efficacy, which is defined as people's beliefs about their capabilities to work. "Work efficacy partly determines how well one develops the basic cognitive, self-management, and interpersonal skills on which occupational careers are founded. Beliefs concerning one's capabilities are influential determinants of the vocational life paths that are chosen," (Bandura, 1994, p.79). When faced with a difficult challenge related to work, individuals with a greater sense of self-efficacy exerted greater effort to master that challenge (Bandura, 1986; Schunk, 1984).

1.2 Challenge courses

Challenge courses are components of outdoor programs that use the natural environment to create new experiences which challenge participants – emotionally, physically, and socially (Ewert, 1989). Many people envision a challenge course as a type of "obstacle course" (Gillis & Gass, 1993) that is designed to foster team-building, community development, and personal growth through a progression of activities on the course. These courses can consist of group challenges, role-playing and imagery techniques, and usually have low ropes and/or high ropes versions.

1.3 Transference

One of the most important elements in challenge courses is emphasizing the transference of key elements of the activity to daily lives. In this study, transference is defined as taking what one learned about himself or herself in a challenge course and applying it to other aspects of one's life. The three types of transference are specific transfer, nonspecific transfer, and metaphoric transfer (Paxton, 1998).

Transference was included as part of the model that Kolb created in 1984, the Experiential Learning Cycle. This cycle starts with a concrete experience (such as participation in a challenge course). Observation and reflection follow, which is where the debriefing of the activity takes place. After that, the formation of abstract concept and generalization occurs, where the individual starts to connect the experience to other experiences they might have. The next step is for the individual to actually use the information gained from the concrete experience and by transferring it to a separate, new situation. The Experiential Learning Cycle (Kolb, 1984) can explain how one learns during a challenge course. Transferring the experience itself and the benefits gained from the experience into a participant's daily life can be an important and lasting outcome of challenge courses.

2.0 METHODS

This research utilized a quasi-experimental research design and was presented as a pretest/post-test format. A followup test was given 6 weeks after the course. It was a quantitative study and convenience sampling was used.

2.1 Sample

The target population was Old Dominion University students who had registered for the challenge course through Recreational Sports Department's Outdoor Adventure Program in the fall semester of 2006. Data were collected from course participants on three separate dates for each participant: a pretest (before the course was completed), a post-test (immediately after course completion) and a followup 6 weeks later. Participation was voluntary and all responses were anonymous.

The survey instrument used to conduct this research was retrieved from Paxton's (1998) dissertation, entitled "Self-efficacy and outdoor adventure programs: A quantitative and qualitative analysis." This instrument has been reviewed for content validity by a panel of experts at the University of Minnesota and at Old Dominion University. The Cronbach's alpha reliability for the survey instrument used in this study is .90.

All challenge course activities were kept consistent for all three data collection dates. The activities were the same, presented in a similar manner each time, and debriefed by using the same questions and same debriefing technique. To remain consistent, one facilitator was used for all three dates. In addition, an impartial observer was present to ensure that the facilitator was using similar debriefing techniques at each of the three separate data collection dates. The facilitator also was given an outline of activities included in the challenge course.

The challenge course activities included the Noodle Walk, TP Shuffle, Ping Pong Ball Pass, Whale Watch, Mohawk Walk, Spider Web, and Group Lap Sit. The activities were geared toward building one's work efficacy by allowing the team to work together to solve a problem and complete a common task. Leadership efficacy was encouraged in the tasks because a leader was needed to step forward and direct the group in what needed to be done.

After the data were collected, *t*-tests were used to analyze and screen it and outliers were removed. Leadership efficacy and work efficacy were analyzed separately. Descriptive statistics were examined and a point-biserial correlation coefficient was calculated.

3.0 RESULTS

3.1 Descriptive Statistics

Forty-three surveys were collected from three separate data collection event dates. Of the 43 respondents surveyed, 72 percent were female. Respondents ranged in age from 18 to 36 years, with an average age of 21 years. About 65 percent of participants had no prior experience with any type of challenge course. Of those that had completed a challenge course previously, 23 percent participated in a half-day course (4 hours), 10 percent participated in a whole day course (8 hours), and one person had participated in a challenge course that was more than 1 day. About 44 percent of participants reported that they were not currently in a leadership role in their lives, while 56 percent were involved as leaders of a student, religious, or outside

group. Three of the participants were working full time in addition to attending the university, 62 percent were working part time, and 31 percent were not employed at the time of the data collection. All participants were going to college; 16 percent of the participants were sophomores, 42 percent were juniors, 35 percent were seniors, and 7 percent were graduate students.

3.2 Statistical Procedures

Data were analyzed using the independent and paired samples *t*-test. All statistical analyses were evaluated at $p < .05$ (see Table 1). The data were entered, checked for inaccurate entries, and screened for univariate outliers (none found) using SPSS 14.0. All participants completed pretest and post-test surveys. All tests conducted were two-tailed tests.

4.0 DISCUSSION AND CONCLUSIONS

Overall, most participants experienced an increase in leadership efficacy and work efficacy from participation in the 4-hour challenge course. The independent variable (challenge course), when applied to the quasi-experimental group, was associated with a significant increase in leadership and work efficacy at the .001 level. These findings compliment what many other researchers have already found: self-efficacy levels do increase after participation in a challenge course (Ewert, 1989; Paxton, 1998). However, past studies were involved challenge courses with a longer time frame. This study indicates that not only can a 4-hour course significantly increase self efficacy, but also the effects last for at least 6 weeks after.

Leadership efficacy scores significantly increased from pretest to post-test and leadership efficacy scores had a larger increase than work efficacy scores. In challenge courses, activities are geared to stimulate group cohesion and growth. In many of the activities, a leader is needed to step forward to assist the group in reaching a common goal. Having a variety of challenge activities causes different people in the group to act as leaders. Individuals who took on leadership roles during the course had noticeable increases in their leadership efficacy scores.

Table 1.—Paired samples t-test for leadership and work efficacy from pretest to post-test and post-test to follow-up test

Variable	Group	Mean	Standard deviation	Sample size	<i>p</i>
Leadership efficacy	Pretest	.73	.13	43	.002*
	Post-test	.81	.16	43	
	Difference (pre-post)	-.07	.14		
	Follow-up test	.78	.14	20	
	Difference (post-follow-up)	-.01	.05		
Work efficacy	Pretest	.81	.14	43	.001*
	Post-test	.86	.11	43	
	Difference (pre-post)	-.04	.07		
	Follow-up test	.86	.11	20	
	Difference (post-follow-up)	-.01	.05		

**p* < .05

Work efficacy scores also significantly increased from pretest to post-test. While leadership efficacy had a larger increase from pretest to post-test, the proportion of variance accounted for shows that work efficacy had a larger effect on the participants than leadership efficacy. Upon closer examination of the statistics, this could be attributed to the leadership efficacy standard deviation being larger (.16) than the work efficacy standard deviation (.11). The results also show that the levels of work efficacy from post-test to followup test were maintained 6 weeks after the event.

4.1 Limitations

This study was limited to registered students at Old Dominion University in the fall semester of 2006 and because of the small sample size is not generalizable to either the whole university population or the larger general population. The findings also do not generalize to a larger population of challenge course participants since this study focused on a 4-hour challenge course and many other challenge courses are of significantly longer length and complexity. In addition, the inclusion of a comparison group in the analysis could improve confidence that the gain in the dependent variable was due to the independent variable. Future research should consider the use of a comparison group. The short time span between the pretest and the post-test may also have influenced participants' responses.

4.2 Implications

The finding that a 4-hour challenge course can significantly increase the participants' levels of leadership and work efficacy and that these gains are retained for at least 6 weeks has many implications for managers and participants in challenge courses, adventure programs, and other forms of outdoor recreation as a whole. Current challenge course practitioners and managers can use this information to emphasize the benefits of a shorter program to potential future participants who may think that only a longer course has positive benefits. The data can be used as a marketing tool to get new course participants, and can be used by those interested in constructing a challenge course. In addition, the specific information on leadership efficacy and work efficacy benefits can be used to target prospective participants who are looking for these benefits from another type of training program.

This study also contributes to the knowledge base on outdoor recreation and education. Many outdoor recreation programs are being encouraged to offer "benefits-based programming," where the program coordinator needs to make a connection between participation in an activity and the benefits gained from that participation. As outdoor education and adventure programs become more popular, more research on these topics will be needed.

4.3 Recommendations

Based on the findings of this study, the following recommendations for future research are suggested. More studies on 4-hour challenge courses are needed to validate the findings about self-efficacy reported here and to determine other benefits of participation. Since this research focused on college students, it would be beneficial to determine if self-efficacy benefits also are found in other populations of participants like working adults, older people, teenagers, or people who belong to special interest clubs. In addition, a comparison group and/or triangulation could be used to better support the findings about efficacy gains.

5.0 CITATIONS

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