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USING OUTDOOR EXPERIENTIAL TRAINING TO STIMULATE EMOTIONAL INTELLIGENCE COMPETENCIES AND GROUP LEADERSHIP SKILLS AMONG UNDERGRADUATE STUDENTS

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This study reports on the use of outdoor experiential training as a methodology for accelerating the group citizenship and leadership behaviors of undergraduate students. Using the emotional intelligence foundational skills of interpersonal competence and intrapersonal insight as a frame of reference for skill acquisition and measurement, it outlines the results of a self-assessment instrument and a small group problem solving exercise. Students reported a significant increase in group citizenship skills and the problem solving exercise indicated behavioral manifestations of these skills. The importance of incorporating the lessons of outdoor experiential training into an engaged classroom environment, methodological limitations, and opportunities for further research are discussed.

Introduction

Small group exercises and team projects have long been a part of organizational behavior and leadership courses. Increasingly, these experiential, group-oriented approaches are moving into other, less behaviorally focused, courses such as accounting and statistics (Cunningham, 1999; Harrington & Schibik, 2004). One reason for this shift toward group learning is that it offers a more personal and interactive approach to large classes (Michaelsen, Watson, Cragin, & Fink, 1982). Holman (2000) advocates the experiential pedagogies inherent in small group work both for reasons of effectiveness and because they simulate the way real-world managers learn and interact. With the increasing reliance on teams the business world (Strozniak, 2000), it stands to reason that instructors would expand the use of these approaches in the classroom.

Instructors attempting to utilize group and team approaches face two major challenges. The first is the need for methodologies that will accelerate the group development process to fit the time and administrative constraints of a typical academic course. The second involves imparting group citizenship skills that carry over to groups and teams outside the classroom and are conceptually relevant and accessible to the undergraduate student. This study deals with the first of the two challenges by reporting on the use of outdoor experiential training (OET) as a methodology for accelerating group development. It suggests using the interpersonal competencies and intrapersonal insights that serve as a foundation for the evolving field of emotional intelligence as a frame of reference for skill acquisition and measurement in conjunction with the second instructional challenge. Self-assessments and small-group task performance are used to evaluate the

impact of these two approaches on one group of undergraduate students.

Foundational Skills

Stevens and Champion (1994) developed a model of interpersonal and self-management knowledge, skills, and abilities (KSAs) that are required for effective teamwork. Although there are questions in regard to their measurement and transferability (Miller, 2001), these KSAs share the two common roots of interpersonal skills and intrapersonal insight with the emerging body of knowledge concerning emotional intelligence (Boyatzis, 2004; Douglas, Frink & Ferris, 2004) and are linked in several studies to increased individual and group performance (Druskat & Wolff, 2001; Goleman, Boyatzis, & McKee, 2002; Tischler, Biberman & McKeage, 2002; Welch, 2003). It is relevant to the focus of this study that the acquisition of these skills can be incorporated into the undergraduate curriculum (Ashkanasy & Dasborough, 2003; Brown, 2003; Clark, Callister & Wallace, 2003).

Outdoor Experiential Training

Kolb (1981) provides a conceptual frame of reference for the dynamics of OET with his model of experiencing, observing, reflecting, generalizing, and testing. Within this active, cyclical learning strategy, many key OET outcome goals involve the enhancement of the foundational skills of interpersonal competence and intrapersonal insight (McEvoy, 1997; Wagner, Baldwin & Roland, 1991). Although many reports concerning the effectiveness of OET in regard to developing these skills have been positive, there have also been concerns in regard to measuring their financial impact (Williams, Graham & Baker, 2003), and the

impact of variables such as culture, stress, and skilled facilitation (Hamilton & Cooper, 2001; Hwang, 2003; Wagner & Roland, 1992). In this regard, it is worth noting that the students in this study were enrolled in an institution and in major concentrations that emphasized experiential learning. Attempts were made to reduce stress by pre-OET visits and classroom discussion by the facilitators. The two facilitators were very skilled and experienced in OET as a methodology and had extensive experience in applying it to undergraduate students.

METHOD

The OET Event

During the second week of a semester class, 23 students (15 male and 8 female juniors and seniors attending either an advanced organizational behavior or a leadership class) participated in a four and a half hour outdoor experiential training event. Prior to the outdoor event, the group experienced a sample activity and discussed the process of group development using Tuckman's (1965) stage model as a frame of reference. Although there are theorists who argue that the process of group development is more complex (Gersick, 1988; McGrath, 1991), Tuckman's model seems to capture many activities associated with group development and there is consistency in the literature in regard to such hierarchical stage models (Miller, 2003). Another reason for the use of Tuckman's model with undergraduate students is that it is clear and provides a tangible context for both the OET experience and classroom discussions.

There were eight outdoor elements of the experience. Each was intended to contribute to the promotion of trust, communication, goal setting, self-efficacy, and teamwork. Examples were a blind trust walk, a wire traverse sometimes called Multi-Vine, and Nitro, an experience focusing on multiple priorities and team problem solving.

Self-assessment Instrument

In order to measure any team citizenship skills that may have resulted from the OET experience, a self-assessment instrument was developed. The first ten items measured five aspects of team KSAs (Stevens & Champion, 1994: 505) and the next eight items measured four dimensions of emotional intelligence (Goleman et. al., 2002: 39). This instrument was administered to two groups one week after the OET event. The first were the 23 undergraduate students who experienced the OET. They were instructed to reflect

and compare their self-assessment on the eighteen items before and after attending the outdoor training event. The second group was made up of 17 Junior and senior students, 10 females and 7 males, from the same classes who, because of scheduling conflicts, did not attend the OET event. This group was instructed to self-assess their abilities on the 18 questions and completed the questionnaire at the same time as the first group.

Group Problem-Solving Exercise

In addition to the questionnaire-based self-assessments, in an attempt to assess actual behavioral differences resulting from OET, a small group problem solving exercise was used. The exercise, "Energy International: A Problem-Solving Multiple Role-Play," (Pfeiffer & Jones, 1972: 25), requires five person groups to collaborate in solving a problem. Four groups were formed, two participated in the OET, and two did not. Each group had two observers. All observers attended the OET and were briefed and provided a checklist of behaviors to observe. They were instructed to rate the observed group process from 1 (ineffective) to 5 (highly effective). They were also instructed to develop a two or three word comment that summed up their observations. The group exercise took place two weeks after the OET.

FINDINGS

Self-Assessment Questionnaire

Table 1 below depicts the actual questions ranked by the number of reported post-experience item increases, the mean increases for each item, and the KSA or EI factor intended to be measured. In the top two items, communication and collaborative problem solving KSAs 18 of 23 participants reported an increase. In the lowest item, goal setting and performance management KSAs four participants reported increases.

T-test for correlated samples was completed on the pre ($M = 3.41$, $SD = 0.328$) and post ($M = 3.97$, $SD = 0.3099$) self-assessments of the 23 students who participated in the OET. The results were significant ($t = -9.85$, $p < .0001$, $df = 22$, one-tailed). T-test for independent samples compared the pre-OET self-assessments of the 23 participating students with the self-assessments ($M = 3.52$, $SD = 0.328$) of the 17 students who did not attend OET. The results were not significant ($t = -1.04$, $p > 0.15$, $df = 38$, one -tailed). There were no significant differences between the self-assessment means of males and females in these groups.

Table 1: Questionnaire Items Arranged by the Number of Post-Experience Increases (23 Participants, 18 Items)

Item	Measures	Number of increased responses	Mean Pre-exp.	Mean Post-Exp.	Mean Increase
"My ability to facilitate group communications "	Communication KSAs	18	2.95	3.95	.10
"My ability to help the group work together to diagnose and solve problems "	Collaborative problem-solving KSAs	18	3.30	4.21	.91
"My ability to help assign tasks for group members "	Planning and task coordination KSAs	13	3.04	3.65	.61
"My flexibility in helping the group reacts to changing situations "	Self-Management: flexibility EI factor	12	3.26	4.0	.74
"My ability to help find win-win solutions to conflict among group members "	Conflict resolution KSAs	12	3.33	3.95	.62
"My ability to help the group coordinate work between members "	Planning and coordination KSAs	11	3.43	4.09	.66
"My ability to understand my own strengths and limits while working with the group "	Self-Awareness: accurate self-assessment EI factor	11	3.78	4.3	.61
"My ability to foster teamwork among the group "	Relationship Management: teamwork and collaboration EI factor	11	3.51	4.13	.61
"My ability to read the group's undercurrents and politics "	Social Awareness: organizational awareness EI factor	11	3.08	3.65	.57
"My ability to help foster participative decisions "	Collaborative problem-solving KSAs	11	3.33	3.86	.56
"My ability to sense others emotions and show interest in their perspective and concerns "	Social Awareness: empathy EI factor	10	3.65	4.08	.44
"My ability to manage my own disruptive emotions while working with the group "	Self-Management: emotional self-control EI factor	9	3.69	4.21	.52
"My ability to help resolve disagreements among group members "	Conflict resolution KSAs	9	3.52	3.91	.39
"My ability to influence the group "	Relationship Management: influence EI factor	8	3.43	4.04	.61
"My ability to help assign tasks for group members "	Planning and task coordination KSAs	8	3.17	3.57	.30
"My ability to understand my own emotions in the group environment "	Self-Awareness: emotional self-awareness EI factor	7	3.95	4.30	.35
"My ability to read non-verbal communications among group members "	Communication KSAs	6	3.47	3.60	.13
"My ability to help the group set goals."	Goal setting and performance management KSAs	4	3.17	3.56	.39

Note: Rating scale anchors were 1 (Low Ability), 2 (Slight Ability), 3 (Moderate Ability), 4, (Good Ability), and 5, (High Ability).

Group Problem-Solving Exercise

Both groups who participated in the OET arrived at the correct answer. Group I finished the task in the shortest time with positive comments concerning their group process. Group II finished ten minutes later and

also received positive process evaluations. Group II, one of the two groups that did not participate in the OET finished in the second shortest time but did not arrive at the correct answer. Group IV took the longest time, arrived at the correct answer, and were perceived arguing a great deal. These results are outlined in table 2.

Table 2: Energy International Group Problem Solving Results Arranged by Completion Time

Group	Participated In Outdoor Experience?	Time	Correct Answer?	Process Score	Representative Comment
I. (3males, 2 females)	Yes	38 minutes	Yes	4	"Smooth process "
II. (3 males, 2 females)	No	40 minutes	No	2	"Went to Abilene "
III. (2males, 3 females)	Yes	48 minutes	Yes	4	"Very Polite "
IV. (3 males, 2 females)	No	1 hour, 5 minutes	Yes	2	"Argued a lot "

DISCUSSION

Although the results of the self-evaluation questionnaire showed a significant difference between the pre and post OET evaluations of participants, caution must be used when generalizing the results beyond the context of this study. The design was intended to

promote participant reflection, comparison, and discussion, as opposed to a more experimental approach. Likewise, although the group that did not attend the OET served as a control group and there was not a significant difference between their self-evaluation and that of the pre-OET assessments group who experienced the outdoor training, this was a serendipitous design element

caused by scheduling conflicts. Future research using the self-assessment items developed for this study with more intentional design and administration of pre and post control and treatment groups would be a useful follow-on.

Of interest in reviewing the questionnaire results are those items where more than half of the participants (12 or more) reported an increase in their team citizenship abilities. This is reflected in the first five items on table1: the ability to facilitate group communication, collaborative problem solving, planning and task coordination, flexibility in response to changing situations, and conflict resolution skills. These were fundamental objectives of the eight elements in the OET. Also of interest is the distribution of the ten items based on team KSAs and the eight items based on emotional intelligence competencies. As can be seen, they are distributed throughout the rankings and both are reported as having increased as a result of OET. There is also evidence of participant discrimination within category measures. For example, the highest mean increase (1.0) was for the communication KSA category, "My ability to facilitate group communications." The lowest mean increase (.13) was also for the communication KSA category, "My ability to read non-verbal communications among group members."

The results of the group problem solving exercise are also difficult to generalize. They do, however, provide a subjective evaluation of group citizenship behaviors. As can be seen in Table 2, the top group in terms of completion time and group process (group I) participated in OET. The only group to come up with the wrong answer (group II) did not attend OET, and the group that took the longest time and had a low process evaluation (group IV) also did not attend. These outcomes also provided a very useful frame of reference for subsequent classroom discussion and analysis.

The two primary objectives of this study were an assessment of the impact of outdoor experiential training on the process of group development, and framing group citizenship skills within the interpersonal and intrapersonal foundations of emotional intelligence. Much of the progress was facilitated by the active engagement of the students involved in the study. Once the questionnaires were completed and the small group problem solving exercise concluded, the objectives, process, and results became fodder for classroom discussion. For many students this approach appeared to provide a concrete and accessible context to the abstractions of group development and emotional intelligence.

CONCLUSION AND SUMMARY

Although, because of design and methodological considerations, caution is necessary in generalizing the results, the following can be concluded:

1. The use of outdoor experiential training (OET) did help accelerate the process of group development among the undergraduate students in this study.
2. The group leadership and citizenship foundational skills of interpersonal competence and intrapersonal insight share common roots with traditional research on group knowledge skills and abilities and the emerging field of emotional intelligence. These skills can form a conceptual bridge for both students and instructors and offer a frame of reference for future research.
3. The success in using OET to accelerate the process of group development was greatly enhanced by creating an open classroom environment. The research methodology, assumptions, competencies, and conceptual underpinnings were discussed and incorporated into a process of engaged learning.
4. Although the focus of this study was on undergraduate students, the approach and methodological orientation can be applied to other groups with short time frames and the need to accelerate the formation process. Examples include, project teams, task forces, and cross-functional teams.

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