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IMPACT OF ONE-DAY ADVENTURE-BASED EXPERIENTIAL LEARNING (AEL) PROGRAMME ON LIFE EFFECTIVENESS SKILLS OF ADULT LEARNERS

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ABSTRACT

Despite positive claims made by advocates of adventure-based experiential learning (AEL), sceptics could be concerned that such claims are overzealous. Due to the expansion of AEL programmes into management training in business schools and the corporate world, ongoing empirical investigations relating to the efficacy of AEL in the workplace is necessary. The aim of this study was to determine the developmental impact of a one-day AEL programme on the life effectiveness skills of adult learners in a business school. A one-day ropes course programme was offered to 140 adult learners from the business school. The Life Effectiveness Questionnaire, Version H (LEQ-H), served as measurement tool and it was administered as a pre- and post-test measurement. The overall post-test scores of the experimental group (n=140) were significantly higher (p=0.0001) than the post-test scores of the control group (n=126). The post-test scores of four dimensions differed significantly (p<0.05) from the post-test scores of the control group. The findings indicate the potential efficacy of an AEL course for the development of life effectiveness skills in adult learners. It demonstrates the necessity of ongoing research directed at principles underlying the application of particular methodologies and other programmatic factors to maximise efficacy.

Key words: Adventure; Experiential learning; Life effectiveness; Adult learners.

INTRODUCTION

Adventure programmes have become a popular vehicle for developing life skills (Moote & Wodarski, 1997). Gillis and Speelman (2008), who found that challenge courses in particular are effective tools for influencing a variety of educational and psychological constructs, confirm this. These courses are applied, for example, in bereavement counselling (Swank, 2013), for enhancing university students' individual psychological and emotional skills (Cooper *et al*., 2009), and for developing resiliency in youth (Conley *et al*., 2007; Bloemhoff, 2012). Nearly two decades ago, Witt and Crompton (1996) identified adventure-based experiential learning (AEL) programmes as a globally recognised vehicle to develop life effectiveness in adolescents and adults. Neill *et al*. (1997:5) define life effectiveness as the "psychological and behavioural aspects of human functioning which determine a person's effectiveness or proficiency in any given situation". Sibthorp and Arthur-Banning (2004) reason that life effectiveness can be defined as the extent to which an individual believes that he or she can be effective in various tasks of life and is similar to 'life skills'. In the current

study life, effectiveness will be regarded as the belief of an individual that they possess the necessary psychological and behavioural proficiencies for effective human functioning in any given situation.

AEL is based on a belief that changes will occur when people are taken out of their comfort zones into a state of disequilibrium. To return to a state of equilibrium, clients must take actions (Priest & Gass, 2005) that result in learning through their experience. In contrast to traditional learning regimes, experiential learning (EL), being one of the earliest forms of education in the Western world (Breunig, 2008), is judged by Beard and Wilson (2006) as the strongest and most enduring of learning theories. Notable educational psychologists such as John Dewey, Carl Rogers and David Kolb have provided the groundwork of learning theories that focus on learning through experience (NIU, n.d.).

EL (also referred to as learning through action, learning by doing, learning through experience, and learning through discovery and exploration), is a client-focused, supported approach to individual, group or organisational development, which engages the young or adult learner, using the elements of action, reflection and transfer of learning (Beard & Wilson, 2006). Facilitators purposefully engage with clients to enhance the quality of the learning experiences, to assist participants in finding direction and sources for functional change, and to create changes that are lasting and transferable (Cilliers, 2000; Priest & Gass, 2005). The basic theory behind EL is active participation, which may lead to knowledge being acquired that is different from what it would be in the case of passive reception (Meyer, 2003).

The concept of impelling clients into adventurous situations as part of EL is not a recent development (Hunt, 1990), and it is escalating in contemporary societies. In AEL, which can be defined as an umbrella term for experiential programmes that utilise adventure activities to achieve programme outcomes (Weilbach, 2007), adventure forms the basis of the experiential milieu. Adventure requires an element of real or perceived risk for the participant (Beard & Wilson, 2006). This risk (the potential to lose something of value), can be physical, mental, social or financial (Priest & Gass, 2005).

Burke and Collins (1998) indicated an expansion in the use of the outdoors as a vehicle for managerial learning. This can be attributed to the many adventure opportunities that exist in the outdoors for actively engaging individuals in physical, emotional and intellectual experiences (Neill *et al*., 1997). Rhodes and Martin (2014) provide evidence of adventure education courses enhancing intra- and interpersonal skills in the workplace. It is thus, no surprise that Gangemi (2005) reports that business schools are indeed increasingly making use of the power of experiential learning in outdoor environments to bring students into direct contact with real, challenging teamwork and leadership situations.

From an anecdotal perspective, there is a body of evidence in the literature that suggests the positive impact of AEL interventions (Carioppe & Adamson, 1988; Bank, 1994; Burke & Collins, 1998; Neill, 2003; Gardner & Flood, 2006; Weilbach *et al*., 2010). More recently, Wu *et al*. (2013) found that participation in ropes course experiences yield intra- and interpersonal benefits to various target groups. Despite the positive claims that have been made by advocates of AEL, sceptics could be concerned that such claims were overzealous

(Neill *et al*., 2003). Scientific demonstration of the effectiveness of AEL must be based on ongoing empirical investigations. Unfortunately, there is still a lack of well-organised, definitive and widespread knowledge about the efficacy of the diverse types of interventions in AEL. Gangemi (2005) indicated that the necessity of measuring developmental changes is emphasised by the expansion of AEL programmes into management training and the proliferation of AEL organisations worldwide.

PURPOSE OF THE STUDY

There is a need for ongoing empirical investigations relating to the efficacy of AEL and the expansion of AEL programmes into management training in business schools and the corporate world. Thus, the aim of this study was to determine the developmental impact of a one-day AEL programme (ropes course) on the life effectiveness skills of adult learners in a business school who are employed full-time in diverse corporate settings.

METHODOLOGY

A quasi-experimental pre- / post-test design was applied in this study. An experimental group and a control group served as subjects. All groups completed the same questionnaire as a pre- and again as a post-test.

Instrument

Table 1. **DIMENSIONS OF LIFE EFFECTIVENESS**

Dimensions	Definition
Achievement motivation:	The degree that an individual is driven to accomplish excellence.
Active initiative:	The degree that an individual will take charge or initiate an action in a new setting.
Emotional control:	The degree an individual is able to remain in control while perceiving to be involved in an emotionally stressful environment.
Intellectual flexibility:	The extent to which an individual is able to modify his/her pattern of thinking based on new/changing information being provided to them.
Self-confidence:	The belief of an individual in his/her abilities and how these abilities would contribute to his/her success.
Social competence:	One's ability to be confident and have the capacity to interact effectively socially.
Task leadership:	The degree to which an individual believes they can organise a group effectively given the task as the primary interest.
Time management:	The ability of an individual to make the best use of his/her time.

A critical challenge for researchers is to establish clear assessments of the relative efficacy of AEL programmes. The Life Effectiveness Questionnaire - Version H (LEQ-H), developed by

Neill *et al*. (1997) was employed to measure the life effectiveness skills of the subjects. This 24-item self-reported questionnaire use an 8-point Likert scale. Neill *et al*. (1997) indicated a Cronbach's alpha coefficient of 0.75-0.93 for the Life Effectiveness Questionnaire (H-format). 8 dimensions of life effectiveness identified by Neill *et al*. (2003) constituted the dependent variables for this study. Neill and co-authors posit that life effectiveness can be further explained using these 8 dimensions (3 items per dimension) as illustrated in Table 1.

The more effective an individual performs in the 8 dimensions, the more likely that individual is to accomplish personal achievements (Sibthorp, 2003). The experimental group received the pre-test in a lecture room directly before the intervention (ropes course). The post-test was administered in the same classroom, directly after completion of the ropes course. The control group completed the post-test 8 hours after the pre-test during normal lecture hours. The researcher distributed the questionnaires.

Participants

The sample population of this study was comprised of adult learners, at least 23 years of age with a permanent work appointment, who were enrolled for the Bachelor in Management Leadership (BML) at the Business School of the University of the Free State, South Africa. The minimum age and a permanent appointment are prerequisites for enrolment on the BML course. This qualification is based on experiential learning. The programme is aimed at part-time students and the recommended duration of study is 4 years. The objective of the BML is to deliver a new generation of formally qualified and innovative managerial leaders equipped to excel in and add value not only to today's corporate and business environment but also to the public sector (UFS, n.d.). After the necessary consent was obtained from the Programme authorities and the Ethics Committee of the Faculty of Humanities, all the students who enrolled for the BML programme between 2011 and 2014 were recruited to participate in this research project. Respondents in their first year of study were randomly assigned to a control (CG) and an experimental group (EG). The experimental group consisted of 140 respondents and the control group of 126 respondents.

Ethical clearance

An ethical clearance application was submitted to the Ethics Committee of the Faculty of the Humanities, University of the Free State. Clearance was granted and the following clearance number was allocated to the research project: UFS-HUM-2013-007.

Experimental treatment

A growing number of private and public adventure programmes are utilising artificial environments such as ropes courses to conduct adventure activities and experiences offering developmental opportunities to participants. These programmes or interventions are not generic. Programmes or interventions vary regarding content and format directed at desired outcomes and the key to increasing transfer-of-learning lies either in the design of appropriate learning activities or in the teaching methodology (Gass, 2008). The traditional sequencing of a programme as describe by Rohnke (1989) was followed in the current research project. This one-day ropes course programme included icebreakers, 'deinhibitisers', trust/spotting, initiative challenges and low and high ropes course elements. The elements require individual

participants to perform tasks while receiving emotional support from the remainder of the group. Group sizes varied between 15 and 20 participants per intervention. It was a first-time experience for all the participants. The same programme was presented to all the respondents at the same venue. The author, who has 20 years of experience in ropes course instruction, acted as the head instructor and facilitator.

Statistical analysis

Data were analysed using procedure MIXED of the SAS software system (SAS, 2009). The overall score of the LEQ questionnaire was calculated as the average of the 8 domain scores. Both the overall scores and the individual domain scores of each questionnaire were statistically analysed as follows: The post-scores of subjects in the experimental and control groups were compared using analysis of covariance (ANCOVA) fitting the factor group (experimental / control) and the corresponding pre-score as covariate. From this ANCOVA model, estimates and 95% confidence intervals for the "experimental – control" difference in mean post-scores were obtained, as well as p-values associated with the null-hypothesis of no difference between groups in post-scores.

RESULTS

The results of the ANCOVA are reported in Table 2.

Table 2. **COMPARISON OF EXPERIMENTAL AND CONTROL GROUPS ON VARIABLES OF LEQ QUESTIONNAIRE**

	Group		**Diff.: Experimental – Control**		
Dependent variables	CG	EG	Estimate	95% CI	p-Value
Overall	6.50	6.70	0.19	0.10 - 0.29	0.0001
Time management	5.84	6.11	0.27	0.11 - 0.43	0.0012
Social competence	6.15	6.40	0.26	0.08 - 0.43	0.0048
Achievement motivation	7.04	7.06	0.02	-0.10 - 0.14	0.7426
Intellectual flexibility	6.64	6.83	0.19	0.04 - 0.35	0.0153
Task leadership	6.59	6.70	0.11	-0.03 - 0.26	0.1235
Emotional control	6.27	6.47	0.20	0.02 - 0.39	0.0276
Active initiative	6.51	6.66	0.15	-0.00 - 0.31	0.0525
Self-confidence	7.07	7.16	0.09	-0.07 - 0.25	0.2535

Estimate and 95% Confidence Interval (CI) for difference between means "Experimental – Control" from ANCOVA of post-test scores with pre-test score as covariate.

The overall post-test scores (that is, the average calculated from the 8 dimensions of life effectiveness), of the EG were significantly higher ($p=0.0001$) than the post-test scores of the CG. The post-test scores of 4 dimensions (achievement motivation, task leadership, active initiative and self-confidence), did not differ significantly from the post-test scores of the CG. The post-test scores of the remaining 4 dimensions (time management, social competence, intellectual flexibility and emotional control), were significantly higher ($p<0.05$) than the post-test scores of the CG.

DISCUSSION

The positive impact of a one-day AEL programme (ropes course) on the life effectiveness skills of full-time employed adult learners is clearly illustrated in the research results of the current study. The results validate some of the claims of AEL proponents, but also differ from similar research. Although the overall life effectiveness scores increased significantly ($p<0.05$), only four of the eight life dimension scores increased significantly. In contrast, Gardner and Flood (2006) reported significant differences ($p<0.05$) of the overall life effectiveness score, as well as in all eight LEQ domains after participation in a one-day challenge course by college students. An analysis of corporate programmes by Richards and Neill (1993) demonstrated similar outcomes. Louw *et al*. (2012) found beneficial short- and long-term changes in life effectiveness of high-school learners. Stoltz (1992), however, found no significant differences in the eight LEQ domains after participation in a one- to two-day professional development programme.

Despite the growing body of literature suggesting the likelihood of reporting positive personal outcomes from adventure programmes (Shellman & Ewert, 2010), it is clear that research results differ. The question can be posed why four of the eight LEQ-domains did not change significantly in this research and why results differ. This may be attributed to programmes that vary regarding content and format. Gass (2008) suggests that transfer-of-learning is determined by programme design (appropriate learning activities), or by the teaching methodology. Sibthorp (2003) confirms this view and maintains that programmatic factors are the best predictors of targeted outcomes. This necessitates research directed at the link between programme content and methodology on the one hand, and programme outcomes on the other (Ewert & McAvoy, 2000; Holman & McAvoy, 2005).

The identified need for research on the impact of programmatic factors on outcomes is emphasised by the increased demand that *bona fide* interventions deliver measurable, positive impacts on clients (Neill, 2003). Adherents of AEL believe that there is a good return of investment (ROI) in such programmes. Although Williams *et al*. (2003) suggested a model by which the ROI can be calculated, it remains difficult to demonstrate that AEL is a prudent investment and to calculate the return of investment. Scientific rigor must be improved (Ewert & Sibthorp, 2008), and the documentation of observed changes as suggested by Rhodes and Martin (2014), as opposed to the documentation of self-reported changes, should be investigated.

The possibility of various biases is acknowledged in these results. It must be noted that artificially high post-intervention scores remain a measurement concern, especially in adventure programmes. Sibthorp (2003) identified the Hawthorne effect (the tendency of some individuals to change their behaviour due to the attention they are receiving from researchers rather than the manipulation of independent variables), demand characteristic (a subtle cue that makes participants aware of what the experimenter expects to find or how participants are expected to behave), social-desirability response bias (Nederhof, 1985), and post-group euphoria (Marsh *et al*., 1986) as problems in the measurement of adventure programme outcomes.

PRACTICAL APPLICATION

AEL programmes have become a popular vehicle for developing life skills. Research suggests that the expansion of AEL programmes into management training in business schools and the corporate world will add value. This is also applicable for one-day courses that are less costly with regard to time and money spent.

CONCLUSIONS

Despite the methodological limitations noted, it can be argued that conclusions are tenable. The efficacy of AEL and more specifically a one-day ropes course for the development of life effectiveness skills in adult learners in a business school is evident. The results of this study and the bulk of similar research demonstrate the potential of AEL programmes to corporate development. The increased demand that bona fide interventions deliver measurable and positive impacts on clients necessitates ongoing research directed at principles underlying the application of particular methodologies and other programmatic factors to maximise efficacy. Without ongoing rigorous scientific research, AEL may become based on perceived benefits and anecdote.

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