

Adventure Based Learning Experience (ABLE): The Effect of Adventure Based Learning on social competence, group cohesion and emotional regulation

A research project studying the effect Adventure Based Learning, delivered within a social constructivist framework by an Outdoor Educational Centre, has on the social emotional learning of Key Stage 3 students attending a state comprehensive secondary school in England.

Abstract

Outdoor education teachers and adventure therapists have argued that a systematic approach to experiential learning through challenge can develop participants trust, social competence and group cohesion. Thereby, facilitating a real engagement with school and family. This study supports this claim, demonstrating significant gains in social competence for 22 Year 8 students participating in the three stage Adventure Based Learning Experience (ABLE) program as compared to the control groups.

Summary

All participants of the ABLE program reported positive change. One week after the end of the program semi-structured interviews were conducted with all participants who completed the ABLE program. 100% of the participants indicated that the experience was "highly successful." 86% of the students reported that their self-confidence had improved, 95% reported feeling more comfortable at school, 78% felt that they had increased in general maturity, and 64% believed that they had become more aware of the needs of others. 89% thought that these changes would last for their lifetimes. Furthermore, 88% say that they have an increased ability to regulate their emotions, and 75% say they have experienced more positive interactions with their family since participating in the program. Most interestingly, group cohesion and trust was positively related to the development of social competence during the ABLE program. More specifically, the evidenced social engagement from the least socially competent participant was an effective indicator of growth in trust and social competence. The observed acceptance of this participant into the group as a trustworthy member allowed the entire group to build their understanding of differences and their acceptance of those differences in the construction and development of group cohesion. This highlights the importance of relationship building and the effect group processes have on individual growth and development as related to trust and social competence. Furthermore, as all learning occurs in the social environment (Vygotsky, 1926/1977), perhaps all educators should be more aware of the importance of group cohesion, trust and social competence within educational settings.

Therefore, by providing children with the opportunities to participate in an outdoor education program designed specifically to build trust, group cohesion and social competence within a learning environment that is both challenging and supportive, adventure programs can be recognized as a powerful tool to meet the Every Child Matters (2003) mandate.

Introduction

For the purpose of this research project an outdoor education program was developed for students (aged between 10-14) experiencing marginalisation and displaying signs of emotional difficulties in engaging fully with school and family life. Therefore, the project encompasses an evaluative assessment of the effective use of an Integrated Outdoor/Adventure Based Educational program delivered in a complimentary milieu of classroom, outdoor and 'wilderness' venues. The primary consideration is the enhancement of trust and social competence and the transference of that development from an outdoor based educational setting to the social interactions and academic engagement within the secondary school environment. There is considerable research that supports the knowledge that increased trust and social competence boosts social emotional learning and increases school engagement and academic achievement. However, little empirical evidence generated in England concerning the role that an integrated outdoor/adventure based educational program has on marginalized pupils, is available. Therefore, this project collected and analysed both quantitative and qualitative corpuses of data to produce the evidence necessary to ascertain the value of outdoor/adventure based educational programming in relationship to personal development and school based achievement.

The delivered strategy consists of a school based delivery of trust building activities, outdoor education based delivery of group dynamics and effective communication activities along with a confidence building wilderness trip. The pupils were assessed using standardized assessment tools before, during and after the program. Furthermore, teachers, parents and school administrators had the opportunity to participate in open interviews, thus providing valuable qualitative and quantitative information to be used in the findings.

Social competence

It generally is agreed that social competence is domain specific and developmental. Yet defining social

competence is not an easy task; no consensual definition exists. Definitions vary according to their usefulness to differing theories and approaches. Typically, definitions fall into two main categories: global, generalised definitions; and definitions which consider specific components and skills (competencies) which serve as indicators of social competence (Peterson & Leigh, 1990). Definitions also differ according to a focus on either internal processes and behaviours or external outcomes (Dodge & Murphy, 1984). Since the effectiveness of social behaviour can only be determined within the context of a particular social environment including communities, peer groups, families and cultures (Oppenheimer, 1988), it appears that both individual behaviours and social outcomes are important considerations in defining socially competent behaviour.

The following indicators can be considered components of social competence (Scott, 2006)

- ‡Effective communication in various social relationships
- ‡Social problem solving and decision making ability
- ‡Constructive resolution of conflicts
- ‡Effective use of basic social skills
- ‡Self control and self-monitoring of one's behaviour
- ‡Respect for individual differences
- ‡Ability to solicit and utilise social support
- ‡Sincere interest in the well-being of others
- ‡Empathy and perspective-taking ability
- ‡Maintaining an attachment to school
- ‡Ability to distinguish between positive and negative peer pressure

Socially competent adolescents have a sense of belonging, are valued, and are given opportunities to contribute to society (Gullotta, 1990), which to a large extent is made possible within the various social environments where adolescents live such as family, school, and community. The development of social competence is facilitated by strong social support, through supportive relationships and a supportive socio-cultural and physical environment; inhibitors of social competence include cultural and social barriers based upon factors such as race/ethnicity, gender, and socio-economic status (Bloom, 1990).

Social competence must first be operationally defined as a collection of specific behaviours and abilities before social competence promotion programs can be designed and implemented (Rathjen & Foreyt, 1980). Interventions intended to enhance social competence are often a combination of health promotion and problem prevention programs such as life skills training programs (e.g. Botvin, 1996; Danish, 1996) which attempt to reduce risk behaviours as well as promote healthy adjustment and development. It has been found that the most effective programs are multi-dimensional and multi-level such as the combination of skills-based approaches with environmentally-oriented approaches (Schinke, McAlister, Orlandi, & Botvin, 1990). The importance of addressing affective (e.g., stress management), cognitive (e.g., problem solving), and behavioural (e.g., social skills training) components of social competence in enhancement efforts has been suggested by many researchers (e.g., Caplan & Weissberg, 1988).

Weissberg, Barton, & Shriver (1996) cite outcome research for social competence promotion programs which show positive effects on adolescents' problem solving skills, social relations with peers, school adjustment, and reductions in high risk behaviours. They view social competence promotion in the school setting as a "highly promising and appropriate educational strategy for preventing high risk behaviour" (p. 287). It has been found that the most enduring outcomes are a result of real world application to promote the generalisation of skills, and consistency of intervention throughout the school years so children are allowed to build on previous learning. As with most intervention programs, the generalisation of what is learned is the greatest challenge. Learned skills and desired outcomes do not always match. The more comprehensive the intervention effort, the more likely that learned skills will be applied in various contexts and behavioural changes will be sustained over time.

Adventure Learning: constructing trust, group cohesion and social competence

The ABLE program was designed to focus on breaking down barriers, both physical and emotional, and overcoming school based marginalisation. In other words, to address the inhibitors to the development of social competence as previously cited. Thereby, allowing the participants to develop social competence within a trusting and supportive environment. The activities delivered are designed first to assess the level of social competence within the group and individuals and then to build from that baseline. This was then followed by activities focused specifically on overcoming barriers to peer collaboration and social interaction. Once trust was developed and barriers overcome the group was able to experience positive results through challenge.

Rationale

It was considered that investigating group development and social competence could provide valuable understanding of the learning processes associated with the Adventure Based Learning Experience (ABLE) Program. Therefore, in this study it was hypothesized that; (1) an adventure based learning experience program within a social constructivist approach would enhance participants social competence; (2) that growth in trust, group cohesion and social competence would be positively related to the outdoor educational learning environment, (3) that this learning through reflective dialogue would be generalisable to the home and school environment; and (4) social competence would enhance engagement at school and in the family.

Method

Participants

The control group consisted of 723 students in Key Stage 3 (YEARS 7 - 9) enrolled at an Essex, England state comprehensive secondary school. Of this control group 443 returned complete data. The group was comprised of 383 males and 340 females; with a mean age of 13 +/- 7 months.

In the experimental group, there were 24 Year 8 participants who participated in the adventure based learning experience program, 22 of whom returned complete data. There were 16 males and 6 females with a mean age of 13 +/- 5 months.

Instruments

To measure social competence within Self-concept, this study used the 150 item self report Multi-dimensional Self-Concept Scale (Braken, 1992).

Table 1; Multi Dimensional Self Concept Scale

Pre-programme delivery of MSCS	Control Group n=443			Experimental Group n=22			
		Raw Scores*	Standard Scores		Raw Scores*	Standard Scores	Deviation (Standard Score)
Social		82.91	110		72.52	95	15
Competence		79.14	107		69.3	90	17
Affect		79.73	107		69.34	93	14
Academic		80.81	110		70.90	96	14
Family		96.32	111		86.1	99	12
Physical		79.11	108		70.13	95	13
Total		498.02	111		438.83	94	17

*Raw scores rounded to the nearest whole number for Standard Score calculations

Table 2
Standard Score Standard Errors of Measurement and Confidence Intervals* for Six Scales and Total Scale

Scale	SEM	85%	90%	95%	99%
Social	4.74	7	8	9	12
Competence	5.40	8	9	11	14
Affect	3.97	6	7	8	10
Academic	4.50	6	7	9	12
Family	2.60	4	4	5	7
Physical	4.24	6	7	8	11
Total Scale	2.12	3	4	4	5

*Confidence intervals are rounded to the nearest whole number

Table 2: MSCS; Examiner's Manual (Bracken, 1992:26)

Table 3
Self-Concept Classifications Corresponding to Standard Score Ranges

Score Range	Classification
Above 135	Extremely Positive Self Concept
126-135	Very Positive Self Concept
116-125	Moderately Positive Self Concept
86-115	Average Self Concept
76-85	Moderately Negative Self Concept
66-75	Very Negative Self Concept
Below 66	Extremely Negative Self Concept

Table 3: MSCS; Examiner's Manual (Bracken, 1992:26)

Table 4
Scale Deviation from the Average Scale Score Required for Significance at the .05 and .01 Alpha

Scale	.05		.01	
	Actual	Rounded	Actual	Rounded
Social	11.27	11	13.44	13
Competence	12.59	13	15.01	15
Affect	9.78	10	11.67	12
Academic	10.80	11	12.88	13
Family	7.32	7	8.73	9
Physical	10.30	10	12.28	12

Table 4: MSCS; Examiner's Manual (Bracken, 1992:29)

Table 5
Comparison of pre-programme and post-programme MSCS outcomes for experimental group (n=22)

Pre-Programme delivery of MSCS				Post-programme delivery of MSCS			
		Raw Scores*	Standard Scores		Raw Scores*	Standard Scores	Deviation (Standard Score)
Social		72.52	95		83.42	111	16
Competence		69.31	90		81.94	111	21
Affect		69.34	93		78.73	106	13
Academic		70.90	96		76.15	105	9
Family		86.16	99		97.83	116	7
Physical		70.13	95		76.52	105	10
Total		438.90	94		494.59	110	16

*Raw scores rounded to the nearest whole number for Standard Score calculations

Self Concept was measured one week before the start of the Adventure Based Learning Experience program and one week after the end of the program. Furthermore, a qualitative corpus of data was collected and coded to develop an understanding of Trust and group cohesion. This was facilitated by recording and video taping all discussions and interviews. These were then coded and analyzed using the ATLAS.ti 5.0(2005) within the grounded theory approaches of Strauss and Corbin (1990).

Semi-structured interviews were conducted at the start, and throughout the programme, including one parent and child interview one month after the completion of the ABLE programme. These interviews were recorded and coded.

Observations were conducted throughout all aspects of the project; all notes and video tapes were coded for analysis.

Programme

The three month multi-component Adventure Based Learning Experience (ABLE) program was conducted in Essex, England. The ABLE program is based on the social constructivist theories of Lev Vygotsky(1926/1977) and the dialogue facilitation aspects of Bakhtin (Klages, 2001) within a Dewey(1933) conceptualization of reflective learning couched in Huhn's(1940) understandings of the relationship between personal growth and development experienced in the physical, emotional and social intensity of adventurous undertakings.

The programme is designed into three developmental stages. The first stage consisting of four 2 hour weekly sessions facilitated at the participating secondary school. Within these sessions a constructivist approach was taken to develop trust and build effective communication. Typical activities included trust games, group challenges and group initiatives followed by debriefings. The second stage involved a 5 day residential component at the Outdoor Education Centre. Activities in this stage entailed initiative tasks, cultural studies, obstacle course, cross-country hike, canoeing, high ropes course, wall climbing, all followed by feedback sessions and debriefings. The third stage consisted of a 3 ½ day wilderness trip to the Brecon Beacons of Wales. The wilderness phase incorporated a backpacking trip over rugged terrain where the participants were responsible for all meal preparation, pitching camp and meeting all other group needs. The trip concluded with a group discussion and debriefing.

Results

As can be seen in Table 5 above there was a statistically significant increase in overall Self Concept. The most significant increases being in the Social, Competence and Affect Sub-scales.

In addition, all participants reported positive results in relationship to building trust, group cohesion, and emotional regulation. One week after the end of the program semi-structured interviews were conducted with all participants who completed the

ABLE program. 100% of the participants indicated that the experience was "highly successful." 86% of the students reported that their self-confidence had improved, 78% felt that they had increased their ability to persevere through frustration, and 64% believed that they had become more aware of the needs of others. 89% thought that these changes would last for their lifetimes. Furthermore, 88% reported that they have an increased ability to regulate their emotions, 75% indicate that they have experienced positive gains in their family since participating in the program. Finally, 100% of the participants report that they have developed a deeper level of trust for the other group members.

Furthermore, positive change was reported by the Secondary School Staff and by Parents as related to school and home behaviour and engagement. As the qualitative evidence confirms the participants have developed a strong trust for one another and this trust has developed into a tight knit group who are committed to staying together as friends. This is strongly evidenced by a visit to the school one month after the end of the ABLE programme. The group has started their own 'Outers Club', whereby, they are organising their own out of school adventurous activities.

Parents have been overwhelmingly positive about the change brought about in their children in such a short space of time. One mother reports, that her son has become so helpful around the house and in the family that she "...just can not believe the change in him."

In addition, reports from teachers have been positive and evidence encouraging results from the ABLE programme. A senior teacher stated, "I have been teaching for nearly 30 years and I have never seen such positive results from any one programme over such a diverse group of students". Another, adds, "I have known the one student now for two years and I have never seen him smile once, now he is constantly smiling since the programme started."

Trust

One participant stated "I never knew I could trust so many people, and people would trust me, I just can't say how great I feel". Another goes on to add "I have realized that I can be who I am, not what everyone else wants me to be. I have learnt that I can really trust people who support me for who I am".

On the wilderness trip, the weather became very harsh and the wind was literally knocking the participants to the ground. What was of interest to note is how everyone pulled together and began to help each other down the mountain. No laughing,

no 'winding each other up', just working together. When we completed the trip they were asked about this; one boy stated that "...if something like that happened at school the weak kids would really be bullied and made fun of, but out there we knew we were in it together, we have learned through you that if we work together we can overcome anything".

Constraints

It is important to highlight the constraints of this research project. Therefore, it must be stated that the project occurred at only one secondary School in Essex, England and was facilitated by one Outdoor Education Centre. In addition, the ABLE program was only delivered to 22 Year 8 Students. Thus, a broader project consisting of a larger number of schools, outdoor centres and program participants would be necessary for the findings to be fully contributed to the ABLE programme. In addition, this project delivered a very specific Adventure Based Learning Experience designed specifically to meet the needs of the participants as ascertained by collecting base line data. Therefore, it may be erroneous to claim that all adventurous activities in and of themselves would evidence the same positive results or that all outdoor centres deliver the same level of programming.

Discussion

In response to growing concerns about children's social emotional intelligence and behaviour in and out of the classroom, recent years have seen a growing interest in providing a structured program for Personal Social and Health Education (PSHE), Citizenship and social emotional intelligence. As research shows powerful feelings and emotions can impair cognitive function, distort perceptions and subsequently affect behaviours. Children may be unable to deal with, or understand, the mix of complex feelings and emotions in the social world of school, family and the broader community at large. They may also experience difficulty in linking their actions with consequences (Thomasgard & Metz, 2004).

Therefore, anxiety within social settings may result in children being impulsive in their reaction to situations, which for some can lead to aggressive and disruptive anti-social behaviour. Thereby, resulting in the possibilities of increased delinquency, depression and disengagement with education and family (Salvador, 2003). Furthermore, children may use coping behaviours that are counter-productive to learning such as bullying, clowning and cheating (Brooks, 1994). These factors may lead to marginalisation and increased difficulties with integrating fully into school and

family life. Thus, impacting negatively on the attainment of personal satisfaction and self-actualisation. Therefore, this project was undertaken to ascertain to what effect, if any, does a structured outdoor educational program, focused on social emotional learning, have on participants. The project used both quantitative and qualitative methods to collect and code data in the desire to answer the research question openly and honestly. As highlighted by Winter's (1989) depiction of action research; 'Risking Disturbance' is one of the key tenets to understanding. Therefore, all participants in this project were informed that the answer was as open as the question. Furthermore, all participants were fully involved and consented to every aspect of the project.

It was evidence that the ABLE program was well received by the participants, their parents, teachers and school administrators. Over the course of the program participants engaged fully with the outdoor education teachers, developed their ability to engage more cooperative and pro-social behaviour, became progressively calmer and barriers to learning were overcome. Participants showed an increase in trust, effective communication and consideration for all members of the group. These observed and reported changes in the participants are important and may support future positive interactions in their families and school.

Hattie et al.'s (1997) meta-analysis of Outdoor Educational Research led to their statement, "It seems adventure programs have a major impact on the lives of participants, and this impact is lasting". Furthermore, according to Fox & Auramidis (2003) within outdoor education "Learning objectives are achieved alongside enjoyable and challenging activities which cannot be performed in conventional classroom settings" Moreover, Hattie et al. (1997) concluded that in their meta analysis it certainly appears that adventure programs affect the social skills of participants in desirable ways.

This U.K. study confirms the findings of previous American and Australian research into the learning processes inherent in outdoor educational programs constructed specifically for the development of pro-social skills and the development of social competence. Therefore, as posited by Elias et al. (1997) schools will be most successful when they promote children's academic, social and emotional learning in an integrated and systematic effort. Thus, as evidenced in this study and others, an integrated outdoor educational program can fill a critical role in improving children's academic performance, family relations, and social well-being. Researchers have concluded that pro-social

behaviour is linked with positive intellectual outcomes (Diperna & Elliot, 1999; Pasi, 2001 and Ben-Avie & Esign, 2003). Conversely, antisocial behaviour co-occurs with poor academic performance (Cobb, 1972; Wentzel, 1993 and Malecki & Elliot, 2002). This study has shown that a structured approach to building trust, effective communication, problem-solving skills, emotional regulation and social competence can have a powerful impact on participants. Along with the observed empowerment of participants, experiential outdoor education can promote accountability, which is a key component for maintaining lasting positive change in adolescents (Perkins & Zimmermann, 1995).

Conclusion

In conclusion, this study provides empirical support for the construction of trust, group cohesion and social competence through the implementation and delivery of outdoor education based adventure programming. As evidenced in the study social competence can be enhanced through challenge. Furthermore, challenges delivered in a controlled, systematic social constructivist approach can help children engage more fully in school and family. Thus, children given the opportunities to partake in an outdoor education program designed specifically to build trust, group cohesion and social competence within a learning environment that is both challenging and supportive can be recognized as a powerful tool to meet the Every Child Matters (2003) mandate.

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