

# **An evaluation of an Experiential Learning and Outdoor Education school program on the Life Effectiveness skills of middle school boys.**

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## **Abstract**

A private boys school in Melbourne focused on the challenging time of year nine to implement a program they hoped would enable the boys to develop life effectiveness skills in the areas of time management, social competence, achievement motivation, intellectual flexibility, task leadership, emotional control, active initiative and self confidence. The program involves a progression through a variety of curriculum areas including a number of Outdoor Education components and trips.

This study looked specifically at two major areas of the program. The first was an examination of the life effectiveness skills of the boys changed after participation in each aspect of the program; and secondly whether participation in the outdoor education program components had a more significant positive impact on life effectiveness skills compared to the other program areas. One hundred and four boys were tested over a ten-month period during which time they participated in a variety of programs. Boys had to complete at least one Outdoor Education trip, but no more than two.

Results showed the life effectiveness skills of the boys increased after each aspect of the program, with a significant difference found between the life effectiveness skills of the boys who participated in two Outdoor Education programs compared to only one.

## **Introduction**

This study evaluated the effectiveness of an Experiential Learning and Outdoor Education school program on the Life Effectiveness skills of middle school boys. The program is referred to as the Pre-Senior Life Effectiveness (PSLE) Program. The research aimed to investigate the impact the PSLE program, and its Outdoor Education component, has on the life effectiveness skills of the year nine boys.

### **Social, Emotional and Psychological Development associated with Adolescence**

At year nine level, students are generally between the ages of thirteen and fifteen years, which is considered part of their adolescent years. The radical physical developments during adolescence are also known to have a significant impact on an adolescent socially, emotionally and psychologically (Coleman & Hendry, 1999; Edelman & Mandle, 1998; Henderson, Champlin & Evashwick, 1998). This is marked by uncertainties over social role and identity, sexuality, work and personal relationships (Fosh, Phoenix & Pattman, 2002). The physical, social, emotional, psychological and role changes lead to the fluctuation of an adolescent's body image and thus has implications on sense of self. An Adolescent often tries to develop his identity by being independent and individual, yet still requires a sense of uniformity in how he appears to others around him. It is not surprising considering all the transitional effects allied with this period of adolescence that it has been associated as a time of self-consciousness, a negative modification of self-concept and has been referred to as a "crisis in contemporary forms of masculinity" (Fosh et al., 2002, pg. 1). Studies by Marsh,

Parker and Barnes (1985) and Richards (1999) have associated this stage with the lowest point of self-concept and an overwhelmingly obvious lowering in physical self-satisfaction.

### **Adolescence & School Performance**

Research has shown that boys' overall performance at school has deteriorated in the last decade, to the point where it is considered that boys are now being disadvantaged (Henderson & Barnett, 2001; Teese, Davies, Charlton & Polesel, 1995; Buckingham, 1999). The deterioration in boys' overall school performance has caused great concern in schools and in the wider community leading to a Parliamentary enquiry in 1994 and October 2002 into the education of boys. Increased pressure has been placed on schools since the 1990s (Neill, 1997) to educate the "whole" student, academically, physically, emotionally and psychologically.

Also causing concern are the low retention rates, with a 1999 study (Cortis & Newmarch, 2000) reporting that thirty-three point six percent of boys in Australia did not complete their schooling. A high percentage compared to the twenty-one point five percent of girls. Of those boys who do continue their education their average year twelve scores are lower than those of girls and fewer enrol in higher education (Cortis & Newmarch, 2000). Cortis and Newmarch (2000) also found that one of the main factors triggering early school leaving is low school achievement experienced in the early and middle years. Boys have also been found to have an increased risk of social exclusion as a result of their poor and deteriorating educational performance (Fosh et al., 2002). Taking this research into consideration, schools are looking for effective and innovative ways to help boys cope with these issues. Some schools are trying to lead the way in helping boys on an academic level and beyond, through a number of curriculum developments including the use of Experiential and Outdoor Education.

### **Outdoor Education and Adolescence Development**

In this study the term Outdoor Education reflects the use of the outdoors to promote and enable educational and behavioural developments and changes. It is considered as guided learning through meaningful experience (Davidson, 2001), "which impels participants into challenging and demanding situations requiring effort, determination, co-operation and self-reliance" (Hattie, Marsh, Neill & Richards, 1997, pg. 45). Outdoor Education is a holistic form of education that can assist in educating the person as a whole; academically, physically, emotionally, socially and psychologically (Gray & Perusco, 1993; Marsh & Richards, 1988; Davidson, 2001; Hattie et al., 1997). It provides opportunities to apply knowledge in real-life situations and enhances the understanding of the relationship between humans and the natural outdoor environment (Lugg, 1999).

Outdoor Education programs within the school curriculum are said to be of valuable assistance as they operate outside the limitations that govern traditional and formal teaching and learning in schools (Henderson & Barnett, 2001) by aiming to promote the development of the whole person as a social and individual being, in a balanced and integrated fashion (Gray & Perusco, 1993). This holistic approach challenges current forms of schooling which are considered to be competitively preparing their students for final exams, and placing vocational outcomes and tertiary entrance scores as paramount (Gray & Perusco, 1993; Lugg, 1999), rather than giving their students a total life experience to assist in the development of the person as a whole.

Substantial evidence over the years has shown a number of benefits of Outdoor Education programs for adolescents. Research has shown Outdoor Education programs:

- 1) Increase self-concept and self-concept domains such as independence, confidence, self-efficacy, and self understanding (Neill, 1994; Davidson, 2001; Hattie et al., 1997);
- 2) Enhance psychological well-being (Neill, 1994);
- 3) Increase ability to overcome challenges (Davidson, 2001);
- 4) Positively impact on leadership competencies (Hattie et al., 1997);
- 5) Enhance decision-making skills, general problem solving competencies, academic achievement and academic self-concept (Hattie et al., 1997; Marsh & Richards, 1988);
- 6) Increase personality dimensions such as assertiveness, emotional stability, achievement motivation, internal locus of control, and maturity and reductions in aggression and neurosis (Hattie et al., 1997; Davidson, 2001);
- 7) Improve mental strength (Davidson, 2001) and interpersonal dimensions such as social competence, co-operation and interpersonal communication skills (Hattie et al., 1997).

Davidson (2001) also found it to be potentially valuable as a holistic and life-long form of activity that enhances the capacity to enjoy and engage in life. Other authors (Hattie et al., 1997) concluded that such programs have a major impact on the lives of participants, which appear to have a lasting effect with the major benefits of adventure programs being reasonably consistent. Based on such substantial evidence and support (Gray, 1999; Davidson, 2001; Gray & Perusco, 1993), schools have been developing comprehensive Outdoor Education programs to address the issue of boys' education and adolescent development.

### **The Pre-Senior Life Effectiveness Program**

Recognising how important this stage is in a boy's life, a private boys school in Melbourne sought to introduce a stand-alone program that would assist and support boys to achieve positive self-concept, increased physical self-satisfaction, improved communication skills and other important life skills for year nine boys. The pre-senior Life Effectiveness (PSLE) program was developed to specifically meet the individual developmental needs of adolescents and enable the boys to respond positively to challenges which may further their academic, social, physical, emotional and spiritual development (Personal communication, 2003).

The PSLE program consists of two components, the "core" and the "option". These two components are all encompassing in the year nine curriculum, as they comprise of the academic and the out-of-school experiences. The core component is a challenging academic program consisting of approximately thirty hours during the school week in traditional key learning areas. The "Option" component consists of three weeks each term, which includes a nine to ten day out-of-school experience and the preparation and debriefing days associated to it. There are twenty-one different options that the participant can choose from, which are divided into one of the following groups: Outdoor Education (Expeditions) or Experiential learning (Special Co-curricular and Academic interests). All components are made up of a range of challenging activities and academic pursuits.

The Outdoor Education 'option' aims to specifically develop time management, social competence, task leadership, emotional control and self-confidence skills (Personal communication, 2003) and is supported by the literature, which shows consistent positive results for students undertaking Outdoor Education programs for these specific components (Neill, 1999; Davidson, 2001; Hattie, et al., 1997). Students are required to choose at least one but no more than two Outdoor Education options. To assist in the development of the

participants as a whole, the boys focus on a different theme each term, progressing from Self, Group and Community to New Horizons.

There is justified pressure on schools (Neill, 1997) for the research and evaluation of programs, because only by evaluating the effectiveness of such programs will schools be sure that their interventions are on target (Scott, Murry, Mertens & Dustin, 1996). This studies evaluation of the PSLE program will enable the school to assess the effectiveness of the program and determine whether it is achieving its outcomes.

## **Methodology**

In order to evaluate the outcomes of the PSLE program, the Life Effectiveness Questionnaire (LEQ) and a Social Validation Questionnaire (SVQ) were employed. The LEQ is a short, comprehensive, psychometrically sound and educationally meaningful instrument for measuring change or lack of it (Neill, 2000). Any change in the direction of the program's stated outcomes, provided face validity for the effectiveness of the program. The SVQ was used to enrich the results provided by the LEQ and give a broader insight into the participant responses. Other studies support the use of both a quantitative and qualitative measure for evaluation as they compliment one another and strengthen the research (Henderson, 1993; Amesberger, 1996; Hanna, 1992).

## **Participants**

Of the one hundred and sixty-nine (169) year nine students at the school, a sample of one hundred and four (104) participants was used. The age range of the participants was between thirteen to sixteen years ( $\bar{x} = 14$  years). The participants were from one of the three school campuses situated throughout the south eastern suburbs of Melbourne.

## **Instrumentation**

### **Life Effectiveness Questionnaire**

The Life Effectiveness Questionnaire version H (LEQ-H) was developed by Neill, Marsh and Richards (1997), for the purpose of measuring the changes associated with adventure or other experiential education intervention programs. The LEQ-H twenty-four (24) item eight (8) factor questionnaire is a self-report instrument that takes approximately ten minutes to complete.

The eight (8) factors measured, which are fundamental aspects of th PSLE program include:

- 1) Time management, which is one's ability to plan and make optimum use of time;
- 2) Social competence, defined as the ability of an individual to function effectively when interacting socially;
- 3) Achievement motivation, is motivation and putting effort into action to achieve excellence;
- 4) Intellectual flexibility involves one's aptitude to adapt thinking and accommodate new information from changing conditions and different perspectives;
- 5) Task leadership, characterizes ability to take on and perform in a leadership role effectively and productivity;
- 6) Emotional control is defined as the ability to deal with and control emotions when faced with difficult or potentially stressful situations;
- 7) Active initiative is an individual's ability to initiate actions and thoughts in new situations and lastly,

- 8) Self-confidence is confidence in ability and the success of actions (Neill et al., 1997).

The LEQ has been used as an evaluation tool in other studies (Neill & Flory, 2000a; Neill & Flory, 2000b), including the single largest research of its kind in adventure education (Neill, 1999).

#### Social Validation Questionnaire

The SVQ consisted of eight anonymous open-ended questions relating to the “option” component of each term. It was used to strengthen and compliment the results, by providing a deeper understanding into what the LEQ responses actually mean. The SVQ related the changes, or lack of, specifically to the program rather than an internal or external factor such as other personal or curriculum changes the participants may have experienced during the process of the study.

#### Procedure

Participants took part in the year nine PSLE program for the duration of their year nine schooling including three “option” components. Prior to the first “option” participants completed the LEQ, providing base line data. Immediately following the first, second and third “option” components the participants were again asked to complete the LEQ-H along with the SVQ. Similar procedures to the baseline testing were followed.

## Results

### Quantitative (Life Effectiveness Questionnaire)

#### Changes in Overall Life Effectiveness

A one-way repeated measures analysis of variance (ANOVA - for comparing means of more than two groups or levels) was conducted to determine whether differences exist in the overall Life Effectiveness across the test time (pre test and post tests). The results of this test showed a significant difference ( $p < .05$ ) in life effectiveness as a result of the program. The descriptive statistics for the participants overall Life Effectiveness are shown in Table 1 and Figure 1.

Table 1

Descriptive Statistics for Overall Life Effectiveness from Pre Test to Post Tests.

	Mean ( $\bar{x}$ )	Std. Deviation (SD)
Pre Test	18.03	2.82
Post Test 1	18.48	2.62
Post Test 2	18.75	2.96
Post Test 3	19.08	2.84

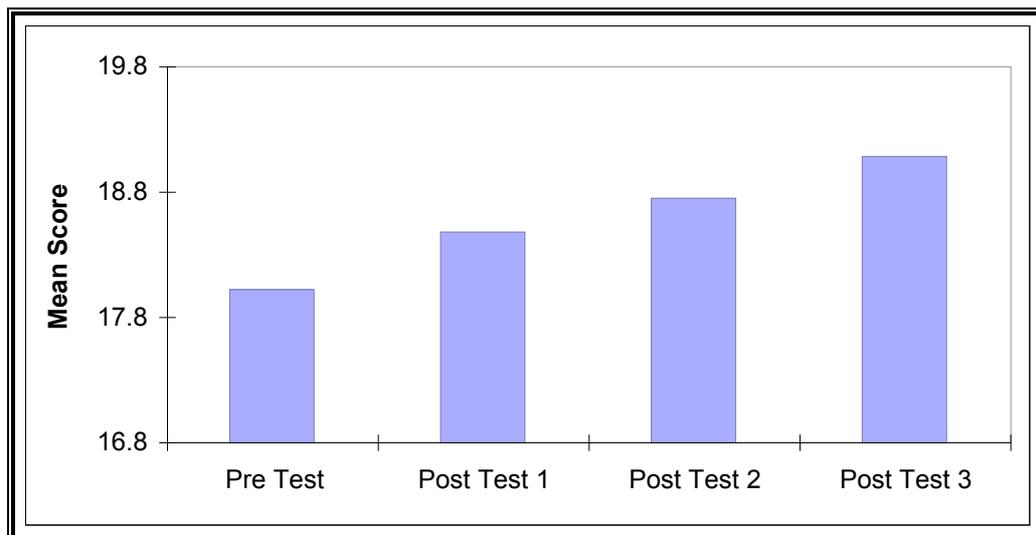


Figure 1 - Descriptive Statistics for Overall Life Effectiveness from Pre Test to Post Tests.

The participant's overall life effectiveness skills significantly increased ( $p < .05$ ) from the pre test to the post tests. Contrast testing showed significant differences ( $p < .05$ ) from (1) the pre tests to all three post tests, (2) the first post test to the third post test and (3) the second post test to the third post test. However there was no significant difference ( $p > .05$ ) between post test one and post test two.

### **Group Differences**

An ANOVA was performed to examine differences in overall Life Effectiveness between the Outdoor Education group and the Non Outdoor Education group. The results showed a significant difference ( $p < .05$ ) between the groups. Figure 2 shows the descriptive statistics of the groups at the various testing times. From this graph it can be seen that the Outdoor Education group obtained (approximately 5%) higher mean scores in overall Life Effectiveness compared to the Non Outdoor Education group at each testing time. However, the Non Outdoor Education group obtained a greater increase (approximately 6%) in overall Life Effectiveness from pre test to post test compared to the Outdoor Education group (approximately 4%).

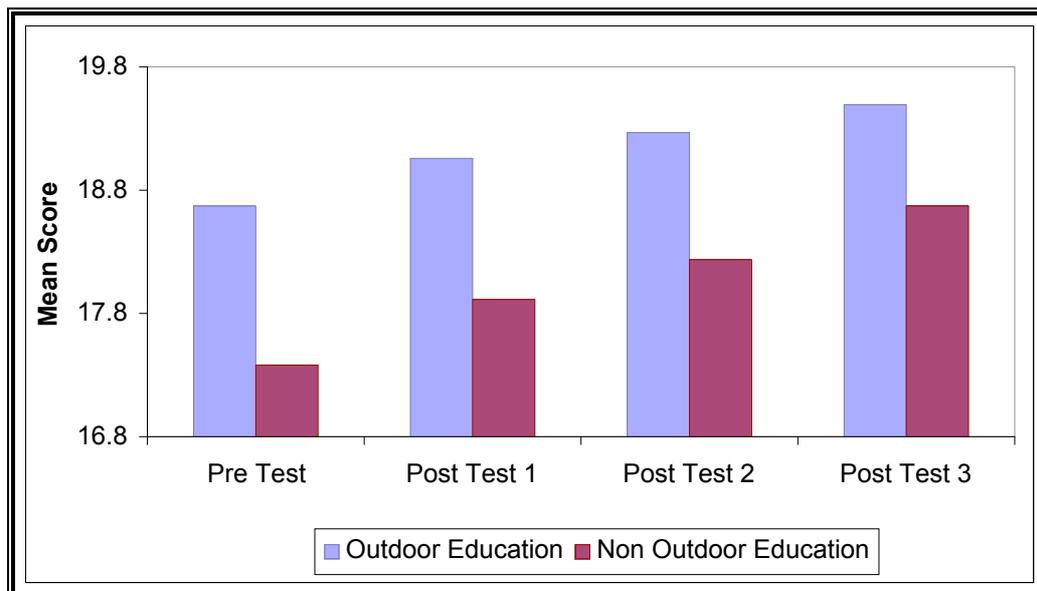


Figure 2 - Descriptive Statistics for Outdoor Education and Non Outdoor Education Groups for Overall Life Effectiveness.

Four t-tests were conducted, one for each of the test times. Table 2 shows that a significant difference ( $p < .05$ ) in overall life effectiveness lies between the two groups during the first two tests, however this difference is not significant ( $p > .05$ ) in the final two tests.

Table 2

Difference Between the Outdoor Education and Non Outdoor Education Groups at each Test.

	p-value	Significance
Pre Test	.019	<.05
Post Test 1	.024	<.05
Post Test 2	.080	NS
Post Test 3	.142	NS

NS = Not Significant

### **Additional Group Differences**

Further analysis of the data (post test 1 and 2 only) compared the outcomes between two Outdoor Education trips, to two Special Curricular and Academic Interest trips and to a combination of the two (1 Outdoor Education trip and 1 Special Curricular and Academic Interest trip). Figure 3 shows the descriptive statistics from the between groups ANOVA for the overall Life Effectiveness for each of the groups. The figure clearly shows the group involved in two Outdoor Education trips have a higher mean score in Life Effectiveness skills than the two other groups. With the group participating in two Special Curricular and Academic Interest trips having the lowest mean for overall Life Effectiveness.

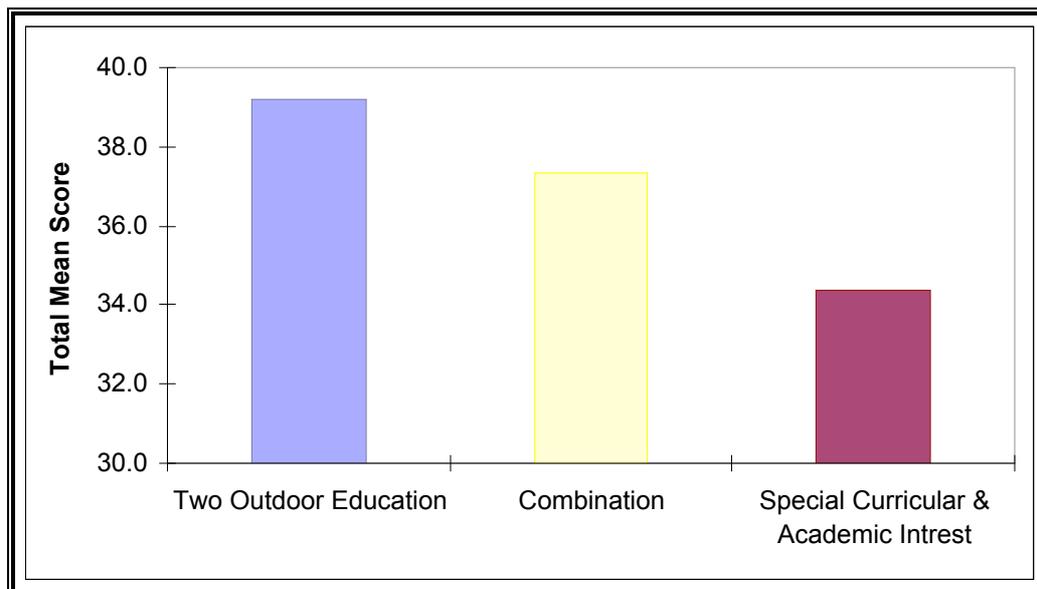


Figure 3 - Descriptive Statistics for the Two Outdoor Education, Two Special Curricular and Academic Interest and Combination Trip Groups for Overall Life Effectiveness.

The results of the ANOVA showed a significant difference ( $p < .05$ ) between the three groups. The groups' comparison (Post Hoc), in Table 3, shows the difference lies between the Two Outdoor Education group and the Two Special Curricular and Academic Interest group but not between the other groups.

Table 3

Summary of Multiple Comparison Statistics for Two Outdoor Education, Two Non Outdoor Education and Combination Trip Groups for Overall Life Effectiveness.

		p-value	Significance
<u>Two Outdoor Education</u>	Two Special Curricular and Academic Interest	.027	<.05
	Combination	.384	NS
Combination	Two Special Curricular and Academic Interest	.116	NS

NS = Not Significant

### Qualitative (Social Validation Questionnaire)

The results from the Social Validation Questionnaire (SVQ) reflect the students personal feelings, which both support and refute the results found in the Life Effectiveness Questionnaire. Due to the nature of these responses they will be explained further within the discussion.

## Discussion

The results indicate that the PSLE program does have a significant positive impact on the Life Effectiveness skills of the participants with an increase in overall Life Effectiveness at each stage of the post testing. Examination of the comments made on the SVQ also supported this, indicating that the participants in general gained beneficial Life Effectiveness skills from the program.

During the evaluation of the comments some additional interesting themes emerged. One related to the affiliation between the skills that were learnt while on an option, being transferable to life outside of these experiences. One such example includes:

*“Because of the busy schedule on our option, it was vital that I had to plan and organise my time efficiently. This taught me to maintain a stable timetable and has built on my independence skills. I have learnt to now apply these skills in my everyday life.”*

Such social validation responses seem to suggest that not only did they develop life effectiveness skills while on the options but also that they are transferable and useful in everyday life. An interesting point worth noting is that the majority of these comments were from participants who attended an Outdoor Education option.

The vast majority of the comments were positive, however not all the participants felt the program was beneficial for their Life Effectiveness skills. Some participants were a little dissatisfied and made comments such as:

*“Wilson’s Prom didn’t affect my ability to plan and make use of time. I already know how to plan; just don’t do it because I can’t be bothered.”*

These results support the notion that there needs to be a willingness to change and an acceptance of change for any positive results to occur (Gray & Perusco, 1993; Davidson, 2001; Marsh & Richards, 1988; Neill & Heubeck, 1997).

The Outdoor Education group showed a significantly higher score in overall Life Effectiveness compared to the Non Outdoor Education group on the LEQ. The results in figure 2 and table 2, suggest that two Outdoor Education “options” are not only more beneficial than two Non Outdoor Education “options”, but are more beneficial than just one.

It can be seen in figure 2 that the Outdoor Education group had an obviously higher mean in overall Life Effectiveness scores at each test interval, however figure 2 also shows the Non Outdoor Education groups mean scores had larger increases at each of the post tests. It should be noted that the outdoor education groups’ pre test scores were initially higher. It is likely that the larger increase in overall Life Effectiveness from the non outdoor education group lead to the decrease in significance between the groups, which can be seen in table 2 (for example at post test two and three).

An interesting observation from figure 2 and table 2 is that in the pre test there was a significant difference between the two groups. This immediately poses the question about the type of participants who select Outdoor Education options. Are they more inclined to possess proficient life effectiveness skills due to innate personality traits or previous exposure to

similar experiences? This is worthy of further investigation, but was beyond the scope of this study. The Outdoor Education group obtained high pre test results (refer to figure 2), perhaps there was less area to increase (with this tool) over the test program. This may explain why the Outdoor Education groups post test scores did not increase as much as the Non Outdoor Education group, who had lower initial scores (refer to figure 2). This supports the patterns that emerged previously which suggested that if participants already believe themselves to obtain high skills in an area, there is less room to improve or vice versa.

The comparison between two Outdoor Education trips and two Special Curricular and Academic Interest trips showed the Outdoor Education “Option” program components had a greater positive impact on overall Life Effectiveness skills (refer to figure 3). Table 3 shows a significant difference was found between two Outdoor Education trips and two Special Curricular and Academic Interest trips. It appears from these results that the Outdoor Education “Option” components are far more beneficial than the Special Curricular and Academic Interest “Option” components at enhancing Life Effectiveness skills (refer to figure 3).

The two Outdoor Education trips group obtained approximately two scores higher than the combination group and the combination group obtained approximately three scores higher than the two Special Curricular and Academic Interest trips group (refer to figure 3). There was however no significant difference between either of these groups and the combination group (one outdoor education trip and one Special Curricular and Academic Interest trip), which can be seen in table 3. The results from figure 3 and table 3 indicate it is beneficial to do at least one Outdoor Education “Option”, but the greatest benefit appear to come from participating in more than one.

The SVQ comments seem to suggest the participants considered the Special Curricular and Academic Interest options as enjoyable holidays on which they were to relax and enjoy themselves rather than enjoy, learn and develop.

The eight components of Life Effectiveness for each test were also researched and compared, with a variety of results obtained, however a discussion of these results is beyond the scope of this paper but will be reported in a future paper.

## **Limitations and Implications for Future Research**

### **Program**

Due to the large variety of option choices available (twenty-one), it was not possible for this study to assess each of the individual options; therefore they were grouped into two groups (the Outdoor Education and Non Outdoor Education groups). Like any grouping of results, this may have affected the results of the current study. If we are to obtain a more accurate reflection of what specific program components are really effective, we need to look further at the individual components of Outdoor Education programs and Experiential learning programs on participants LEQ results. In this particular school program the waters were a little muddied with components of some of the Experiential learning options overlapping with components significant in most Outdoor Education programs.

There was also crossover of skills presented between the groups, with some of the Non Outdoor Education options including some components that would normally be considered as

typical curriculum for an Outdoor Education program. For example, some rock climbing and bush walking were undertaken on the Western districts tour and snorkelling was included in the Marine Biology option. Further evaluation of the content of each option would enable identification of areas of overlap and an examination of any effect this overlap may have had on the final results.

Program participants were required to attend all three options. The compulsory nature of the program may have influenced the results, as participants need a willingness and readiness to accept change for such results to occur (Gray & Perusco, 1993; Davidson, 2001; Marsh & Richards, 1988; Neill & Heubeck, 1997). If they are forced to be involved, a negative attitude may be adopted resulting in no change or a decrease in LEQ results.

### **Control Group**

Due to school charter, curriculum structure, ethical reasons and parental expectations it was not possible, for this study, to have a control group who participated in none of the option components or purely just the Outdoor Education or Non Outdoor Education options. A control group would have been beneficial to provide comparative data, allowing a more accurate indication of program effectiveness on the development of Life Effectiveness skills. For example, some components of life effectiveness were already high at the pre test. The pre test results also showed a difference in overall LEQ scores between the Outdoor Education and Non Outdoor Education groups before program implementation. A control group would have enabled the researcher to ascertain whether the high pre test scores were a result of elevated anticipation and expectation about the program, or if it was a result of normal maturation, academic and life experiences.

### **Gender**

This research considered only male participants from one school; which immediately raises the question about the impact this program would have on middle school boys from other schools, countries and socio-economic backgrounds. Further research may wish to consider this program for a more diverse group and number of boys to identify if similar results occur. This will consequently assist in the development of a program to specifically target boys during this stage of development.

### **Conclusion**

The PSLE program was found to be effective at assisting the participants in increasing overall life effectiveness skills. It is therefore worth considering this program to enable adolescents to deal with the physical, social, emotional and psychological developments of puberty more effectively. There was also a significant difference found between the Outdoor Education and Non Outdoor Education group in Life Effectiveness skills, suggesting that Outdoor Education can play a vital part in better facilitating a boy's growth at this time in his life.

Attention needs to be given to the content of each program option. An examination of each of the programs envisaged outcomes would enable better planning and curriculum design. This will ensure a quality experience for the participants and optimum opportunity to achieve the desired outcomes as valued by the school.

It is vital that school programs, such as this schools PSLE program, continue to strive to address the issues faced by adolescent boys and it is extremely important for such programs to

continue to evaluate the outcomes. The results from these evaluations could then be used to enhance program effectiveness by ensuring the outcomes are on target with program aims and allowing improvements to be made to try and achieve the best possible outcome for adolescent boys. The specific outcomes of program evaluation could enable curriculum development and the establishment of a more universal program that could address some of the issues prevalent at this truly bewildering, challenging and exciting stage of a boy's development. It is imperative that we continue to strive to assist boys to make this transition to manhood and enable them to lead a well-balanced adult life in our contemporary and future societies.

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