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Factors contributing to the underrepresentation of girls in year 11 outdoor education at a selected government school

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**FACTORS CONTRIBUTING TO THE UNDERREPRESENTATION OF GIRLS
IN YEAR 11 OUTDOOR EDUCATION AT A SELECTED
GOVERNMENT SCHOOL**

by

**Ruth Hope Rynehart
Grad. Dip. App. Sc. (Recreation)**

**A Thesis Submitted in Partial Fulfilment of the
Requirements for the Award of**

**Bachelor of Education with Honours
at the Faculty of Education, Edith Cowan University**

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USE OF THESIS

The Use of Thesis statement is not included in this version of the thesis.

ABSTRACT

The purpose of this study was to investigate factors contributing to the underrepresentation of girls in the Year 11 Outdoor Education course in a selected government school. Enrolment statistics provided by the Secondary Education Authority indicate a possible gender orientation of the course which is problematic under the *Social justice in education: Policy and guidelines for gender equity* (Ministry of Education, 1991).

In Western Australian schools, enrolments in Outdoor Education have increased steadily since lower school units were introduced in 1987. However, the participation rate has consistently been about two times greater for boys than for girls. Of concern to feminist researchers in education is the way in which the hidden curriculum conveys and reaffirms messages of inequalities between the sexes. Outdoor Education offered an ideal framework within which the assumptions of prevailing cultural ideologies concerned with gender identities and relations could be explored and challenged.

The project is a descriptive-analytical study, utilising mixed-mode methods of research: that is, both quantitative and qualitative data were collected in order to investigate factors affecting the selection, or nonselection, of Year 11 Outdoor Education. The research strategy involved the completion of a questionnaire by (a) all Year 10 Outdoor Education students, (b) other Year 10 students who had selected Year 11 Outdoor Education, and (c) a randomly selected group of Year 10 students who had not participated in or selected Outdoor Education.

The results of the questionnaire were analysed to determine trends, similarities, and differences in the attitudes of girls and boys towards Outdoor

Education. The inclusion of questionnaire data from boys allowed the researcher to observe commonalities and note areas where opinions and attitudes of girls and boys contrasted. These contrasting attitudes were of particular interest because they indicated areas where girls differed to boys in their reasons for selecting, or not selecting, Outdoor Education.

Findings from the study indicate that selection, or nonselection, of Year 11 Outdoor Education by girls and boys was influenced by several main factors. The factor which appeared most to perpetuate the underrepresentation of girls in Year 11 Outdoor Education was the permeating effect of the masculine *gender orientation* of the course. The masculinisation of Outdoor Education: negatively affected many girls' *enjoyment* of, or potential to enjoy, the course; resulted in many girls perceiving the course as irrelevant to their personal and career *ambitions*; and led to many girls conceptualising *challenge* and adventure as being coercive, and therefore not desirable for girls' involvement.

Finally, recommendations based on the findings are made to three key groups: The Ministry of Education; Heads of Department in schools; and Outdoor Education teachers. The suggested strategies encompass both policy changes from Ministerial level down, as well as more fundamental shifts in attitude by outdoor educators and school administrators. Mentoring of female outdoor education teachers, revision of the educational objectives for Outdoor Education courses to reflect a balance of interpersonal skills and technical skills, and provision of opportunities for a variety of learning styles to suit the needs of both girls and boys, are among essential strategies required to achieve social justice in education for girls and boys.

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My special thanks are extended to Julie Heeley, who willingly gave her time and skills as a reader, and for her support and encouragement.

DECLARATION

I certify that this thesis does not incorporate without acknowledgement any material previously submitted for a degree or diploma in any institution of higher education; and that to the best of my knowledge and belief it does not contain any material previously published or written by another person except where due reference is made in the text.

Signature: 

Date: *8th June 1974.*

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CHAPTER 1

INTRODUCTION

Outdoor Education is a relatively recent addition to the offerings of the Secondary Education Authority (S.E.A). It was included in the lower school unit curriculum in 1987 and as an upper school course in 1989. Historically, educators have long been aware that learning by direct experience in the outdoors is a worthwhile part of the total learning experience of a school programme.

The inclusion of Outdoor Education in the curricula of Western Australian schools reflects an increased level of awareness of its value amongst teachers and administrators of physical education, where it is conceptually based (Ministry of Education, 1990a). Further, the S.E.A. (1993b) has endorsed Outdoor Education as a course which belongs in the upper school Pathways strands of *Health, Social and Community Services* and *Food, Hospitality and Tourism*.

For the purpose of this study, a distinction has been made between references to the curriculum unit or course called Outdoor Education as offered in Western Australian schools, and the broader area of outdoor education from which the subject draws its philosophy, pedagogy, and content.

The terms *sex* and *gender* have also been used distinctively for the purpose of this study. The term *sex* has been used to identify physiological difference and is signified by the use of the bipolar terms *female* and *male*. The term *gender* has been used in the sense of the social construction of our social selves and is signified by the use of the bipolar terms *feminine* and *masculine* (Davies, 1989b).

Background to the problem

Outdoor education programmes employ a process of experiential learning through which young people can retrieve a sense of connectedness with the complexities of our natural world, develop a strong self-concept, build awareness and appreciation of the dynamics of social interaction, and further their understanding of the interrelatedness of all living things (Ministry of Education, 1990a, pp. 1-6). Kiewa (1991), a Queensland outdoor educator, advocated outdoor education as a powerful strategy for addressing the issues of "alienation", "empowerment", and "community" with young people.

Other literature focussing on the benefits of outdoor education as part of the school curriculum referred to challenge, responsibility, and community (Maddern, 1990), self-awareness (Royce, 1987), self-concept (Watkinson, 1985), self-actualisation (Phipps, 1985; Yaffey, 1988), self-esteem (Wealand, 1986), and independence, rewards, and variety (Teaff & Kablach, 1987). These values have become more clearly delineated over time since American educational philosopher John Dewey, writing when there was little research to support his views, first pleaded for educational programmes that would bring young people into contact with reality (Dewey, 1938). The principles by which Kurt Hahn established the first Outward Bound School in 1941, emphasizing learning and self-improvement through challenging outdoor experiences, are reflected in the values attributed in the 1990s to outdoor education programmes (Maddern, 1990; March & Wattachow, 1991; Nolds, 1987).

In Western Australia, Outdoor Education has been taught in four sequential units at lower school level since 1987. In 1989, the course was accredited by the S.E.A. for Years 11 and 12. The rationale for Outdoor Education explains the philosophical base and goal of the subject in school curriculum as follows:

The subject called "Outdoor Education" in Western Australian curriculum...has its conceptual base in physical education and the major goal is...to develop students' abilities to manage the physical challenge of the natural environment (Ministry of Education 1990a, p. 1).

The teaching of Outdoor Education involves a holistic approach which develops students' abilities to successfully manage the physical challenge of the natural environment. Desired abilities include self-management, management of others, and management of the environment (Ministry of Education, 1990a). Outdoor self-management includes knowledge and practical skills concerning intrapersonal skills, health and first aid, nutrition, equipment, navigation and outdoor pursuit skills. Outdoor management of others involves interpersonal skills, team-building, and leadership. Management of the environment requires environmental knowledge, awareness of the interrelatedness of all living things and minimum impact skills. All three areas of management are closely interconnected and underpinned by the common goal of developing the self-aware, confident person who is able to successfully manage the physical challenge of the natural environment.

Enrolment trends in Outdoor Education

Examination of statistics supplied by the S.E.A. for the years 1987 to 1992 reveal a consistent trend in Outdoor Education enrolments. Girls enrolled in Outdoor Education at each year level are substantially outnumbered by boys. Numbers of girls enrolled in lower school Outdoor Education have consistently been approximately half the numbers of boys enrolled since the inception of Outdoor Education units in 1987. Figures 1 and 2 graphically display enrolments in Years 9 and 10 Outdoor Education by sex. Percentages are rounded. Data on enrolments in Year 9 have not been available from the S.E.A. since 1990.

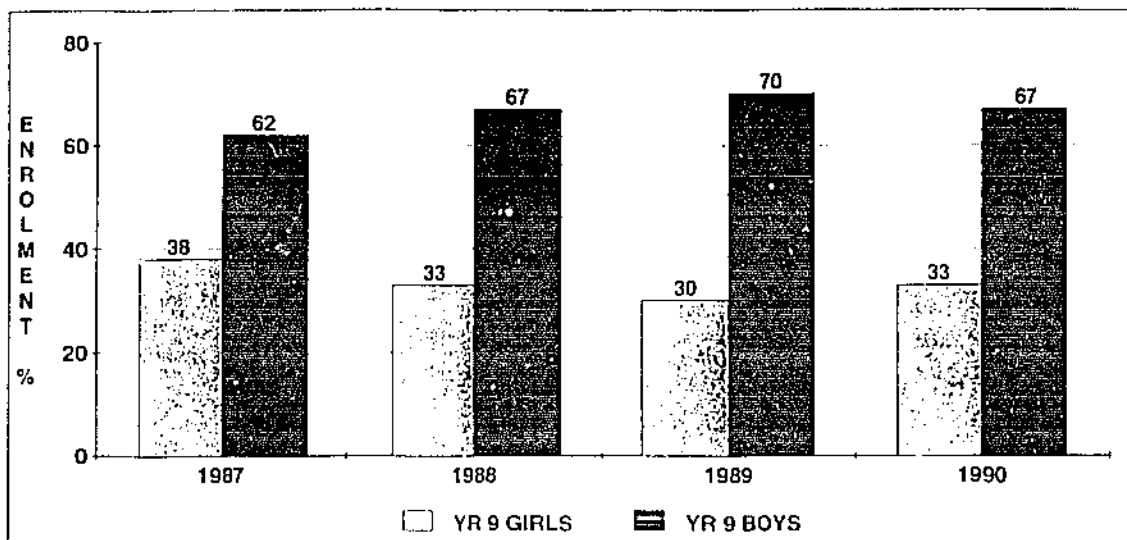


Figure 1. Girls' and boys' selection of Year 9 Outdoor Education.

Data: Secondary Education Authority.

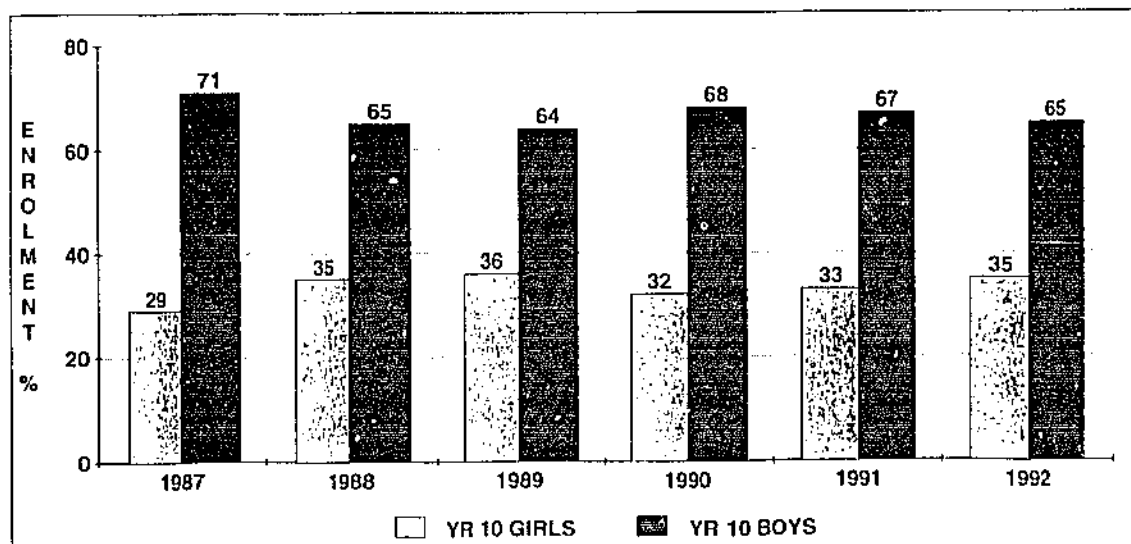


Figure 2. Girls' and boys' selection of Year 10 Outdoor Education.

Data: Secondary Education Authority.

A similar participation ratio of about one girl to every two boys has occurred during the first four years of the Year 11 and Year 12 Outdoor Education accredited courses (see Figures 3 and 4).

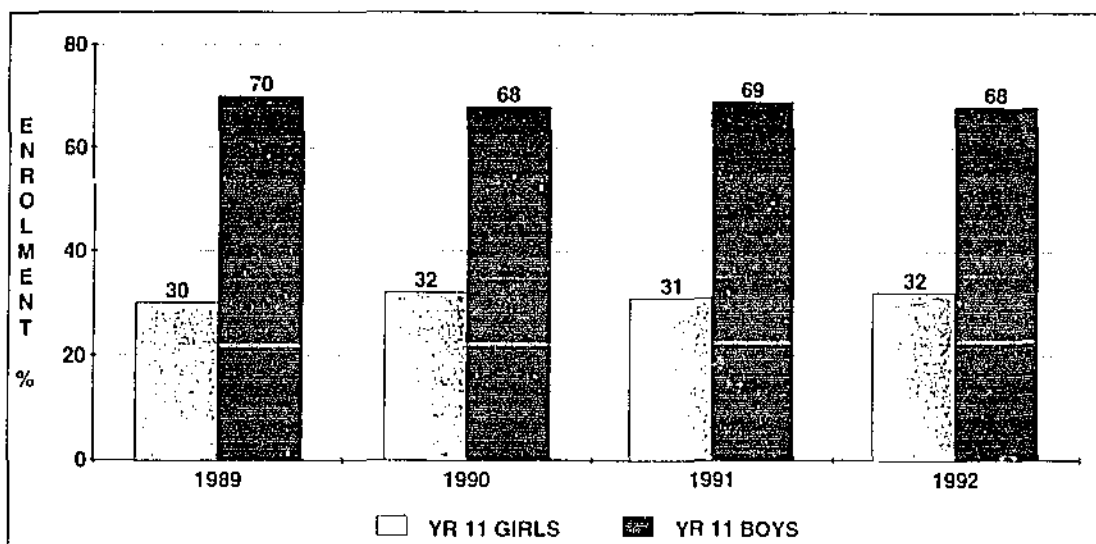


Figure 3. Girls' and boys' selection of Year 11 Outdoor Education.

Data: Secondary Education Authority.

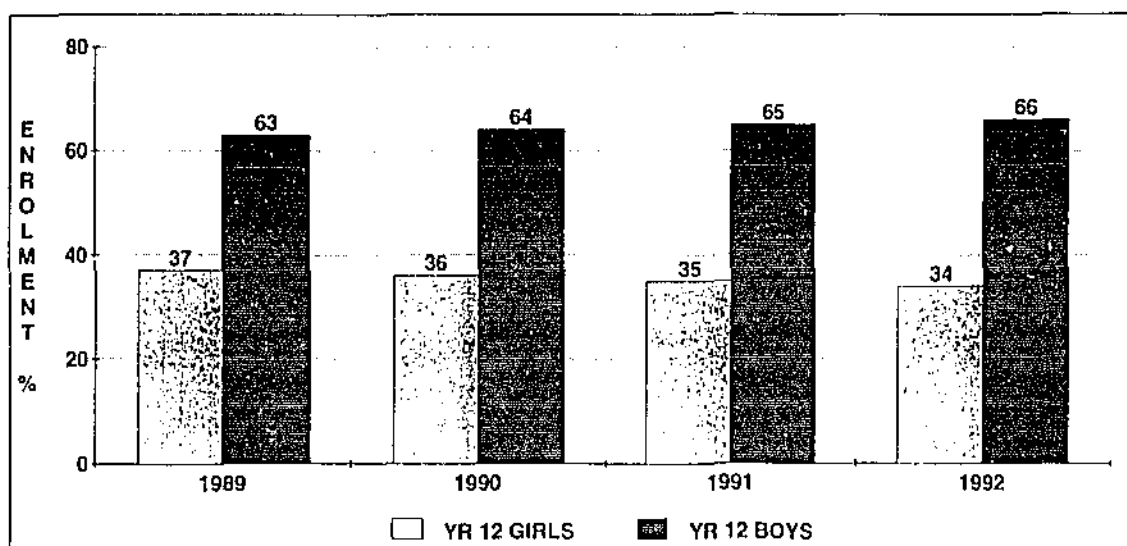


Figure 4. Girls' and boys' selection of Year 12 Outdoor Education.

Data: Secondary Education Authority.

Teacher–student ratios and sex of teachers

While enrolments of girls in Outdoor Education in Years 10 to 12 during 1991 averaged a third of all students enrolled, the percentage of female teachers decreased by year level from approximately 30% at Year 9 to merely 7% of the staff teaching Outdoor Education at Year 12 level (Rynehart & Tye, 1991). The percentage of male teachers increased sharply at upper school levels, against a slight fall in percentages of boys. Although percentage participation rates for girls have remained steady at all year levels, it is unlikely that a girl enrolled in Year 12 Outdoor Education will be taught by a female outdoor education teacher. A recent study by Browne (1991) found that a lack of female teachers for Year 11 and Year 12 Physical Education Studies was a factor in girls' nonselection of these courses. The lack of female outdoor education teachers as role–models for girls in many schools could be a factor affecting girls' selection of Outdoor Education. Figures 5 and 6 outline participation patterns of students and teachers by year level and sex.

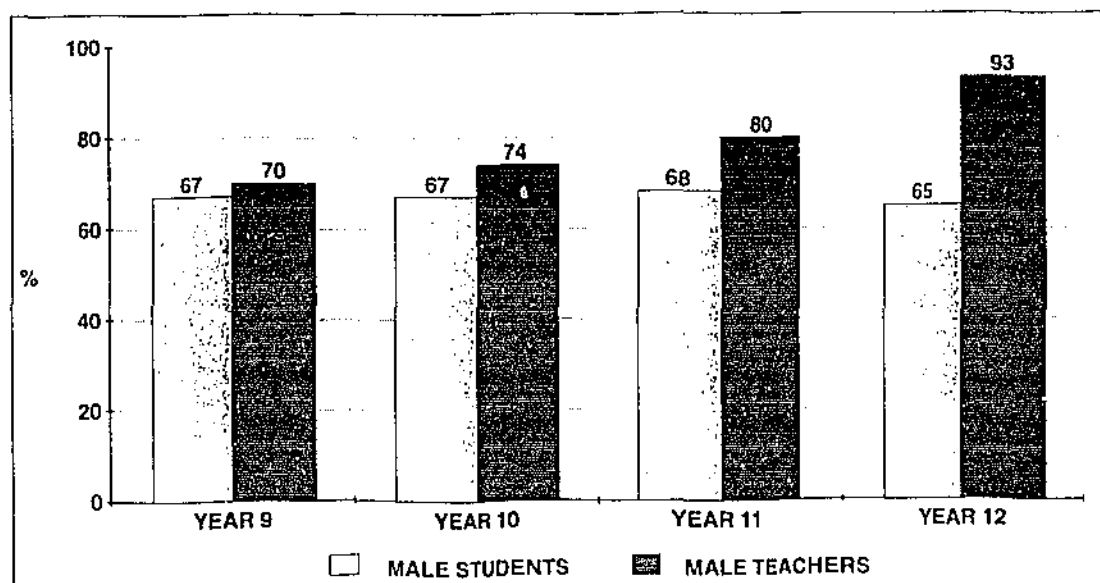


Figure 5. Participation patterns of female students and female teachers by Year level in Outdoor Education in 1991 (Rynehart & Tye, 1991).

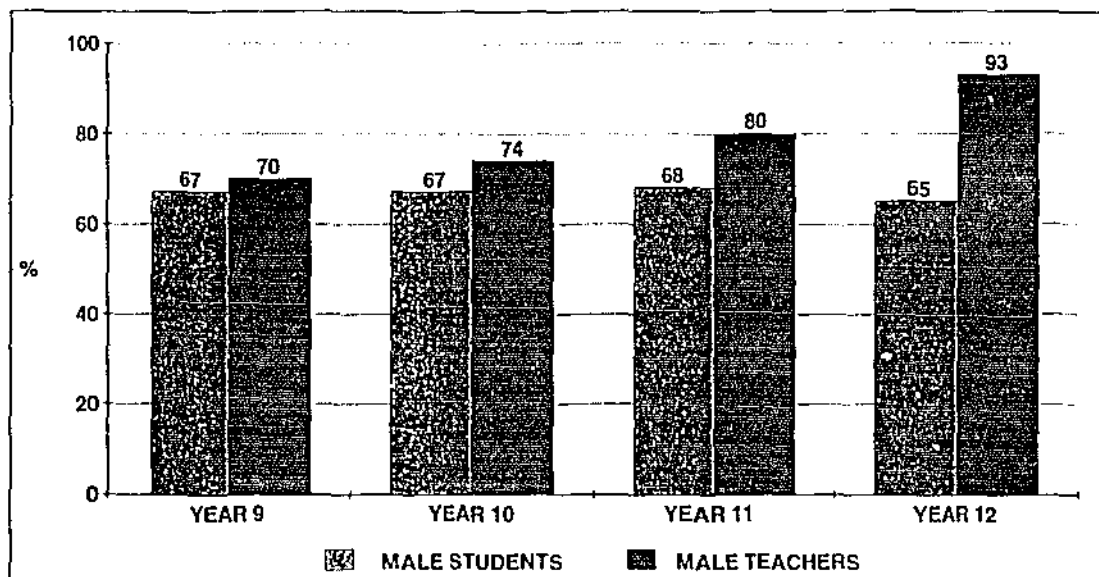


Figure 6. Participation patterns of male students and male teachers by Year level in Outdoor Education in 1991 (Rynehart & Tye, 1991).

Gender orientation of outdoor education

In outdoor leadership theory and practice, skills have commonly been polarised as either *hard* or *soft*. Hard skills refer to such technical expertise as canoeing and climbing skills, logistics, and navigation, which are necessary to undertake outdoor pursuits. Soft skills refer to the dimension of human interaction and include group management, communication, and social skills (Swiderski, 1987).

In spite of current recognition by outdoor educators of the value of interpersonal skills (Chase & Chase 1992; Friedrich & Priest 1992; Knapp 1989; Phipps 1986), school programmes do not always show evidence that the dimension of human interaction skills development is taught or valued. An examination of current Western Australian curriculum provided to schools by the Ministry of Education indicates one reason why the interpersonal skills area appears to have diminished in importance in many school Outdoor Education programmes, while the area of technical skills has been accorded more

importance. Interpersonal skill development is not included explicitly in lower school unit objectives, although it is stated clearly in the rationale (Ministry of Education, 1990a, 1990c). However, it may be common practice for Outdoor Education teachers to refer to unit descriptions and objectives without developing an understanding of the rationale. Teachers of Outdoor Education who are physical educators are more likely to emphasise physical skills development than the development of interpersonal skills when allocated one or two classes of Outdoor Education. Moreover, it has been argued that male outdoor educators are traditionally more likely to emphasise hard skills than soft skills (Jordan, 1990; Knapp, 1985;), whereas there is evidence from the literature that female outdoor educators are increasingly concerned with the role of interpersonal skills within outdoor education programmes (Humberstone, 1990; Johnson, 1990; Jordan, 1990; Miranda, 1985; Mitten, 1985, 1992; Warren, 1985).

A similar understatement of the place of soft skills in Outdoor Education occurs in the syllabus for upper school students. The recently developed course for Year 11 contains only three references to interpersonal skills amongst 26 stated and required objectives. Consequently, many school programmes focus on, and evaluate, hard skills to the exclusion of soft skills. This may be a factor affecting the selection, or nonselection, of Outdoor Education by girls.

The problem

Outdoor Education, from its inception, has been a popular course choice in schools where it has been offered. In its fourth year as an S.E.A. accredited course in 1992, Outdoor Education attracted approximately 3.6% of all students. It was offered by 31 senior high schools and 4 nongovernment

schools at Year 11 level, and by 18 senior high schools and 2 nongovernment schools at Year 12 level (S.E.A., 1993a).

Examination of statistical data since 1987 shows that the imbalance of females and males enrolled in Years 10, 11, and 12 Outdoor Education has remained relatively constant at approximately 1 girl for every 2 boys (S.E.A., 1987-1992). Table 1 presents enrolment numbers and percentages by sex and year since 1987. Enrolments for Year 9 since 1990 have not been available.

Enrolments for Year 10 and upper school Outdoor Education have been graphed in Figures 7 and 8 to demonstrate the consistency of the girl to boy ratio. Against a slight decline in Year 10 enrolments after an initial peak in 1988, it can be seen that upper school enrolments have steadily risen. Concurrently, the sex imbalance has steadily increased.

TABLE 1

Girls' and boys' Outdoor Education enrolments for Years 10 to 12, 1992

	1987	1988	1989	1990	1991	1992
YR 10 GIRLS	135	2195	2144	1770	1794	1818
YR 10 BOYS	334	4112	3857	3693	3607	3411
YR 10 TOTAL	469	6307	6001	5463	5401	5229
=====						
UPPER SCHOOL:						
YR 11 GIRLS			116	135	174	248
YR 11 BOYS	not offered		269	287	387	523
YR 11 TOTAL			385	422	561	771
YR 12 GIRLS			36	138	101	132
YR 12 BOYS	not offered		21	79	191	253
YR 12 TOTAL			57	217	292	385
=====						
TOTAL GIRLS			152	273	275	380
TOTAL BOYS			290	366	578	776
YR11/12 TOTAL			442	639	853	1156
=====						

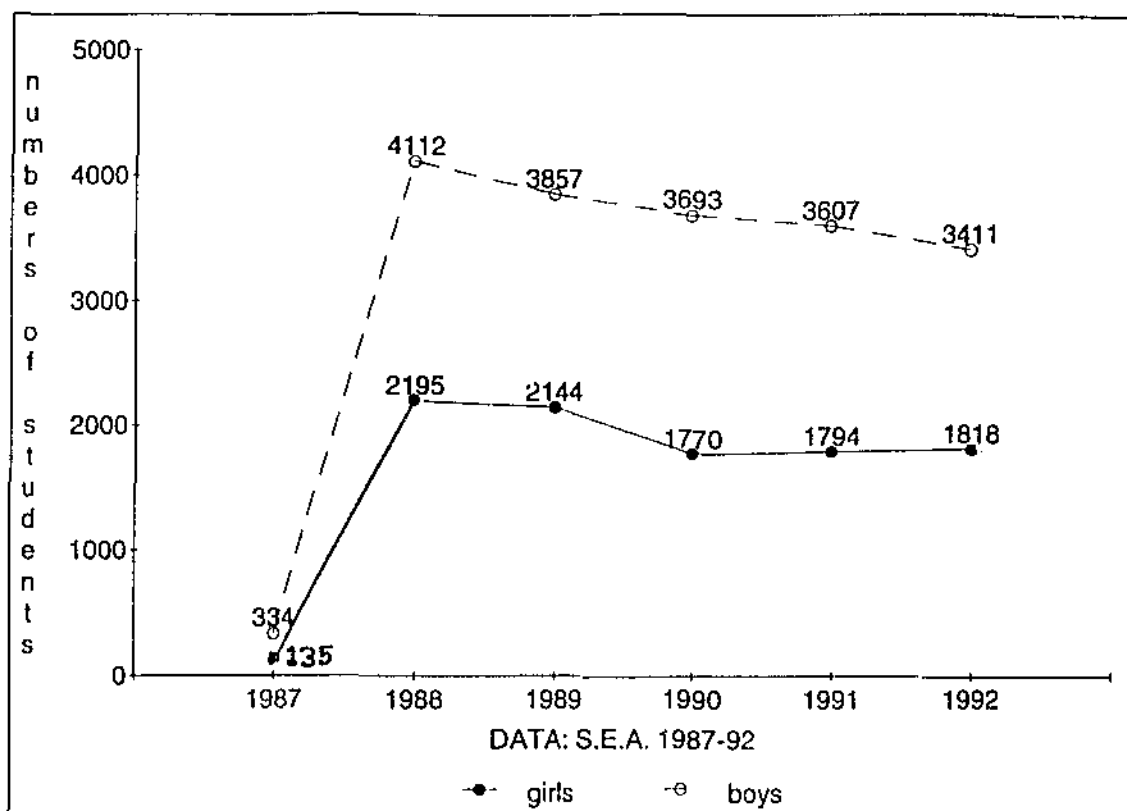


Figure 7. Year 10 girls' and boys' enrolment numbers, 1987 - 1992.

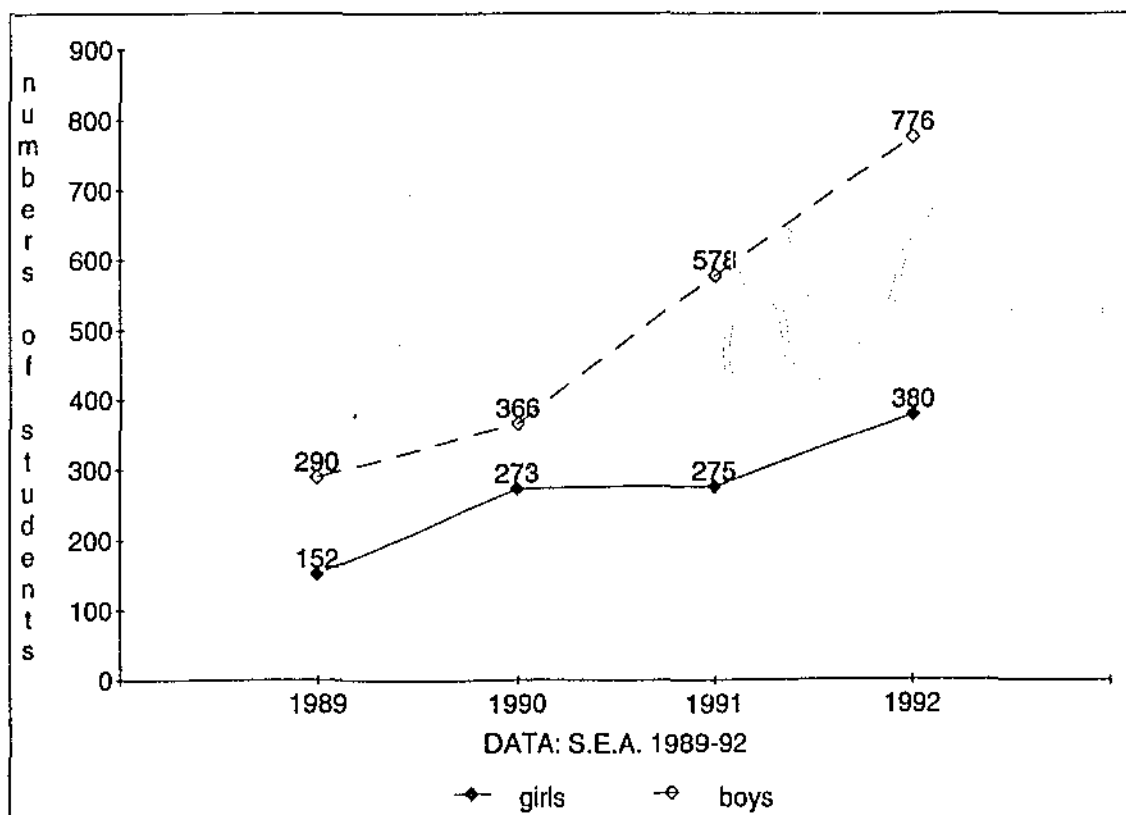


Figure 8. Upper school girls' and boys' enrolment numbers, 1989 - 1992.

Ministry of Education policies affecting girls' access and equity

The Australian Bureau of Statistics (1993) described the concepts of *access and equity* as "the moral and legal rights to equal participation and fair treatment. Their consideration underlies all policy decision-making processes" (p. ix). The Commonwealth Schools Commission's 1987 *National policy for the education of girls* embodied these concepts, which were reaffirmed in the 1993 *National action plan for the education of girls* (Australian Education Council). The Western Australian Ministry of Education endorsed the National Policy through development and implementation of its *Social justice in education policy* (1991). The section of this policy pertinent to gender is the *Policy and guidelines for gender equity*. A major objective of the Ministry's gender equity policy is to ensure that "gender is no longer a variable affecting patterns of student participation, achievement, and post-school options" (p. 5). The Ministry intends that this objective will be achieved to the extent that:

there is a significant increase in the participation of girls in higher level mathematics, physical sciences, technology, manual arts and physical education (Ministry of Education, 1991, p. 5--6).

The Ministry of Education also recognises the value of "learning through direct experience in the natural environment" as evidenced by its commitment to developing and implementing the K-12 Outdoor Education curriculum (Ministry of Education, 1990a, p. 1).

Access and equity are commonly measured by participation rates, however consideration of the reasons underlying nonparticipation provides further insight. Accordingly, factors which promote a consistent enrolment imbalance of girls and boys in all secondary years of Outdoor Education require identification and redress.

Purpose of the study

The purpose of this study was to investigate factors contributing to the underrepresentation of girls in the Year 11 Outdoor Education course at a selected government school. Enrolment statistics provided by the S.E.A. indicate a possible gender orientation of the course which is problematic under the *Social justice in education: Policy and guidelines for gender equity*, introduced by the Ministry of Education in 1991. Identification of factors militating against the selection of the course may assist Outdoor Education teachers and school administrators to plan and implement changes to ensure that sex is no longer a variable affecting students' participation and achievement in the curriculum area of Outdoor Education.

Research questions

The questions which initiated and directed the following research were:

General Question

What reasons underlie the fact that fewer girls than boys select Outdoor Education as a Year 11 course?

Subsidiary Research Questions

1. To what extent and in what way is a gender perception of Outdoor Education by girls and boys a factor involved in its selection as a Year 11 course?
2. To what extent and in what way is a liking of the outdoors by girls and boys a factor involved in selection of Outdoor Education as a Year 11 course?
3. To what extent and in what way is perceived value for career by girls and boys a factor involved in its selection as a Year 11 course?
4. To what extent and in what way is a liking of challenge and adventure by girls and boys a factor involved in its selection as a Year 11 course?
5. What other factors affect girls' and boys' selection, or nonselection, of Year 11 Outdoor Education?

Significance of the study

The current political and social concern of Western Australian educators is to provide *all* students with the opportunity to achieve optimal educational outcomes. The Ministry's *Social justice in education policy* reflects these community concerns. The key statement of this policy is:

The Western Australian Ministry of Education is committed to social justice in education through the achievement of optimum educational outcomes for all students (Ministry of Education, 1991, p. 3).

The Ministry of Education is committed to significantly increasing the participation of girls in subject areas that have been deemed to be masculine "by content and traditional enrolment" (Ministry of Education, 1991, p. 6). The findings from this study may indicate useful strategies that could be employed by curriculum planners, school policy-makers, and teachers to address the underrepresentation of girls in Outdoor Education.

Delimitations

The following five factors fixed the boundaries for this study:

- * only one school was utilised in the study;
- * only Year 10 students were included in the study;
- * the selected school was a government metropolitan senior high school;
- * a school with sufficient populations of girls and boys enrolled at Years 9, 10, 11, and 12 levels of Outdoor Education was selected because it provided a combination of Year 10 students with and without previous experience of Outdoor Education programmes, as well as the opportunity to select Outdoor Education courses in Year 11 and Year 12; and
- * the selected school had an above state average enrolment of girls in two classes of Year 10 Outdoor Education students, thereby providing a total of 17 Year 10 girls who had participated in Outdoor Education.

Thesis outline

The following chapters present the background, methodology, and findings of the research concerning the underrepresentation of girls in the Year 11 Outdoor Education course at a selected government senior high school.

Chapter 2 reviews the literature related to girls and women in outdoor education. It commences with defining the concept of outdoor education within the context of its historical development, and within its philosophical base of physical education. Participation of women and girls in outdoor education is explored globally, and is then connected with the effect of hidden curriculum. Feminist research into the pervasive effects of sexism in curriculum and in Western patriarchal society is examined, with particular reference to the gendered nature of discourse in the area of outdoor education. This chapter concludes by delineating four key factors, emerging from the literature reviewed, that may affect the selection process for girls and boys.

Chapter 3 describes the methodology used, the study's feminist base, and the mixed-mode method of research that is employed. It outlines the procedures followed, and describes the methods and instrumentation utilised for data collection and analysis.

Chapter 4 provides an analysis and discussion of results of research undertaken to determine reasons for the underrepresentation of girls in Year 11 Outdoor Education. Firstly, the results of findings regarding the 10 constructs of the questionnaire are tabulated and summarised in relation to the major issues of the research. Secondly, findings from an analysis of responses to open-ended questions are presented. The findings from both sections are compared and interpreted in a manner also relative to the major issues.

Chapter 5, the final chapter, presents the main findings of the study, makes recommendations concerning measures to effect more equitable

participation of girls in Year 11 Outdoor Education, and offers suggestions for further research in the area.

CHAPTER 2

REVIEW OF RELEVANT LITERATURE

The literature review is presented under the following topics:

- * What is outdoor education?
- * Girls and women in outdoor education;
- * The hidden curriculum and feminist theory;
- * Gendered language in outdoor education discourse; and
- * Girls and course selection.

The review is then summarised, and its influence on the study is explained.

What is outdoor education?

An extensive literature base pertaining to the philosophy, aims, and practice of outdoor education has been built from the tenets of: Kurt Hahn, founder of the Outward Bound movement; John Dewey, educational philosopher; Carl Rogers, leading humanistic educator; and L.B. Sharp, outdoor education pioneer. A guiding principle for outdoor educators has been Sharp's direction advice:

That which can best be learned inside should be learned there.
That which can best be learned in the out-of-doors through direct experience, dealing with native materials and life situations, should there be learned (Sharp, 1957).

Although there are many definitions of outdoor education, Ford recommended that the most comprehensive one appears to be: "Outdoor education is education *in, about and for* the out-of-doors" (1989, p. 31). She suggested that this broad definition allows for outdoor education to be seen as a process involving direct learning experiences to develop knowledge, skills, and attitudes about our world. Ford (1989) inferred that outdoor educators

consider ideal programmes to be those that reflect the interrelatedness of all three domains of learning.

Priest (1986) analysed how outdoor education functioned as an experiential learning process using all of one's senses:

It [the experiential learning process] takes place primarily but not exclusively through exposure to the outdoors. In outdoor education the emphasis for the subject of learning is placed on relationships concerning people and natural resources (p. 19).

Knapp (1989) questioned why schools accorded such high priority to cognitive objectives, in comparison to psychomotor and affective objectives. He argued that outdoor education, because of its holistic approach, educates the total individual by providing a proper balance between all three domains of learning. Knapp pointed out that most educators agree with Maslow's needs hierarchy, which begins with physical essentials, progresses through personal power, and peaks with the ability to interact with others, bringing about self-actualisation. Knapp contrasted the traditional classroom formality and compartmentalizing of subject matter, taught out of context through passive, vicarious learning methods, with group interaction outdoors. He observed that taking students out of doors more readily gave rise to communication opportunities, conflicts, self-esteem issues, and motivation to learn, through directly dealing with life situations in both built and natural ecosystems. The careful management of learning experiences in the outdoors to ensure balanced and integrated learning across all three domains constitutes outdoor education in the sense accepted by recognised outdoor educators such as Ford (1989), Knapp (1989), Priest (1991), and Priest and Hammerman (1988).

Bunting (1989) examined outdoor education's compatibility with its philosophical base, physical education. She argued that present-day physical education overemphasises physical fitness and skills, and seems to have lost its holistic goal of Greek origin pertaining to an individual's mental, social,

emotional, and physical well-being. In contrast, she observes that holistic learning about self and others through the physical, along with a commitment to the natural environment, is at the very heart of outdoor education.

In the discourse of outdoor education, writers have found it necessary to clearly distinguish between outdoor education and outdoor pursuits. Outdoor pursuits programmes have been defined by White (1978) as "stress-seeking natural challenge activities which require the participant to learn a response to chosen landscape challenges" (p. 22). Outdoor pursuits programmes emphasise the development of physical and technical mobility skills in the outdoors as a leisure or physical recreation activity. Such physical mobility skills have their place in the psychomotor learning domain of outdoor education. In effective outdoor education programmes, mobility skills are taught interactively with learning in the cognitive and affective domains, while emphasising the interrelationship of all living things (Priest, 1986).

Girls and women in outdoor education

Although outdoor and adventure experiences within the school curriculum for both girls and boys have been recognised by educators as worthwhile, issues regarding a possible gender orientation of the subject have received little attention. In England, Ball (1986) researched the "gender climate" of the hierarchical structure of outdoor organisations and institutions, and found that males overwhelmingly occupied decision-making positions and leadership roles such as heads of outdoor centres and chief instructors. Conversely, in all outdoor activities surveyed, 22% of club members were female, and yet they filled 47% of the "*nurturing* secretarial roles" (p. 30).

Humberstone (1986a) examined the problem of providing appropriate personal development for girls and boys in outdoor education programmes. She expressed concern that gender images portrayed through traditional

outdoors programmes served to reinforce the ideology of male superiority in the outdoors. She raised questions regarding "whose personal development?", and "what form of social development?" are outdoor education programmes promoting, if gender is ignored as a powerful force (pp. 29–30).

An ethnographic case–study by Humberstone (1990) described girls' and boys' experiences at an English outdoor adventure education centre. At this centre the prevailing material conditions, social relations and ethos were conducive to both girls and boys becoming more aware of their own and each other's capabilities. The mainly male teaching staff acknowledged that gender was a powerful cultural and ideological force in shaping individuals' views about themselves and other people. Therefore they deliberately adopted a nonauthoritarian, interpersonal, empowering pedagogy. Humberstone noted that both girls and boys began to work collaboratively and supportively in mixed groups, with boys experiencing fear and apprehension in much the same way as girls.

The literature supports the view that outdoor education can challenge both girls' and boys' traditional assumptions about feminine and masculine behaviours. However, achieving this requires outdoor educators to challenge their own assumptions about sex, gender, and the nature of relations between women and men (Dawes, 1985; Green, 1987; Humberstone, 1986a; Humberstone, 1990; Johnson, 1990; Jordan, 1990; Knapp 1985). Green (1987) cited an inner city programme which encouraged the participation of girls at a Manchester watersports centre. She argued that this programme achieved success because of the awareness of male and female staff of the complexity of gender–related behaviour and their consequent changes in role perception. The success of Humberstone's case–study at Shotmoor (1990) was dependent on the factor that "the mainly male teaching staff tended to provide contradictions to stereotypical images of the aggressive sportsman who

celebrates machismo and exclusivity" (p. 213). However, she acknowledged that within the sphere of physical and outdoor education generally, masculine imagery and superiority were dominant.

Jordan (1990) explored with outdoor educators the implications of using gender-identified language and behaviours to reinforce sex-role stereotypes. Knapp (1985) proposed that outdoor educators need to accept the challenges of developing more androgynous leaders, place a greater emphasis on human relations skills, equalise the number of qualified male and female leaders serving as role models, and raise gender consciousness in participants. With regard to encouraging more women into the profession, Levi's (1991) report describing her difficulties in gaining recognition for skills and qualifications, and in dealing with unsupportive male colleagues, indicated that women outdoor educators still face gender and sex barriers.

The traditional sphere of girls' single-sex physical education in Britain was the subject of a study by Scraton (1986). Her findings indicated that, amongst physical educators, powerful attitudes prevailed around girls' physical ability and capacity. Scraton argued that these attitudes were based on assumptions that girls are physically less capable than boys, that physical competence is less desirable in girls, and that the female body needs more protection than the male body. Another English study by Cockerill and Hardy (1987) found that fourth year secondary girls had polarised perceptions of the constructs of *feminine* and *unfeminine*. They concluded that there were serious implications, for girls who value and cultivate the feminine image, with regard to their involvement in physical activity.

Observations by South Australian outdoor educators Dawes (1985) and Kuchel (1987) concerned the lack of enthusiasm displayed by many Australian girls for participation in outdoor education programmes. Both observed that girls were in the minority in outdoor education programmes, and offered the

following reasons for consideration: there are few women outdoor educators to provide role models in schools; many girls feel outdoor education is a boys' subject; boys' negative behaviour towards girls is seen as a barrier; girls' lack of prior experience in outdoor activities leads to lack of confidence; girls' preference for participating with friends means many will not select outdoor education individually. The South Australian observations support the British findings and serve to highlight the problem facing outdoor educators who wish to increase girls' participation levels.

An increase in the number of female outdoor leaders has been advocated as a means of counteracting the gender-stereotyped image of the outdoors as a masculine domain (Dawes, 1985; Humberstone, 1986a; Knapp, 1985). However, as both Levi (1991) and Warren (1990) have pointed out, a female outdoor leader who gains recognition in this male-dominated profession is in danger of being perceived as a "superwoman, a woman unlike the rest of the population" (Warren, 1990, p. 415). Competent female outdoor educators (and their physical education counterparts) who might serve as powerful role models for girls, may find that their *superwoman* status makes the role model ineffective, and even counterproductive in encouraging participation of girls (Carrington & Leaman, 1986; Johnson, 1990; Mitten, 1985). Davies (1989a) also supported this stance, observing that one woman in a high status position does not change the way in which the male/female duality is perceived:

One woman, who is the exception, is probably, as far as the child can see, someone who has got her gender relations wrong – which of course she has – since the symbolic order which defines how men and women *ought* to be has not changed (p. 4).

Davies (1989a) discussed the male-female dualism as a basic assumption in our socialisation process:

Like other dualities such as day and night, good and bad, happy and sad, male and female is perceived within the Western intellectual tradition as an inevitable and natural duality, each opposite to its other and each relying on the other for an interpretation of itself (p. 9).

Davies further explained that each person is faced first with a "fact" – that they are one part of a duality. They are then confronted with the task of finding how the duality works in the everyday world, and finally, by interacting with others, assume the attributes of their sex and their gender in order to be perceived as "normal" competent members of their social scenes.

Studies of student perceptions of coeducation in physical education or outdoor education showed that most girls and boys preferred coeducation to single-sex classes (Browne, 1991; Humberstone, 1990; Macdonald, 1989a). Feminist research on coeducational classes revealed that both girls and boys underestimated the ability of girls, and that girls were marginalised by the behaviour of boys (in Britain, Burgess, 1990; Sarah, 1980; Spender, 1989; Stanworth, 1983; and in Australia, Davies, 1989a, 1989b; Willis, 1991). The research also highlighted the ways in which boys denigrated girls and used girls as negative reference points. Reports of research conducted in North American schools showed that teachers in coeducational classes gave more attention of all kinds to boys, and that boys dominated classroom interactions (LaFrance, 1991).

Burgess (1990) argued that coeducation threatened girls' levels of achievement, self-esteem, and willingness to take an active role:

Sex-stereotyping affecting subject choice, underachievement in maths, science and technology, the absence of women in authority positions, and constant social pressure – even harassment – from boys, all combine to depress girls' self-confidence and limit their aspirations (p. 91).

A study of the effects of mixed-sex groupings in physical education by Turvey and Laws (1988) supported the findings of Burgess, but urged that:

teachers consider and reflect upon the process of how they teach, and not just naively believe that mixed-sex grouping ultimately means equality of opportunity and mixed-sex teaching (p. 25).

Humberstone (1986b) urged similar caution for British schools contemplating the change from single-sex to coeducational physical education. She also noted that a disadvantage of the strategy of single-sex groupings might be to unintentionally consolidate for boys the traditional notion that "girls are less capable" and "unable to work on equal terms with boys" (pp. 209–210).

The hidden curriculum and feminist theory

Recognition and development of the concept of the hidden curriculum in physical education since the 1970s has been traced by Bain (1985). She defined the hidden curriculum as "consist(ing) of implicit values taught and learned through the process of schooling" (p. 145). Bain's feminist analysis of the implications of hidden curriculum for girls highlighted the fact that our patriarchal society maintains gender roles to supply society with the most basic form of hierarchical social organisation and order. The task of feminist educators is to identify how the pervasive effects of sexism in a patriarchal society are reproduced in the process of schooling (Bain, 1985; Burgess, 1990; Humberstone, 1990; LaFrance, 1991; Sarah, 1980).

Feminist viewpoints vary considerably. A useful starting point may be the definition offered by Oakley (1985), that feminism is:

putting women first – about judging their interests to be important and insufficiently represented and accommodated within the mainstream politics and the academic world (p. 335).

Today the terms liberal, Marxist, socialist, and radical feminists are in common usage amongst feminists. Liberal feminism seeks to correct the injustices of sexism through ensuring equality of opportunity by enacting legislation such as the Commonwealth *Sex Discrimination Act (1984)* and the

Western Australian *Equal Opportunity Act (1984)*. Nationally in education, equity for girls been further defined by *The National policy for the education of girls* (Commonwealth Schools Commission, 1987), and its current sequel, the *National action plan for the education of girls 1993–97* (Australian Education Council, 1993). Within Western Australian schools, the guiding document is the *Social justice in education: Policy and guidelines for gender equity* (Ministry of Education Western Australia, 1991). This recent policy has yet to impact effectively on the practice of most Western Australian schools. It has particular implications for sport, physical education and outdoor education in schools and has been specifically interpreted for this area in the document *Physical education and sport: Guidelines for gender equity in secondary schools* (Ministry of Education, 1990b, 1993).

While liberal feminism "endorses the basic principles of existing society" (Bain, 1985, p. 150), it was argued by Tong (1989) that liberal thought was becoming more feminist and more radical. Marxist feminists, socialist feminists and radical feminists argue that curbing patriarchal oppression and minimising sexist practices in society will require fundamental structural changes. However authors differ widely on the types of change needed (Bain, 1985; Tong, 1989).

The implication for education of Tong's prediction is that liberal feminism is finding that legislative changes alone are insufficient to bring about a more equitable educational outcome for girls. Tong proposed that liberal thought is now more supportive of the need for fundamental structural changes in society in order to achieve gender equity. In relation to outdoor education, the area of intrapersonal and interpersonal skills takes on renewed significance as educators seek ways to redress inequities related to sex, race, and class. The potential of outdoor education for making a major contribution to human relations skills has been widely acknowledged in outdoor education literature (Carlson & Lewis, 1982; Easter, 1982; Humberstone, 1986a, 1990; Jordan,

1990; Knapp, 1985; Nettleton, 1978; Phipps, 1985; Priest, 1986; Watkinson, 1985).

Reasons underlying sexism in Western society have a philosophical and social base which has been well documented in feminist literature. Since 1848, feminist activists have campaigned for changes to reduce inequities between the sexes in the eyes of the law (Miles, 1989). Writers such as de Beauvoir, Friedan, Greer, and Spender have explored and analysed the web of women's oppression. Yet the task of identifying and correcting gender-biased curriculum and practice in schools remains a challenge. In the areas of outdoor education this challenge is being tackled by some (Dawes, 1985; Humberstone, 1986a, 1986b, 1990; Johnson (1990); Jordan, 1990, 1992; Knapp, 1985, 1989; Nolan & Priest, 1993), yet in Western Australia participation rates alone indicate that major change is yet to occur.

Educators, students, parents, and the general community are biased by traditionally acceptable notions of masculine and feminine roles and behaviour. These notions have been shaped by "a male culture that is essentially about domination and submission" (Gen, 1991, p. 1). Even the most liberal feminists have recognised that policy reform does not necessarily result in positive changes. Three important goals for feminist educators and researchers are to (a) examine and correct content bias in curriculum; (b) address the imbalance in participation rates of girls and boys; and (c) work towards the stated objective of the *Social justice in education: Policy and guidelines for gender equity*. This policy gives as an objective that: "gender is no longer a variable affecting patterns of student participation, achievement and post-school options" (Ministry of Education, 1991, p. 5).

Gendered language in outdoor education discourse

Historically, the wilderness has been portrayed as a male domain, with exploring and discovery perceived as highly masculine pursuits (LaBastille, 1980). Outdoor clothing and equipment has often been of military origins, and the military-style quests for survival and conquest have pervaded outdoor adventure activities and discourse. Mitten (1985) described the kinds of commonly used dominating and survival-mode discourse in outdoor activities, which included 'attack the trail', 'hit the water', 'assault the mountain', and 'conquer the summit' (p. 22). She advocated replacing such discourse with the deliberate use of adapting or coping language which emphasised win/win outcomes. In her experiences with women's groups in the outdoors, she suggested it was more common to have to suggest to someone to slow down, relax, or give someone else a chance to do the chores, than to be concerned with motivation levels of participants.

Jordan (1990) reported that although there has been a shift towards gender-neutral language, the continued use of terms such as two-man tent, man-hours, mankind, and references to adult females as girls (or ladies) and males as men, serve to promulgate the message that male is better. LaFrance (1991) reported a number of studies showing that teachers' speech frequently includes sexist language. Use of the generic 'he' to refer to females as well as males has been shown in several studies to give a strong male-only picture to students.

Warren (1990) pointed out that "outdoor adventure education has traditionally been a white male-dominated field with programmes evolving from and emulating these roots" (p. 416). While the traditional male view of outdoor adventure has been the heroic quest, a woman's approach to the outdoors is more likely to involve bonding with nature rather than conquering it.

From an historical viewpoint, Bialeschki (1992) traced women's involvement in outdoor recreation over the past 100 years, and suggested that these women viewed their experiences as a journey rather than a quest, writing in their diaries of their love of the wilderness for its beauty, freedom, solitude and peacefulness. Julie Tullis, an outstanding mountaineer who died on K2 after reaching its summit in 1986, wrote, "People are always asking why I climb....It is a love, a great desire, a passion to be with the mountains, like a sailor feels with the sea" (p. 216).

The language of outdoor education discourse still reflects much of its male military origins in terms of equipment, objectives, behaviour, and leadership styles. Johnson (1990) observed that male outdoors groups tended to be more competitive, task-oriented, and prepared to 'drop' a team member rather than fail to meet their objective. Female groups tended to be more cooperative, supportive, and prepared to express their apprehension about challenges.

Lynch (1991) reported that peer pressure to participate in outdoor challenging activities was often couched in stereotypical gender terms, such as, 'Aw, don't be a wimp! It's easy. You just hold on to that rope and don't look down. Go on – be a man!' (p. 10). She pointed out that such coercion was more effective for teenage boys than girls, because this form of gender stereotyping allowed girls to opt out, whereas boys had their masculinity and sexual maturity at stake.

Jordan (1990) pointed out the gender orientation inherent in the language of the terms *hard* skills and *soft* skills. Firstly, through general usage ordering of the terms as in hard–soft rather than soft–hard, hard skills are given superiority and masculinity. Secondly, the phallogentric nature of the words can depreciate the female gender and its contribution to the area of outdoor education. Jordan suggested substitution of the terms *technical* and

interpersonal as a strategy to correct the devaluing of the perceived feminine domain of human interpersonal skills (p. 47).

Traditionally, hard skills have been most valued and admired. People trained hard to improve competency in technical outdoor skills, whilst it was assumed that social and interpersonal skills developed with little formal training. Knapp (1985) observed that society designated whole-body physical pursuits in the field of outdoor education as typically male activities, while it designated human growth and group processing skills as typically female.

Girls and course selection

The Ministry of Education acknowledged in its *Social justice in education: Policy and guidelines for gender equity (1991)* that patterns of secondary subject enrolment "reveal a largely sex-differentiated segregation of the student population" (p. 6). In this document the Ministry recognised that many parents, teachers, and students perceive certain curriculum units and courses to be feminine or masculine and therefore appropriate or inappropriate for girls and boys:

In secondary schools, it has been shown that a major reason why girls drop out of physical education is that both boys and girls regard it as a "masculine" domain (Ministry of Education, 1991, p. 6).

The Ministry, through its *Social justice in education: Policy and guidelines for gender equity (1991)*, is committed to increasing the participation rates of girls in physical education, and to reforming curriculum so that "the likely interests, experiences, and learning styles of both girls and boys are provided for equally" (p. 6).

A study by Browne (1991) to identify reasons for the selection, or nonselection, of Physical Education Studies by Year 12 girls in Western

Australian government schools found that girls selected Physical Education Studies for enjoyment, a break from the classroom, and fitness. Girls also indicated that their selection was influenced by a liking of learning new skills, a liking of sports offered, a perception that they were good at sport, and a liking for coeducational classes. The major reason given by girls for not selecting Physical Education Studies was that other courses were more important for career plans.

Browne's findings are considered to be relevant to this research project, as it appears likely that there would be commonalities in the reasons given by girls for selecting, or not selecting, Physical Education Studies and Outdoor Education. A comparison of both courses highlights the following similarities:

- * both are conceptually based in physical education;
- * both are taught by physical educators;
- * both are taught mainly by males;
- * both are relatively recent inclusions as accredited courses for Year 11 and Year 12 students (Physical Education Studies 1985, Outdoor Education 1989); and
- * the participation rate of girls in both courses in Years 11 and 12 is comparable, with girls comprising approximately 35% of enrolments in both Physical Education Studies and Outdoor Education.

A report by Reynolds (1988) indicated that in Victoria, across both the public and private school sector in 1986, boys outnumbered girls in outdoor education enrolments at Years 10, 11, and 12. Reynolds acknowledged that "this modest research" raised more questions than it answered (p. 24). Issues raised included:

- * the dramatic fall-off rate from Year 10 to Year 11 (comparable to the poor retention rate at the same level in Western Australia);

- * the question, "What exactly are schools teaching, and naming, as Outdoor Education?";
- * the perceived relevance, or irrelevance, for students' career aspirations; and
- * the effects of organisational difficulties in offering outdoor education in schools.

The area of girls' and women's participation in outdoor education courses in schools has been the subject of comparatively little research in Australia, New Zealand, Britain and North America. Examination of available sources revealed that there is a large literature base pertaining to philosophy, technical skills, leadership, motivation, legal liability and programmes. However, until 1991, the literature rarely referred to the different interests, experiences and learning styles of girls and women in, for, and about, the outdoors. Humberstone (1985, 1986a, 1986b, 1990) undertook her observation and research of gender issues in outdoor education in Britain, where programmes have evolved over many years and from widely differing philosophical bases across the school system. Her research indicates a need for further investigation by outdoor educators into the implications of traditional gender-identified philosophies and practices which are implicit in present-day outdoor education curricula and programmes.

Summary

This review has investigated the concept of outdoor education, and the pattern of underrepresentation of girls and women in the area of outdoor education. The literature reveals that there is a considerable body of knowledge regarding the effects of gender operating as a powerful cultural and ideological force to shape our perceptions of ourselves and others. Government legislation makes sex discrimination unlawful, and education policy-makers direct schools and teachers to comply with curriculum reform for

gender equity. However statistical data shows that an imbalance of females participating in the traditionally perceived masculine domain of the outdoors continues.

It is also apparent from the literature that sexist language and behaviour is promulgated by curriculum, teachers, media, parents and society in general. The review concludes with the inference that within the area of outdoor education the task of monitoring participation rates and researching reasons for girls' and women's low participation has merely begun.

From the literature, four factors were identified that appear to influence the process of girls' and boys' selection, or nonselection, of Outdoor Education. The major factor that appears to permeate all others is an individual's *gender orientation* to the masculine–feminine binary. Girls and boys making course selections which affect their future career and personal aspirations, are affected by their previous socialising experiences. These will determine their level of positivity towards selecting a course in a traditionally masculine, or feminine, domain. Educators who are looking to redress the imbalances of participation related to gender orientation find this of major concern.

While Western society adheres to a hegemonic male symbolic order, and to discursive practices which divide the world in this way, girls and women will struggle with contradictions, learning their own female subject position at the same time as they are learning the rhetorical discourse of equality (Davies, 1989a; Gilbert, 1990). In her research on self–esteem and the English curriculum, Gilbert (1990) posed the questions:

What 'self–knowledge' about being a woman is possible for girls given the prevailing gender constructs in literature and in the media masquerading as natural and universal concepts of womanhood or girlhood? Is it 'self–knowledge' that will be useful to girls, or a critical understanding of the social construction of gender, and of how that construction operates to oppress women? (p. 183).

Three other factors identified from the literature appear to be operative in the process of selection, or nonselection, of Year 11 Outdoor Education for girls and boys. *Enjoyment* of the outdoors, *personal plans and ambitions*, and a sense of *challenge and adventure* were likely motivating factors for selecting Year 11 Outdoor Education.

The literature also suggests that a girl's self-perception of what she *ought* to be, in order to take her social place, may be biased against any or all of these factors, because they are seen to be polar opposites of the femininity for which she believes she should be striving. By contrast, a boy's self-perception of what he ought to be is unlikely to throw up such contradictions as he considers selection, or nonselection, of the course. Figure 9 illustrates how the major factor of *gender orientation* acts as a filter for other factors, and affects girls' and boys' selection, or nonselection, of Year 11 Outdoor Education.

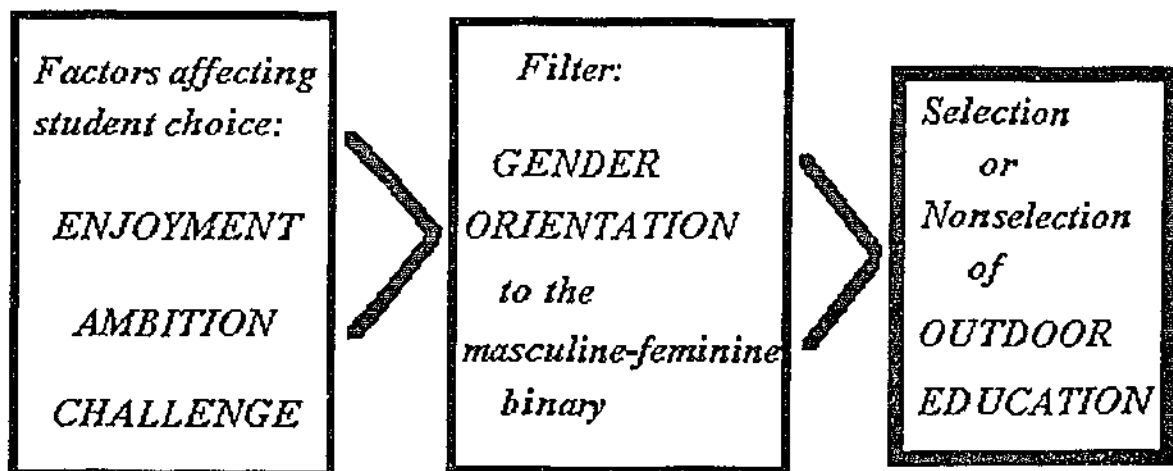


Figure 9. The interaction between factors relevant to selection, or nonselection, of Year 11 Outdoor Education.

The literature, plus the researcher's personal experience as an outdoor educator, were both drawn upon to refine these factors into 10 constructs.

Table 2 synthesises the 4 factors and 10 constructs derived from the literature.

Table 2
Factors and their constructs derived from the Literature

FACTOR	CONSTRUCT	DERIVATION
G E N D E R O R I E N T A T I O N	1. PERCEPTION OF GENDER EQUITY IN OUTDOOR ACTIVITIES	Carrington & Leaman (1986); Dawes (1985); Griffin (1991); Green (1987); Humberstone (1985, 1986a, 1986b, 1990); Knapp (1985); LaFrance (1991); Reynolds (1988); Sarah (1980); Scraton (1986); Stanworth (1983).
	2. ATTITUDE TO COEDUCATIONAL CLASSES	Bain (1985); Browne (1986, 1988, 1990, 1991); Burgess (1990); Carrington & Leaman (1986); Humberstone (1985, 1986a, 1986b, 1990); Macdonald (1989a, 1989b, 1991); Turvey & Laws (1988).
	3. ATTITUDE TO OTHER STUDENTS	Fraser & Fisher (1983); Griffin (1991); Research Branch, EDWA (1985); Discussion with outdoor educators; Personal observation.
	4. PERCEPTION OF GENDER EQUITY IN LEADERSHIP	Bain (1985); Ball (1986); Dawes (1985); Green (1987); Humberstone (1986b, 1990); Knapp (1985); Kuchel (1987); Levi(1991); McBride (1990); Warren (1990).

(table continues...)

FACTOR	CONSTRUCT	DERIVATION
E N J O Y M E N T	5. ENJOYMENT OF OUTDOOR EDUCATION	Fraser & Fisher (1983); Browne (1990); Easther (1982); Humberstone (1985); Kiewa (1991); Lynch (1991); Miranda (1985); Research Branch, EDWA (1985).
	6. INTEREST IN OUTDOOR SKILLS	Fraser & Fisher (1983); Browne (1990); Easther (1982); Humberstone (1985); Maddern (1990); March & Watchow (1991); Research Branch, EDWA (1985).
A M B I T I O N S	7. PERCEIVED VALUE FOR SELF- DEVELOPMENT	Carlson & Lewis (1982); Easther (1982); Fox (1988); Maddern (1990); March & Watchow (1991); Mitten (1992); Oldenhove (1987); Phipps (1985); Teaff & Kablach (1987); Wealand (1986).
	8. PERCEIVED VALUE FOR CAREER ASPIRATIONS	Ball (1986); Browne (1991); Humberstone (1990); Levi (1991); Reynolds (1988); Willis (1991); Women's Bureau, DEET, (1990).

(table continues...)

FACTOR	CONSTRUCT	DERIVATION
C H A L L E N G E	9. ATTITUDE TO PERSONAL CHALLENGE AND ADVENTURE	Carlson & Lewis (1982); Dawes (1985); Easther (1982); Gair (1988); Green (1987); Humberstone (1990); Johnson (1990); Kiewa (1991); Maddern (1990); March & Watchow (1991); Mitten (1985); Phipps (1985); Priest (1986, 1991); Teaff & Kablach (1987); Warren (1990).
	10. ATTITUDE TO CAMPS AND EXPEDITIONS	Dawes (1985); Easther (1982); Gair (1988); Johnson (1990); Kuchel (1987); March & Watchow (1991); Mitten (1985); Nettleton (1978); Royce (1987).

The 10 constructs also reflect current Ministry of Education guidelines for curriculum content and process as expressed in the *Outdoor education 1989–90 rationale, Western Australian schools, K–12, Unit curriculum stages 3–6, Year 11 and Year 12* (Ministry of Education 1990a), and the *Social justice in education: Policy and guidelines for gender equity* (Ministry of Education, 1991).

CHAPTER 3

METHODOLOGY

This chapter discusses the following aspects of the methodology: design of the study, subjects and setting, instrumentation, procedures, and limitations of the design.

Design

The methodology employed in this study is based on feminist theory, which is concerned with the reconstruction of knowledge reflecting the position of women in society as meaningful and valuable. It is essentially a descriptive-analytical study which employs both quantitative and qualitative data collection methods to identify reasons underlying the fact that fewer girls than boys select Outdoor Education in Year 11. Jayaratne (1983) advocated the use of quantitative data in conjunction with qualitative data in feminist research. She also noted that: "While there is a practical limit to the complexity of quantitative data (and thus analysis), the limit for qualitative data seems higher since, at least theoretically, it can be as detailed as possible" (p. 153).

Patton (1990) noted that an important advantage of mixed-mode design is enhanced validity through cross-data checks which provide triangulation. Priest (1986) pointed out that outdoor educators are concerned with intangibles such as the development of intrapersonal and interpersonal awareness, understanding, communication skills, and the interrelationship of people and environment. Accordingly, research in outdoor education concerning such intangibles is well suited to utilisation of qualitative methods.

The researcher, adopting a feminist perspective, recognises that through listening for "the different voice" (Gilligan, 1982) in qualitative data collection,

and through content analysis as well as statistical analysis, it will be possible to adequately describe and analyse reasons underlying girls' subject choice. Gilligan supported the feminist viewpoint that experience of life by females and males is fundamentally different. She argued that the construct of *male* experience as "normal", and *other*, or female experience as "deviant" or "inferior", is the basis for oppression by sex, race and class today. Gilligan contended that women speak in a different voice, not a morally inferior one. She contrasted the male experience of separateness, of rights, duties and obligations, with the female experience of connectedness and of identities residing within relationships.

Subjects and setting

Subjects for this study were 43 Year 10 girls and 34 Year 10 boys at a metropolitan senior high school, drawn from the following sections of the school population:

- * 16 girls and 20 boys who had completed Year 10 Outdoor Education units (the total population);
- * 6 girls and 6 boys who did not participate in Year 10 Outdoor Education, but who had selected Year 11 Outdoor Education (the total population); and
- * 21 girls and 8 boys who did not participate in Year 10 Outdoor Education and who did not select it for Year 11 (randomly selected from year lists).

All participants indicated that they were continuing into Year 11.

The large difference in numbers of girls and boys in the last category occurred because the constraints of timetable and programmed school events made it difficult to gain access to the Year 10 boys. It was decided to retain the larger number of girls in the study in order to enhance reliability in the focus area of girls' responses.

The school was a large metropolitan senior high school with an ongoing outdoor education programme. Its student population draws from all socio-economic levels. Several other factors contributed to its selection. Firstly, it had a sufficiently large population of girls and boys enrolled in outdoor education units and courses. In addition, it was well resourced in terms of equipment and accessibility to appropriate outdoor teaching venues. Finally, there was an expressed willingness by relevant teaching staff to cooperate with the study.

Both outdoor education teachers involved in the study were male physical educators, one with eight years and the other with two years teaching experience. Both had taught outdoor education at this school over the previous two years. They were assisted on camps by the female Youth Education Officer, who had outdoor education expertise.

Instruments

The instrument utilised for quantitative data collection was a purpose-developed questionnaire designed to ascertain girls' and boys' attitudes to aspects of outdoor education. An additional section for open-ended responses was included for qualitative data collection. School documentation and personal observation provided other useful sources of data for purposes of triangulation.

The questionnaire was designed to explore the significance of four main factors in the selection process of girls and boys. Each of the four factors, namely *gender orientation*, *enjoyment*, *ambitions*, and *challenge*, had been identified from a review of the literature (see Table 2), and were triangulated

with personal experience, observation, and discussion with other experienced outdoor educators.

The four factors under investigation were further refined to provide a total of 10 constructs pertaining to outdoor education. Each construct was then expressed in question form. Table 3 synthesises the four factors, their corresponding constructs and clarifying questions.

Table 3
Constructs and their clarifying question.

FACTOR	CONSTRUCT	CLARIFYING QUESTION
G E N D E R O R I E N T A T I O N	1. PERCEPTION OF GENDER EQUITY IN OUTDOOR ACTIVITIES	Do students view outdoor education as a curriculum unit or course which is equitable for both girls and boys?
	2. ATTITUDE TO COEDUCATIONAL CLASSES	Do students have a positive attitude to coeducational classes in outdoor education?
	3. ATTITUDE TO OTHER STUDENTS	Do students have a positive attitude towards other members of their Outdoor Education class?
	4. PERCEPTION OF GENDER EQUITY IN LEADERSHIP	Do students perceive the role of outdoor leader as equitable for females and males?

(table continues...)

FACTOR	CONSTRUCT	CLARIFYING QUESTION
E N J O Y M E N T	5. ENJOYMENT OF OUTDOOR EDUCATION	Is the attitude towards outdoor education generally positive?
	6. INTEREST IN OUTDOOR SKILLS	How strong is the interest level in acquiring a variety of new outdoor skills?
A M B I T I O N	7. PERCEIVED VALUE FOR SELF- DEVELOPMENT	Do students have a positive perception of outdoor education as a means of personal growth and development?
	8. PERCEIVED VALUE FOR CAREER ASPIRATIONS	Do students perceive outdoor education as useful in preparing them to better achieve their career goals?
C H A L L E N G E	9. ATTITUDE TO PERSONAL CHALLENGE & ADVENTURE	Do students view risk as a necessary component of adventure that can be managed to maximise safety?
	10. ATTITUDE TO CAMPS AND EXPEDITIONS	Do students have a positive attitude to camps and expeditions?

The pilot questionnaire contained a total of 40 items, consisting of 4 questions relating to each of the 10 constructs, as presented in Appendix A. Students were asked to respond to each question by marking a Likert scale from 1 to 4, indicating *Strongly Disagree* to *Strongly Agree*. A 4-point Likert scale allowed responses to be classified as positive or negative. Items in the questionnaire were presented in random construct order as follows: 5, 6, 7, 8, 1, 9, 2, 3, 10, and 4. Of the 40 items included in the pilot questionnaire, 50% of the questions were stated in the positive form and 50% in the negative form. The questionnaire concluded with a section allowing respondents to answer four open-ended questions.

The questionnaire was piloted with a group of 23 Year 10 Outdoor Education students, using a test-retest procedure with an interval of 8 weeks. Reliability was established by the computation of stability coefficients and internal consistency coefficients. The scores for negative-form questions were reversed prior to computation.

Stability coefficients (Pearson r) were computed using test-retest results. This yielded item correlation coefficients ranging from 0.93 to 0.99 with an overall coefficient of 0.98, which represents a significant relationship at the 0.05 level. Therefore, reliability of responses on all items was established.

Internal consistency coefficients (Cronbach Alpha), plus frequency responses, item means and standard deviations were derived from the LERTAP statistical package. An alpha coefficient is considered significant at a level above 0.7. Six of the 10 constructs resulted in a significant coefficient across all four items, therefore establishing internal consistency for those constructs. From each of the remaining four constructs, the lowest scoring item was deleted in order to establish reliability across the remaining three items (see Appendix A).

The resulting 36-item questionnaire utilised in this study is presented in Appendix B. A modified version of the questionnaire was also prepared and used with students who did not participate in Year 10 Outdoor Education. That is, the wording of items referring specifically to current class participation were adjusted to ask students to respond regarding their perceptions of how outdoor education might be for them. The modified questionnaire is presented in Appendix C.

Validity of the questionnaire was established by considering face validity and content validity. Face validity was established through appraisal by three experienced and current practitioners in outdoor education. Each of the 10 constructs was examined for representativeness to the content domain of "attitudes to outdoor education", and the relationship of each individual item to the relevant construct was examined. Both areas were deemed to be satisfactory after appraisal by each of the practitioners. Two of the three appraisers were female and all had extensive backgrounds in teaching outdoor education at secondary level. Two were instrumental in developing unit curriculum for outdoor education in Western Australia, while the other was currently teaching outdoor education at tertiary level.

Content validity was established through the process of deriving the constructs from four sources of knowledge. The sources utilised were the literature on outdoor education and physical education, existing measures of attitudes to school subjects, discussion with outdoor educators, and personal observation.

School documentation

It was beyond the scope of this project to take full advantage of the kinds of unobtrusive measures for data collection that may have been available. However, the researcher utilised some readily-accessible school records and

personal observation for purposes of triangulation and enriched description. Experienced researchers have noted that, in social environments such as schools, unobtrusive measures are useful in reducing such reactive arrangements as a *Hawthorne effect*, or *John Henry effect* (Gay, 1990; McMillan & Schumacher, 1989; Patton, 1990).

School records, such as the prospectus, timetables, timetabling procedures, and programme content, provided useful data for triangulation with questionnaire results. As the researcher was also employed regularly as a relief teacher during the period of data collection at the selected school, opportunities for personal observation of outdoor education activities and student interaction were utilised for triangulation.

Procedures

The questionnaire (or its modified version) was completed by all Year 10 Outdoor Education students and a randomly selected group of Year 10 non-Outdoor Education students at the selected school. All participants in the study had indicated that they had enrolled for Year 11 courses. The questionnaires were administered by the researcher to students during class time by prior arrangement with their teachers. The results of the questionnaire were analysed to determine trends, similarities, and differences in attitudes of girls and boys towards outdoor education.

The inclusion of questionnaire data from boys allowed the researcher to observe commonalities and note areas where opinions and attitudes of girls and boys differed. Contrasting attitudes were of particular interest, as they indicated areas where girls differed to boys in their reasons for selecting, or not selecting, Year 11 Outdoor Education.

Limitations of the design

The following limitations were recognised:

- * this study was essentially a descriptive–analytical study with no attempt to manipulate variables;
- * access to students was subject to the normal constraints of a school environment. For example, timetabling, school hours, absenteeism, and Year 10 students leaving for employment were acknowledged as constraints;
- * student responses to the questionnaire were subject to the level of motivation a student experienced to complete the task;
- * the large percentage of girls may indicate that Year 10 girls at this school had a more positive attitude than girls at other schools towards the selection of Year 11 Outdoor Education; and
- * More girls than boys were participants in the study. This was, firstly, a direct result of using total student populations participating in Outdoor Education courses in Year 10 and Year 11. Additionally, the constraints of timetable and programmed school events at the time of the study made access to Year 10 boys who had not selected Outdoor Education at either Year 10 or Year 11 level, more difficult than access to the comparable group of girls.

CHAPTER 4

RESULTS

The analysis and discussion of results will be presented in two sections. Firstly, questionnaire findings will be presented and summarised under two headings: (a) quantitative findings relating to the 10 constructs of the questionnaire; and (b) quantitative and qualitative findings from analysis of responses to the open-ended questions. Secondly, findings will be interpreted, and the significance of the findings discussed.

Quantitative findings relating to the 10 constructs of the questionnaire

For each construct on the questionnaire a 2x2x2 analysis of variance (ANOVA) was carried out. The scores for the questionnaire items which made up each construct were summed to obtain a total for each construct. A score of 3 or 4 indicated a positive attitude to an item. A construct total between 8 and 16 indicated a positive attitude to the particular construct, with the exception of constructs 1, 3, 6, and 7, where a score between 6 and 12 indicated a positive attitude. These constructs had three items scored only. The scores on each of the ten constructs were used as the dependent variables. The three independent variables were Sex (Girl/Boy), Selection of Year 11 Outdoor Education (Yes/No), and Completion of Year 10 Outdoor Education (Yes/No). Table 4 tabulates the design for clarification.

Table 4

A 2x2x2 ANOVA design for each construct from the questionnaire.

	OUTDOOR EDUCATION			
	<i>Yr10 YES</i> <i>Yr11 YES</i>	<i>Yr10 YES</i> <i>Yr11 NO</i>	<i>Yr10 NO</i> <i>Yr11 YES</i>	<i>Yr10 NO</i> <i>Yr10 NO</i>
GIRLS				
BOYS				

This yielded data which provided answers to the following seven questions in relation to each construct. Construct 6, interest in outdoor skills, has been used to illustrate each question.

- * Is there a significant difference between girls and boys in their interest in outdoor skills?
- * Is there a significant difference between those who select Year 11 Outdoor Education and those who do not select Year 11 Outdoor Education in their interest in outdoor skills?
- * Is there a significant difference between those who have completed Year 10 Outdoor Education and those who have not, in their interest in outdoor skills?
- * Is there an interaction between sex (girls/boys) and selection of Outdoor Education regarding interest in outdoor skills?
- * Is there an interaction between sex and completion of Year 10 Outdoor Education regarding interest in outdoor skills?
- * Is there an interaction between selection of Year 11 Outdoor Education and completion of Year 10 Outdoor Education regarding interest in outdoor skills?

- * Is there an interaction between sex, selection of Year 11 Outdoor Education, and completion of Year 10 Outdoor Education, regarding interest in outdoor skills?

ANOVA results were used to develop a matrix showing where significant main effects and interactions occurred for each construct of the questionnaire. Examination of the matrix presented in Table 5 shows that significant results were found for the constructs that were grouped under the factors labelled *gender orientation*, *enjoyment*, and *ambitions*. The constructs within the *challenge* factor, however, did not demonstrate any significant effects.

Table 5
Matrix of significant main effects and interactions

FACTOR Construct		MAIN EFFECTS			INTERACTIONS			
		SEX	11OE	10OE	SEX/ 11OE	SEX/ 10OE	11OE/ 10OE	SEX/ 11/10OE
GENDER ORIENTATION	C1	X			X			
	C2				X			
	C3			X				
	C4	X				X		
ENJOYMENT	C5			X				
	C6		X					
AMBITIONS	C7		X	X				
	C8		X		X			
CHALLENGE	C9							
	C10							

Note. A cross 'X' indicates occurrence of a significant main effect or interaction. Sex, 11OE and 10OE = the three independent variables Sex, selection of Year 11 Outdoor Education, and participation in Year 10 Outdoor Education. C1 to C10 = constructs 1 to 10.

Results are significant at $p < .05$.

Results are also presented in tabulated and graph form for each of the 10 constructs. Mean scores of the eight groups in each ANOVA were graphed in order to explore the nature of differences and interactions that occurred, and are presented in Appendix D. The significant results for each construct under factor headings are described in the following section. No other main effects and interactions indicated statistical significance.

The main factor *gender orientation* was measured by responses to constructs 1, 2, 3 and 4. Results indicated that, firstly, there was a significant difference ($p < .05$) between girls and boys regarding their perception of gender equity (construct 1). Overall, girls had a more positive perception of gender equity in outdoor activities than boys (girls: $M=10.85$, $SD=.45$; boys: $M=10.13$, $SD=.69$).

There was a significant interaction ($p < .05$) between sex and selection/nonselection of Year 11 Outdoor Education, with regard to perception of gender equity. Results shown in Figure 10 reveal that girls who selected Year 11 Outdoor Education appeared to have a more positive perception of gender equity in outdoor activities than boys who selected Year 11 Outdoor Education. From Figure 10 it also appears that girls who chose Year 11 Outdoor Education had a more positive perception of gender equity in outdoor activities than girls who did not choose Year 11 Outdoor Education.

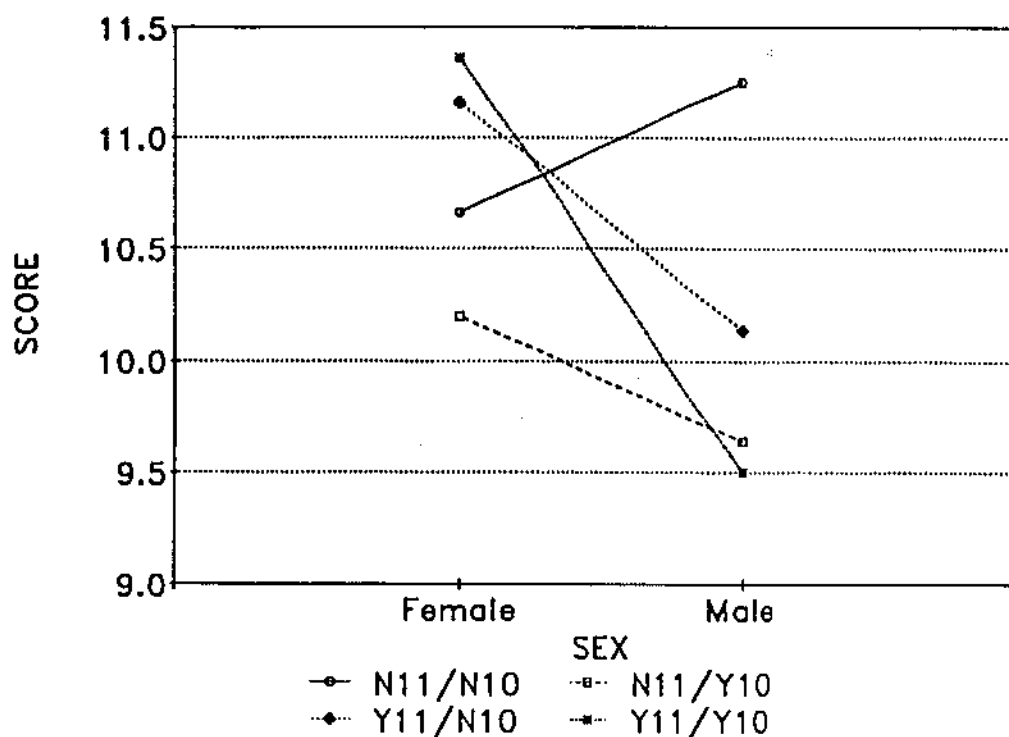


Figure 10: Results for construct 1, 'Gender equity' demonstrating the nature of the Sex/11OE interaction.

There was also a significant interaction ($p < .05$) between student sex and selection/nonselection of Year 11 Outdoor Education with regard to coeducation (construct 2). Results shown in Figure 11 reveal that girls who selected Year 11 Outdoor Education had a more positive attitude to coeducational classes than boys who selected Year 11 Outdoor Education, whereas it appears that girls who did not select Year 11 Outdoor Education had a more negative attitude to coeducational classes than boys who did not select the course. From Figure 11 it also appears that girls who chose Year 11 Outdoor Education had a more positive attitude to coeducational classes than girls who did not choose Year 11 Outdoor Education, whereas boys' attitudes to coeducational classes do not seem to be important in relation to whether or not they chose Year 11 Outdoor Education.

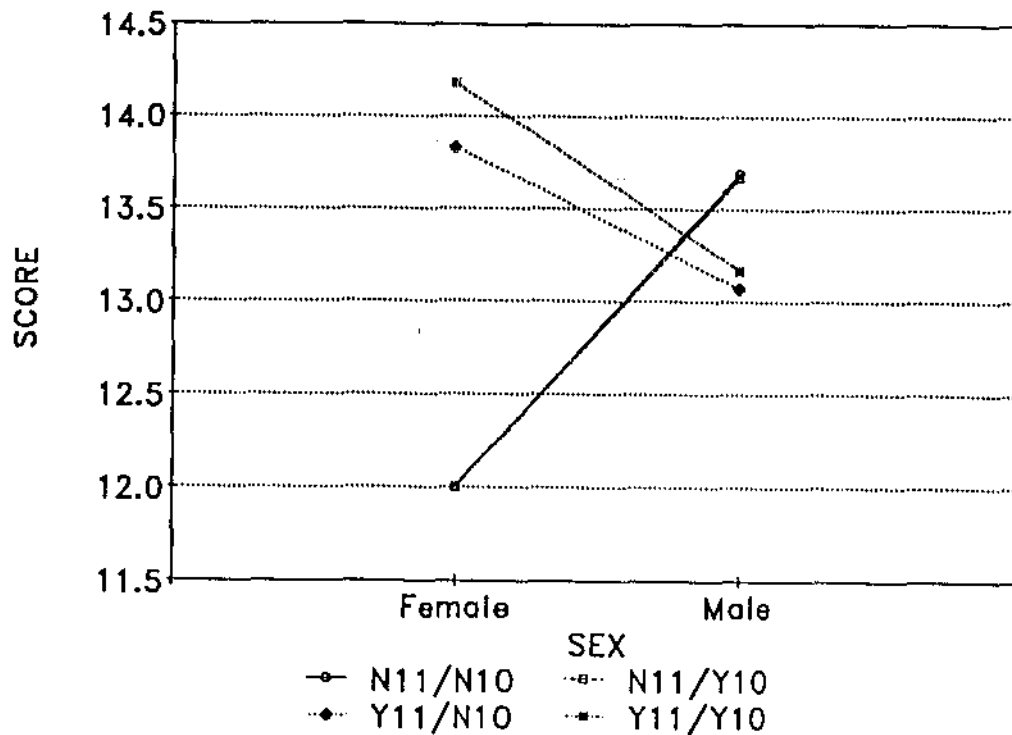


Figure 11: Results for construct 2, 'Coeducation' demonstrating the nature of the Sex/11OE interaction.

There was a significant difference ($p < .05$) in attitude to other students (construct 3) between students who participated in Year 10 Outdoor Education and students who did not. Students who participated in Year 10 Outdoor Education had a more positive attitude to other students in the Outdoor Education class than students who did not (Yes 10OE: $M=9.98$, $SD=.48$; No 10OE: $M=8.89$, $SD=.46$).

There was a significant difference ($p < .05$) between girls and boys regarding perception of gender and leadership (construct 4). Girls had a more positive perception of gender equity and leadership roles than boys (girls: $M=14.78$, $SD=.57$; boys: $M=13.41$, $SD=.77$).

There was a significant interaction ($p < .05$) between sex and participation/nonparticipation in Year 10 Outdoor Education regarding perception of gender and leadership roles. From Figure 12 it appears that girls

who participated in Year 10 Outdoor Education had a more positive perception of gender equity in leadership roles than boys who participated.

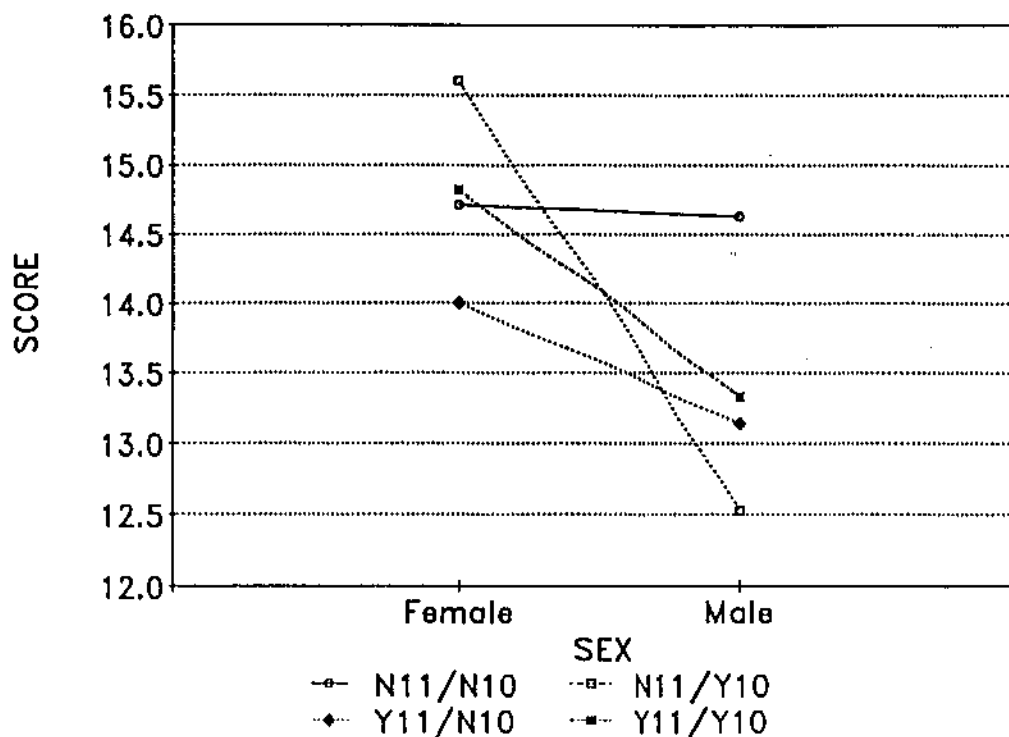


Figure 12: Results for construct 4, 'Gender equity in leadership' demonstrating the nature of the Sex/10OE interaction.

In summary, the *gender orientation* factor in selection of Year 11 Outdoor Education appeared to be of more concern to girls than boys. Overall, girls perceived Outdoor Education as a more equitable subject for girls and boys, and as a more equitable area for female and male leadership, than boys. Notably, girls who had completed Year 10 Outdoor Education, regardless of whether they had selected the Year 11 course, considered equitable leadership more positively than all other students.

Girls who selected Year 11 Outdoor Education were more positive regarding both the level of equity and coeducational classes than boys, while girls not participating in Year 10 Outdoor Education and not selecting Year 11

Outdoor Education appeared to have more negative attitudes to coeducational classes in Outdoor Education compared to all other girls and boys in the study. Boys who had completed Year 10 Outdoor Education and/or selected the Year 11 course had more negative attitudes to gender equity and leadership equity than other boys.

Finally, girls and boys who had participated in Year 10 Outdoor Education had a more positive attitude to other Outdoor Education students than others. In contrast to attitudes of boys, Figure 13 graphs the attitude of non-Outdoor Education girls to Outdoor Education students as more negative than all other girls in the study. This appears to be indicative of the gender orientation of Outdoor Education.

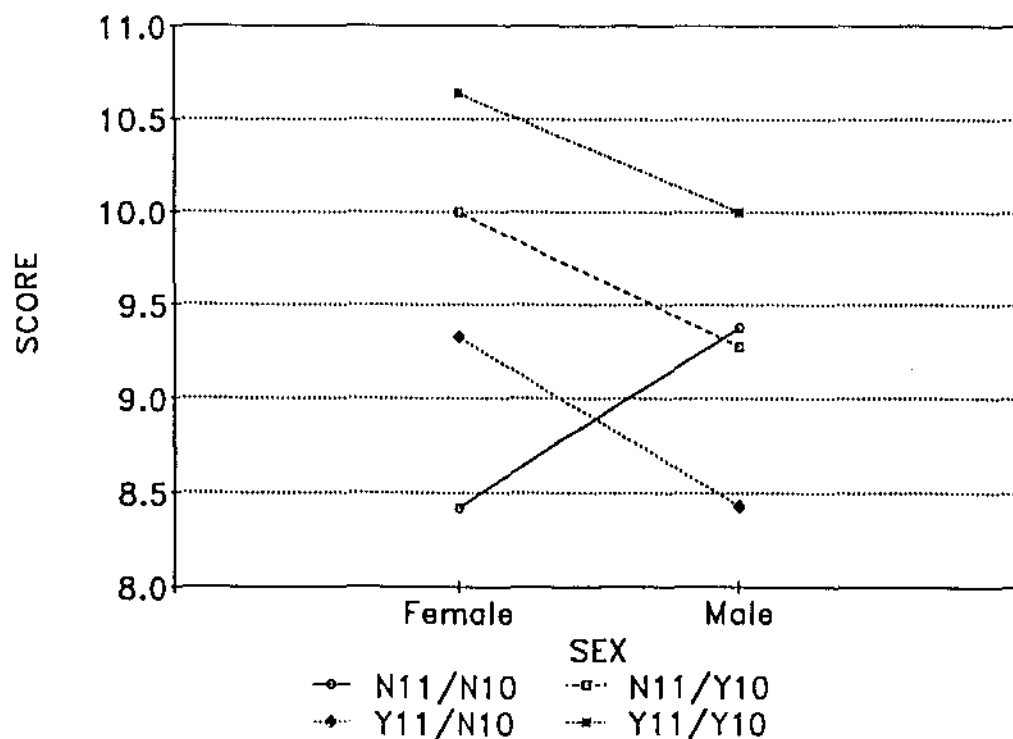


Figure 13: Results for construct 3, 'Attitude to other students' demonstrating the contrast in response from Yes 10OE and/or Yes 11OE girls with response from NO 10OE/NO 11OE girls.

The factor *enjoyment* was measured by responses to constructs 5 and 6. Results revealed that, firstly, there was a significant difference ($p < .05$), between those who participated in Year 10 Outdoor Education and those who did not, in perceived enjoyment (construct 5). Students who participated in Year 10 Outdoor Education had lower enjoyment expectations than students who did not do Year 10 Outdoor Education (Yes 10OE: $M=11.44$, $SD=.86$; No 10OE: $M=12.84$, $SD=.56$).

Secondly, there was a significant difference ($p < .05$) in interest in Outdoor Education (construct 6) between students who selected Year 11 Outdoor Education and those who did not. Students who selected Year 11 Outdoor Education were more interested in outdoor skills than those who did not select the course (Yes 11OE: $M=10.7$, $SD=.27$; No 11OE: $M=8.65$, $SD=1.76$).

To summarise, *enjoyment* of the outdoors was important in selecting Year 11 Outdoor Education for both girls and boys. However, students who participated in Year 10 Outdoor Education indicated lower levels of *enjoyment* of the subject.

The factor *ambitions* was measured by responses to constructs 7 and 8. Results revealed that, firstly, there was a significant difference ($p < .05$) between students who selected Year 11 Outdoor Education and those who did not, regarding their perception of value for self-development (construct 7). Students who selected Year 11 Outdoor Education had a higher perception of its self-development value than students who did not select the course (Yes 11OE: $M=10.7$, $SD=.27$; No 11OE: $M=8.65$, $SD=1.76$).

Secondly, there was a significant difference ($p < .05$) between students who participated in Year 10 Outdoor Education and those who did not, regarding their perception of its value for self-development. Students who participated in Year 10 Outdoor Education had a lower perception of its self-

development value than students who did not do the subject (Yes 10OE: $M=8.35$, $SD=.78$; No 10OE: $M=9.4$, $SD=.36$).

Thirdly, there was a significant difference ($p<.05$) between students who selected Year 11 Outdoor Education and those who did not, regarding their perception of value for career (construct 8). Students who selected Year 11 Outdoor Education had a higher perception of value for career than those who did not select the course (Yes 11OE: $M=11.7$, $SD=.86$; No 11OE: $M=8.35$, $SD=3.51$).

Finally, there was a significant interaction ($p<.05$) between sex and selection/nonselection of Year 11 Outdoor Education, with regard to perceived value for career. A graph of the ANOVA (Figure 14) reveals that girls who selected Year 11 Outdoor Education appeared to have a higher perceived value of Outdoor Education for career aspirations than boys who selected Year 11 Outdoor Education. Additionally, girls who did not select Year 11 Outdoor Education appeared to have a lower perceived value of Outdoor Education for career aspirations than other students.

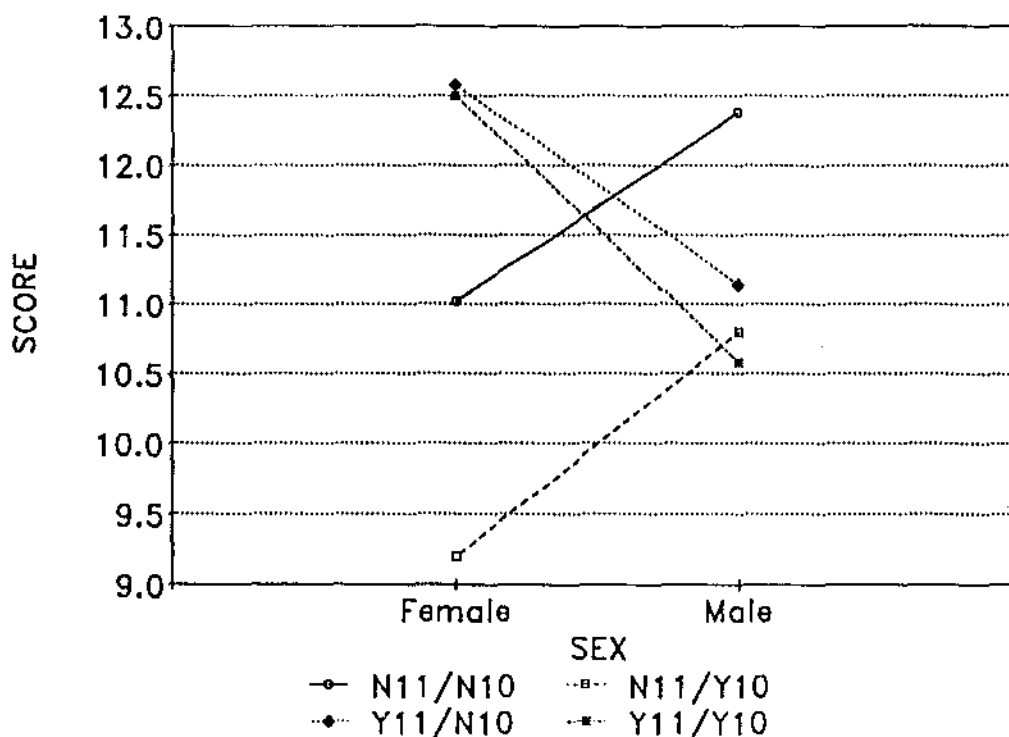


Figure 14: Results for construct 8, 'Value for career', demonstrating the nature of one significant difference, Year 11 selection; and a Sex/Yr11 selection interaction.

In summary, the *ambitions* factor, related to personal and career aspirations, was more important for girls and less important for boys in selecting Year 11 Outdoor Education. In particular, girls who selected the Year 11 course saw Outdoor Education as of higher value for self-development and career than all the other girls and boys in the study. By contrast, girls not selecting Year 11 Outdoor Education appeared to have a more negative perception of its value for self-development and career aspirations than other students. However, participation in Year 10 Outdoor Education for girls or boys was not an indicator of a raised perception of the value of Outdoor Education for career and personal development.

The factor *challenge* was measured by responses to constructs 9 and 10. Results indicated that there were no significant effects for either of these constructs within the variables of sex, Year 11 Outdoor Education, and Year 10 Outdoor Education. Therefore the findings from this study indicated that the challenge and adventure factor was not important for either girls or boys when selecting the course.

Findings from analysis of responses to open-ended questions

Data from the open-ended responses were coded and tabulated to build matrices of students' likes and dislikes, suggestions, and reasons for selection or nonselection of Outdoor Education (Tables 6 to 10). Responses were grouped and quantified according to Sex (girl/boy), Selection/nonselection of Year 11 Outdoor Education, and Participation/nonparticipation in Year 10 Outdoor Education, to facilitate comparison. Quotations from students are included in the analysis to add authenticity through provision of qualitative data. Where more than one student has been quoted to illustrate a particular point, the separate quotations are grouped under the relevant point.

Analysis of girls' and boys' open-ended responses showed consensus by both sexes across all categories regarding a liking for the following aspects of Outdoor Education: doing practical activities; camps; being in the outdoors; and personal challenge and adventure. Girls differed to boys in that girls expressed their liking for building friendships, having fun, mixing with girls and boys, and socializing with others (Table 6).

Table 6

Analysis of responses regarding liked aspects of Outdoor Education

SELECTED YR 11 OUTDOOR ED COMPLETED YEAR 10 OUTDOOR number of students	yes yes 10	GIRLS			BOYS			no no 8
		yes 6	no 6	no 21	yes 5	yes 6	no 15	
LIKES								
learning practical skills through hands-on experiences	7 70%	4 67%	5 83%	14 67%	4 80%	2 33%	10 67%	3 38%
camps	6 60%	3 50%	4 67%	12 57%	1 20%	4 67%	5 33%	6 75%
enjoyment of being outdoors	4 40%	2 33%	2 33%	11 52%	1 20%	4 67%	2 13%	3 38%
personal challenge and adventure	6 60%	4 67%	4 67%	12 57%	1 20%	2 33%	2 13%	3 38%
building friendships, having fun and socializing	4 40%	4 67%	3 50%	14 67%		1 17%		5 63%
relaxation, and a change in lesson routine	3 30%	4 67%	1 17%	3 14%	1 20%		1 7%	

Note. Each entry provides the number of students responding, plus percentage of total e.g. 4 19%

One girl who had completed Year 10 Outdoor Education and had selected the Year 11 course commented:

I really enjoy outdoor ed its really fun to do. You become friends with more people than you sit with.

Another girl selecting the Year 11 course who had not participated in Year 10 Outdoor Education wrote that:

I really love the outdoors, ie camping and I think it will be great to have the opportunity to do it with your peers.

Boys generally did not remark on this aspect, with the exception being

those boys who had never selected Outdoor Education. More girls than boys expressed a liking for Outdoor Education as relaxation, and a change of school routine. A continuing Outdoor Education female responded that:

I selected Outdoor Ed as one of my subjects for next year because it isn't stressful and it will be a relaxing subject for me when I will have all of my other TEE subjects.

Another girl selecting Outdoor Education for the first time in Year 11 wrote:

I think it will be good to get out of the main subjects like maths and science and do something different to get it off your mind instead of always having schoolwork on the brain. Also it will probably be a good challenge to try something a bit different.

There was consensus amongst responses from both girls and boys regarding a *dislike* for the following: excessive and monotonous note-taking; repetition of theory work covered in previous units; and a perceived lack of excursions and camps. Girls who had not participated in Year 10 Outdoor Education expressed similar dislikes regardless of whether they had selected, or not selected, the Year 11 course. These girls, who included those who had selected Year 11 Outdoor Education, disliked coercion to take part in risky activities, negative and disruptive class members, and sexist behaviour by male students and/or teachers (Table 7). The following responses from girls selecting Outdoor Education in Year 11 for the first time indicate their concerns:

Something I would not like is if someone like a teacher made me do something I really couldn't do or I was really scared of doing, or if someone played a trick on me and caused an injury.

The only thing I wouldn't like about an Outdoor Ed class is sexism.

Boys pick on you because you're weaker. Boys are favoured, it's sexist.

Just the scary courses that we'll probably have to do.

Table 7

Analysis of responses regarding disliked aspects of Outdoor Education

SELECTED YR 11 OUTDOOR ED COMPLETED YEAR 10 OUTDOOR number of students	yes yes 10	GIRLS			BOYS									
		yes no 6	no yes 6	no no 21	yes yes 5	yes no 6	no yes 15	no no 8						
DISLIKES														
excessive note-taking, theory replacing practical, and repetition	10	100%	5	83%	1	5%	5	100%	3	50%	13	87%	3	38%
repetitive and uninteresting practical activities, and insufficient excursions	5	50%	1	17%	2	10%			2	33%	5	33%		
coercion in risky activities			2	33%			7	33%					3	38%
sexist behaviour of male students and/or teachers			2	33%			6	29%						
dealing with menstruation and personal hygiene			1	17%									1	13%
particular class members, "put-downs" from others, and disruptive students			1	17%			6	29%					1	13%
adventure pursuits							3	14%					3	38%
expense of camps							1	5%						
lack of friends in class	1	10%												

Note. Each entry provides the number of students responding, plus percentage of total e.g. 4 19%

Girls not selecting Outdoor Education at Year 10 or Year 11 level

expressed similar concerns:

The teacher would have to be good, not pressurizing or demanding students to take part in something they are not comfortable with.

I don't think I would like to be treated as though "a girl isn't as good as a boy at this" for-it sounds as though this does go on - sexism, that is.

The only thing I wouldn't like about the classes is mixed sexes classes. I like just all boys or all girls. Makes me feel more relaxed and not as if I have to compete against really strong, faster, more energetic guys.

Having to deal with menstruation and personal hygiene in the outdoors were dislikes expressed by one girl and one boy respectively. One girl, whose overall attitude was positive and who was continuing Outdoor Education in Year 11, disliked the fact "that I don't have too many of my friends in the class". Some non-Outdoor Education girls and boys expressed a dislike of adventure pursuits, and only one student mentioned a dislike of the expense of camps.

Table 8 shows there was consensus from both boys and girls on the following *changes they would like introduced* into the programme. They suggested more practical activities and less theory, more camps and excursions, more variety with less repetition, and more student choice.

Suggestions relating to correcting the gender orientation of Outdoor Education were made only by girls. They suggested improved equity for girls, more female outdoor education teachers, and equal numbers of girls and boys in classes. A continuing female student wrote:

The male teachers really favour the guys. The girls don't really have a say and are not given equal opportunity.

Girls who had selected Outdoor Education in Year 11 for the first time suggested the following changes:

None. Except for equal treatment for males and females.

Both sexes treated the same.

Non-Outdoor Education girls suggested:

Female teachers and even number of girls, not all boys.

More girls and boys mixing with each other.

Girls also suggested more emphasis on social interaction, as did some boys who had not selected the course. Reducing the expense of camps was suggested by a few students.

Table 8
Analysis of responses regarding suggested improvements

	GIRLS				BOYS			
	yes	no	yes	no	yes	no	yes	no
SELECTED YR 11 OUTDOOR ED	yes	no	yes	no	yes	no	yes	no
COMPLETED YEAR 10 OUTDOOR	yes	no	yes	no	yes	no	yes	no
number of students	10	6	6	21	5	6	15	8
SUGGESTIONS								
more practical activities, less theory	8 80%	1 17%	4 67%	2 10%	4 80%		9 60%	1 13%
more camps and excursions	4 40%	2 33%	2 33%	4 19%	1 20%	3 50%	3 20%	2 25%
variety, less repetition	5 50%		2 33%		1 20%		3 20%	
Improved equity for girls	2 20%	2 33%	1 17%	7 33%				
female outdoor ed teachers			1 17%	3 14%				
equal numbers of girls/boys				4 19%				
emphasis on social interaction	2 20%			5 24%				2 25%
friends in same class	1 10%							
elimination of coercion		1 17%		2 10%				
more time allocation				2 10%	1 20%			1 13%
less expensive camps		1 17%		1 5%		1 17%		
more student choice	2 20%	1 17%		3 14%	1 20%	1 17%	2 13%	
greater challenge	1 10%		2 33%	3 14%		1 17%		

Note. Each entry provides the number of students responding, plus percentage of total e.g. 4 19%

There were similar responses from girls and boys regarding their reasons for selecting Year 11 Outdoor Education. Both sexes mentioned the fun and socializing, an enjoyment of being outdoors, camps and excursions, a

change of routine from the classroom, and self-development. The opportunity to learn outdoors skills was a reason for selection by a larger percentage of girls surveyed than boys. Friendships and relaxation were reasons given by girls only for selection of Outdoor Education. Two female students selecting Outdoor Education for the first time in Year 11 wrote:

I chose it because I wanted to do something to get the core subjects e.g. maths off my mind. Also for something a little more challenging.

I mainly chose Outdoor Ed because it is different from any other subjects. I like the things you do in Outdoor Ed and I like the people you become friends with.

Table 9

Analysis of responses regarding reasons for selecting Outdoor Education

SELECTED YR 11 OUTDOOR ED COMPLETED YEAR 10 OUTDOOR number of students	yes yes 10	GIRLS			BOYS			
		yes 6	no 6	no 21	yes 5	yes 6	no 15	no 8
REASONS FOR SELECTION								
fun and socialising	6 60%	2 33%			3 60%	2 33%		
making new friends	2 20%	1 17%						
being with friends	2 20%							
enjoyment of being outdoors	6 60%	4 67%			2 40%	2 33%		
camps and excursions	1 10%	1 17%			1 20%	1 17%		
learning outdoor skills	5 50%	5 83%				2 33%		
a change from classroom	4 40%	1 17%			2 40%	1 17%		
relaxation	3 30%	1 17%						
self-development	3 30%	1 17%			1 20%	2 33%		
usefulness for career		1 17%				1 17%		
learning leadership skills	1 10%				1 20%			

Note. Each entry provides the number of students responding, plus percentage of total e.g. 4 19%

Girls and boys gave similar *reasons for not selecting Year 11 Outdoor Education* (Table 10). The main reasons were that TEE courses had priority, there was limited perceived value for career, and other courses were seen as more important for career and future. Comments from two noncontinuing students were:

With the other subjects I want there is not enough room for another optional subject but otherwise I definitely would choose it as it is great fun, especially the camps.

No, because I did 5 TEE and my option is Phys Ed. I want to be a PE teacher.

Table 10
Analysis of responses regarding reasons for not selecting Outdoor Education

SELECTED YR 11 OUTDOOR ED COMPLETED YEAR 10 OUTDOOR number of students	yes no	GIRLS			BOYS			no no		
		yes	no	no	yes	no	no			
	10	6	6	21	5	6	15	8		
REASONS FOR NON-SELECTION										
priority of TEE and other subjects didn't fit my gridline		6	100%	14	67%		7	47%	5	63%
limited career value		2	33%	2	10%		2	13%	3	38%
boring, too much theory							3	20%		
no interest in outdoors		1	17%	5	24%					
already involved in outdoors		1	17%	3	14%					

Note. Each entry provides the number of students responding, plus percentage of total e.g. 4 19%

Some boys also commented that the course was boring with too much theory. Some girls remarked that they had little interest in the outdoors. By

contrast, several girls also stated as a main reason for their nonselection, that they already had a strong involvement in the outdoors out of school. Two nonselecting girls explained:

Because I want to dedicate my time to serious studies that relate to later life work and that there is no horseriding or sport like that. Also I think I do enough sport and I really need to study more for the real life.

Apart from the fact that I've chosen the subjects that would get (me) into the area I want to go into, my father is a National Park Ranger and as a result, I spend a large amount of time doing the things that Outdoor Ed teaches for practical and 'real' situations.

Interpretation

Findings from analysis of girls' and boys' responses to open-ended questions generally supported, and to some extent expanded on, findings regarding the four main factors investigated in the 40-item questionnaire, namely *gender orientation, enjoyment, ambitions, and challenge*. Additionally, two other factors emerged as influences on selection, or nonselection, of Year 11 Outdoor Education.

Firstly, although girls who had completed Year 10 Outdoor Education perceived it as an equitable course for girls and boys, other girls showed concern that it was not equitable from several aspects. Secondly, girls revealed more complexity in their reasons for enjoying outdoor activities than boys. Thirdly, girls who selected Year 11 Outdoor Education valued it as useful for personal and career ambitions, while it was less valued by boys, and viewed even more negatively by nonselecting girls. Finally, although initial findings indicated that the challenge and adventure factor was not important for either girls or boys in selecting, or not selecting, Year 11 Outdoor Education, responses to open-ended questions added a dimension of concern. Girls who

had not previously participated in Outdoor Education were wary of the course's potential for coercing students into attempting risky adventure activities.

The masculine *gender orientation* of the course made it appealing for many boys, and unappealing for many girls. Girls acknowledged the presence of constraints felt by females in the outdoor education environment, such as coping with unequal girl/boy ratios in coeducational classes, sexist behaviour from boys, favouritism towards boys from the male teacher, managing personal hygiene, negative discourse and "put-downs", and disruptive class members. Girls particularly expressed their dislike of the occurrence, or potential for occurrence, of "put downs" from more competent outdoor education students, whether it be from a female or male student. Boys in the study did not acknowledge the presence of these constraints, and boys involved in Outdoor Education appeared to have more negative attitudes to sex equity, and leadership equity, than non-Outdoor Education boys.

These findings indicate that a gender perception of Outdoor Education as a course dominated by male students and male teachers did influence selection, or nonselection, of Year 11 Outdoor Education for girls and boys. The role of the school in correcting this influence is clearly delineated, under the *Policy and guidelines for gender equity* (Ministry of Education, 1991), as to 'develop, monitor and implement strategies and programs which will ensure that gender is an irrelevant factor in student participation and achievements' (p. 12). The challenge for outdoor education teachers is to take up the reconstruction of their own perception of gender roles on a day by day basis, and in any face to face encounter.

The *enjoyment* factor was important for both girls and boys in their selection, or nonselection, of the Year 11 course. Many girls and boys indicated a liking for being outdoors, camping, and learning practical skills through hands-on experience, regardless of whether they had selected, or not

selected, Year 11 Outdoor Education. Girls' responses, however, indicated that their enjoyment of the outdoors was compounded by the opportunities it provided for development of interpersonal skills and friendships through social interaction and cooperative group learning, whereas it appeared that boys did not perceive social interaction and friendship as important for course selection. These components of girls' enjoyment reflect components of girls' preferred learning styles as described by Foster (1989):

- * group work featuring cooperation, sharing, negotiation, trust, consensus, acceptance of difference and the opportunity to speak freely
- * the sharing of information, knowledge and skills
- * the experience of being taken seriously, which, by contributing to confidence and self-esteem, increased learning potential
- * the absence of the concept of failure (p. 34).

The *personal and career ambitions* factor was important for girls and boys in their selection, or nonselection, of the Year 11 course. Some girls and boys acknowledged the course as essential to supporting their future plans, while the constraints of gridlines and TEE course selection meant that although students may have found the Year 11 Outdoor Education course appealing, it was not a possible option for them. Three nonselecting students wrote:

I had to choose 5 TEE subjects and I've only ever gone on actual Year camps at my school in Tasmania – (that was great!) and for my non-TEE subject I chose speech and drama – which I have done since Year 8.

I don't have any room to do Outdoor Education because I'm doing 5 TEE subjects and Applied Computing, so there's no room left. If I had room I would choose it.

I just didn't bother about it, instead I chose Early Childhood Studies which I thought would be more educational for me.

A report from the Australian Education Council (1992), titled *Where do I go from here? An analysis of girls' subject choices*, stated that girls' career choices tended to be stereotyped, and tended towards 'voluntarily choosing

educational paths that lead to the more "social" types of occupation,...consistent with future family roles'(p. 15). The report details supporting research which indicates that girls' educational and career decisions are often influenced by the proximity of marriage and child-rearing roles. The masculine perception of Outdoor Education could therefore deter many girls from considering it as a possible Year 11 course.

The *challenge and adventure* factor, although emerging historically from the literature as a motivating influence in outdoor activities, may have a negative connotation when interpreted as coercion. Coercion implies the presence of an external locus of control. In outdoor activities, coercion may produce negative rather than positive results for participants. Lynch (1991) observed that:

Students should ideally be involved in "challenge by choice", selecting activities...where they can challenge themselves whilst maintaining power over their participation, and reaping the benefits of self-esteem at the end (p. 12).

Girls in the study expressed a dislike of being coerced into attempting adventure activities. Statements regarding dislike of coercion, and a perceived probability of coercion, were made most strongly by girls taking the subject at Year 11 level for the first time and by girls who did not select the course at all. Dislike of coercion was mentioned by boys who did not select Outdoor Education, but not by boys who did select Outdoor Education.

In support of the concept of "challenge by choice", Mitten (1985) emphasised that outdoor adventure programmes for women should be designed to ensure that they feel physically and emotionally safe within the experience, and that a supportive atmosphere is maintained. Programmes should emphasise wilderness travel for enjoyment, not for conquest, and participants should be encouraged to set their own goals, not preset programme goals. Warren (1990) explored the myth of the heroic wilderness

quest for women. She argued that 'a new heroic based on bonding with the natural world rather than conquering it may be the foundation for a new metaphor for men and women alike' (p. 416).

An additional factor emerged as important for girls, and not important for boys, in the selection of Year 11 Outdoor Education, namely *a break from routine*. It was important for girls to select at least one Year 11 course that offered "a break from conventional subjects". Girls also perceived that a number of courses in addition to Outdoor Education offered this *break from routine*, for example, Theatre Arts, Speech and Drama, and Early Childhood Studies. Staff members commented that these courses have more girls than boys enrolled, and are perceived as girls' courses. Girls may be influenced against selection of Outdoor Education, and towards selection of these alternatives, by the feminine gender orientation of these courses.

In addition, the *expense of camps and excursions* was seen by both girls and boys to be a factor affecting selection, or nonselection, of Year 11 Outdoor Education. The challenge for outdoor education teachers in this regard is to avoid any suggestion of elitism by devising out-of-school programmes that can be financially accessed by all students.

Summary

This chapter has presented the findings from the analysis of responses to Parts A and B of the questionnaire, respectively, followed by a section that synthesised and interpreted the results from both sections. Overall, findings indicated that *gender orientation, enjoyment, ambitions, challenge, a change of routine*, and *course costs* were factors influencing students' selection, or nonselection, of Year 11 Outdoor Education.

The factor which appeared to most perpetuate the underrepresentation of girls in Year 11 Outdoor Education was the pervasive effect of the masculine *gender orientation* of the course. The masculinisation of Outdoor Education (a) negatively affected many girls' *enjoyment* of, or potential to enjoy, the course, (b) resulted in many girls perceiving the course as irrelevant to their personal and career *ambitions*, and (c) led to many girls conceptualising *challenge and adventure* as coercive, and therefore not desirable for girls' involvement.

While Western society continues to be constructed as a male–female binary where maleness is hegemonic, girls' perceptions of coercion are most likely to be gender–based. In the context of masculine–oriented outdoor education programmes, coercive practices are historically an accepted part of promoting male self–development, and originate from Kurt Hahn's tenet that educators have a responsibility to impel young people into experiences (Lynch, 1991). By contrast, Lynch and other female outdoor educators such as Miranda (1985), Mitten (1985, 1992), and Warren (1991) promote empowerment of the individual to set their own goals and make choices, as a more effective facilitator of self–esteem for both girls and boys.

CHAPTER 5

CONCLUSION

This chapter will present the main findings of the study, make recommendations concerning measures to effect more equitable participation of girls in Year 11 Outdoor Education, and offer suggestions for further research in the area.

Findings

A number of interrelated factors emerged from this study which appear to be underlying reasons for fewer girls than boys selecting Outdoor Education as a Year 11 course. The permeating effect of the masculine gender orientation of the course should not be underestimated. The masculinisation of outdoor education negatively influences many girls' perceptions surrounding the appropriateness of the Year 11 Outdoor Education course for them in terms of their femininity, enjoyment, personal and career ambitions, and sense of challenge and adventure. The masculine gender orientation of Year 11 Outdoor Education is characterised by the following aspects:

- * Outdoor Education is perceived to be a masculine course;
- * existing low ratios of girls to boys further deter other girls and perpetuate the image of a boys' subject;
- * girls perceive the course as fertile ground for oppressive and demeaning behaviour towards them from male students and teachers;
- * it is more likely to be taught by a male teacher than a female teacher;
- * there is a tendency to view existing female role models in the outdoors as 'other than the norm';
- * it is taught in coeducational classes;
- * girls perceive that it can involve physical and emotional coercion; and

- * other courses are perceived by girls as more important for their career aspirations.

It is apparent that six of the eight characteristics are directly related to the gendered perception of the course as masculine. Further, it is argued that the perception of coercion may also be related to a masculine style of interaction and leadership. The eighth factor, concerning girls' aspirations for themselves, may be influenced by their perception of what girls *ought* to be, and thus could also be part of a gendered perception of the course.

Girls making choices about selecting a masculine subject such as Outdoor Education are confronted by contradictory imperatives about the continuing accomplishment of their femininity. On the one hand, girls receive messages through everyday discourse with friends, family and the media, that being female is opposite to male, and is therefore being weak, powerless, and submissive. Simultaneously, through the same processes, girls receive messages that they are persons, and as such have access to male education, male knowledge, and male jobs. These contradictions create a pressure of uncertainty for girls who are trying to access the male benefits, as they endeavour to 'get it right' concerning their gender:

As long as gender remains the primary defining feature of each person and as long as maleness and femaleness are constructed as opposites, the requirements for being successfully male or female potentially override the logic of equality (Davies, 1989a, p. 14).

Outdoor Education is a relatively new course, and as such in 1992 attracted approximately 3.6% of all students, including approximately 1.2% of all females, at upper school level. A female student selecting Year 11 Outdoor Education is likely to find that she is making a choice that most other girls at her school will not make, because of the perceived gendered nature of the course. Girls in the study appeared to be far more aware of issues involving equality

between the sexes than boys, whose apparent unconcern about issues of equality is understandable, given that the course is perceived as a masculine course. Therefore, for boys, selecting Outdoor Education does not pose the same contradictions and uncertainties as it does for girls.

Recommendations

The potential for Outdoor Education courses to lead in the quest for gender equity in education has been suggested by renowned outdoor educators including Humberstone (1986a, 1990), and Knapp (1985). The fact that fewer girls than boys are selecting Outdoor Education as a curriculum unit or course, plus indications from this study that the masculine gender orientation of Outdoor Education is a major factor affecting girls' selection of the course, require educators to acknowledge that currently, Year 11 Outdoor Education appears to offer no leading role in the quest for gender equity.

The findings of this study gave rise to a number of recommendations which attempt to address the problem. The recommendations, incorporating solutions offered by respondents and other research findings where relevant, are directed at three key groups: The Ministry of Education; Heads of Department in schools; and Outdoor Education teachers.

Recommendations for the Ministry of Education

*** Revision of the educational objectives for Year 11 Outdoor Education**

Evidence suggests that the educational objectives for Year 11 Outdoor Education should reflect a balance of interpersonal skills and technical skills, in order to achieve the full potential in personal development outcomes that outdoor education offers; and desired equitable and gender-free outcomes for both girls and boys.

*** Inclusion of Outdoor Education in all post-compulsory schooling**

Pathways

Outdoor Education courses provide opportunities for personal development and team-building training that are potentially accessible to all post-compulsory school students within an educational setting. Attributes such as confidence, self-awareness, a concern for health and safety of self and others, awareness of environment, and cooperative and supportive behaviours in a team situation are sought after by employers. Employers in interview situations hold in high regard any evidence that a young person has pursued this kind of personal development through youth organisations and award schemes such as the Duke of Edinburgh's Award and the Leeuwin Sail Training Scheme. Positioning Outdoor Education within each vocational Pathway will alert girls and boys, parents, and employer groups to its potential as a personal development tool; it will also make the course more readily accessible to all students.

Recommendations for Heads of Department, Physical Education

*** Use school development planning processes to set priorities and to target inequities within the whole school context**

Evidence suggests that inequities of sex and gender within the process of schooling are deeply embedded in the wider context of Western patriarchal hegemony. Changes within the area of physical and outdoor education require systemic support, and consistency in implementation of change within the total school community, in order to achieve any measure of success.

*** Identify and sponsor potential female outdoor education teachers**

Active support and affirmation of potential female outdoor education teachers is required to encourage female teachers and female students,

and to raise the visibility of female outdoor educators as role models for girls and boys.

*** Allocate Year 11 and Year 12 Outdoor Education classes to female teachers**

An affirmative action approach to overcome the lack of female Outdoor Educators at upper school level is necessary. Both girls and women lack appropriate role models in outdoor activities.

*** Promote selection of Year 11 Outdoor Education to girls**

Inform Year 10 girls, at meetings for girls only, of the nature of the course, its benefits and appeal, and promote Outdoor Education as an appropriate course for both girls and boys.

Recommendations for Outdoor Education teachers

*** Reflect upon one's personal and professional understanding of issues surrounding sexism and gender bias**

The potential of both girls and boys in schooling is limited by their own, and others', traditional assumptions and stereotyped concepts which polarise the sexes into different roles. The task for female and male outdoor educators is to take up the discourse which challenges their own, and others, stereotypical assumptions of sex roles, on a day-by-day basis.

*** Design Outdoor Education programmes which provide opportunities for a variety of learning styles to suit the needs of both girls and boys**

Evidence suggests that girls' preferred learning styles are not being catered for in much current schooling practice. Outdoor Education courses offer scope for utilising group work which features cooperation, negotiation, trust, consensus, and the opportunity to speak freely; and creates a safe,

supportive, and positive learning environment for girls. Research shows that boys also respond well in these learning climates.

*** Design Outdoor Education programmes which are financially within reach of all students**

Humberstone (1990) argued that the popular media has portrayed outdoor and adventure activities as a predominantly masculine sphere (p. 200).

Further, as popularity increases, so do related expenses increase. There is a tendency in schools to utilise more commercial operators to deliver specialist programmes, to travel long distances to venues, and to encourage the purchase of expensive outdoors clothing and equipment. It is the task of the outdoor educator to design outdoor programmes that all students can access through utilising local outdoor facilities and environments; extending and updating personal competencies in preferred outdoor activities; and being aware that the expensive media image of outdoor activities may be a deterrent for some students.

*** Demonstrate as an outdoor leader, a range of leadership styles focussing on supportive and coping strategies, and win/win situations rather than conquests**

Research on outdoor leadership styles is recent and plentiful, as a result of corporate interest in outdoor challenge and adventure training for personnel. Of particular interest in the corporate arena has been a focus on the softer styles of leadership, and a recognition that female leadership styles are effective and productive in the workplace. The task for outdoor educators is firstly to utilise this knowledge to enhance the quality of their teaching and leadership styles; secondly, to maximise the learning potential of both girls and boys.

Suggestions for further research

This study was restricted to investigation of girls' underrepresentation in the Year 11 Outdoor Education course at one senior high school. Findings indicate an area of particular concern for educators striving for equitable outcomes. Further research would be useful in order to corroborate, expand, or challenge these findings in different educational settings, namely nongovernment schools, single-sex schools, and country schools. It is suggested that future studies may be usefully focussed on the similar patterns of underrepresentation at Year 9 and Year 10 levels.

Evidence suggests that female outdoor educators may adopt teaching styles and create outdoors programmes that differ in their approach to their male colleagues. Research regarding the leadership and teaching styles of a range of female and male outdoor educators at all curriculum levels would be informative.

The primary school Outdoor Education curriculum has the potential to be a successful change agent in terms of challenging stereotypical discourse and behaviour. Investigations into girls' and boys' attitudes towards outdoor activities, and leadership and teaching styles of primary outdoor educators, would provide valuable information.

The *National action plan for the education of girls in schools 1993-97* is concerned that gender still has a significant effect on subject choice at senior secondary level. The plan notes that girls' choices include home science, creative and performing arts, and languages. Boys' choices prevail in technical and applied studies. A useful extension to this study would be an investigation into the reasons underlying the gender orientation of these subject areas.

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