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The Structure of Elite Sport in New Zealand: A critical examination of sport academies and institutes.

This thesis is presented in partial fulfilment of the requirements for the degree of Master of Business Studies in Sport Management and Coaching at Massey University

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Abstract

Sport has a significant impact on New Zealand society. In contemporary society there are few people who do not directly or indirectly encounter elements of sport in their daily lives. Performances by New Zealand athletes at the highest level are nationally recognised and instil a sense of national pride.

The purpose of this research was to examine the structures in place for the development of elite athletes in a number of countries and in particular Australia, to determine the optimal structures for elite sport development for New Zealand.

Qualitative methodologies, in the form of interviews and questionnaires, were used in order to elicit perceptions on the Australian and New Zealand models of elite sport development.

The research concluded that a decentralised but integrated structure for the development of elite sport would be optimal for the New Zealand context.

CHAPTER ONE

INTRODUCTION

Chapter Outline

Chapter One introduces the research and outlines the context in which the research is set. This chapter discusses the rationale for the research and research objectives. The chapter concludes with an outline of the structure of the thesis.

1.0 Introduction

The place of sport in popular culture has been recognised by sports people and the general public. Sport, politics and patriotism are closely linked. Sporting successes by New Zealanders instil a sense of national pride in both players and spectators and help raise the profile of New Zealand on a global scale. For this reason, governments have become more involved in social aspects of life such as sport (Coakley, 1994). The Olympics and Commonwealth Games and all levels of international competition create a sense of achievement at personal, team and national levels and, perhaps more importantly, provide valuable contacts with other countries and cultures (Sports Development Inquiry, 1985). Sport has become an important dimension in New Zealand social and economic life.

As sport is expressed in many forms, the definition of sport may change to accommodate each form. One definition by Brohm (1978), states that "Sport is the voluntary and habitual cultivation of intensive muscular

effort based on the desire for progress, which can even go to the point of taking risks" (p. 67). Coakley (1994) provides the following definition of sport:

> sports are institutionalised, structured, competitive activities that involve vigorous physical exertion or the use of relatively complex physical skills by individuals whose participation is motivated by a combination of intrinsic and extrinsic factors (p. 21).

The above definition will be used in this research owing to its simplicity and clarity.

Further definitions are required in order to set the parameters for the present research. Elite sport in the context of the present research may be defined as sport at the highest level of competition for that particular sport. 'Elite sport' and 'high performance sport' are used interchangeably within this research.

The present study is concerned with the structure of elite sport development and for the purposes of this research, a sports structure is defined as "an institutionalised framework of agencies and organisations promoting participation in sport and elite sport and providing appropriate opportunities for people to take part in some sort of physical exercise" (Wilcox, 1994, p. 244).

Sport institutes and academies make up part of the sports structure. Carrol (1991a) defines an institute as an organisation or society for some special purpose. Carrol (1991a) also defines an academy as a place for instruction where some special skill or subject can be studied. In the context of this study, the *skill subject* is sport. The Coaching Research Group (1992) defines institutes as advanced coaching centres which use

a fixed set of facilities in an essentially permanent manner. Academies are defined as advanced coaching centres which are more transient in their use of time and/or location than institutes (Coaching Research Group, 1992). Ken Norris of the ACT Academy of Sport suggests that "there is no difference between the name 'institute' and 'academy'. The programs or the concept of the programs are no different" (Personal Communication, September 27, 1995).

Coles (1981) suggests that, despite the differences in definition and meaning that the concept of sports institute conjures up, they all incorporate an important link between sports development and sports science research. Coles adds that the knowledge of sport through disciplined scientific study and research is what distinguishes a sports institute from other organisations for sport development such as sport training centres or university sports departments.

While a sports training centre may share certain functions with a sports institute, such as training facilities, coaching headquarters and information points, it does not, according to Coles (1981) have an institutionalised commitment to scholarship. If it did it would have sports students and sport researchers and would therefore justify the designation of "sports institute".

In New Zealand the Hillary Commission requires the sports 'academies' being established by individual sports to have a sports science component in their courses. Given this, the New Zealand 'academies', as they are called by the Hillary Commission, may be called institutes or academies according to Coles (1981).

For the purposes of this research the terms academies and institutes will be used interchangeably and defined in a broad sense as "organisations,

either fixed or transient in location for the instruction and development of elite sport"

1.1 Rationale for the Research

Nations investing money in their sports' competitors in terms of facilities, coaches, equipment and salaries can see the results of such input at events such as the Commonwealth and Olympic Games. The influence of the Australian Institute of Sport was heatedly discussed at the time of the 1994 Commonwealth Games in Victoria, Canada, following Australia's overwhelming success at these games. This debate provided New Zealand with an ideal opportunity to examine the Australian model of elite sport development and consider the possible development of a New Zealand Institute of Sport. From this debate and anecdotal research from discussions with sport persons, and from media reports, the researcher in the present study felt there was a need to investigate, more closely, the issue of New Zealand's sporting future in terms of its sporting structure and infrastructure and the efficacy of developing a New Zealand Institute of Sport.

From personal experiences in high performance sport over the last eight years and in post-graduate studies at Massey University over the past year the researcher has became more fully aware of the issues facing New Zealand and international sport and developed a particular research interest in this area.

In 1994, New Zealand committed eight million dollars to the Commonwealth Games athletes, of which just over one million dollars came from the New Zealand Sports Foundation (New Zealand Sports Foundation, 1994). Australia had developed an Institute of Sport, which has had an apparently significant impact upon that nation's sporting

successes, and invested the equivalent of fifty million New Zealand dollars in its Commonwealth and Olympic Games athletes in 1994. Over the next six years the Australian government has earmarked another one hundred and thirty five million dollars in the build up to the 2000 Sydney Olympics (Australian Sports Commission, 1995). In New Zealand, the Minister for Sport and Recreation, says that New Zealand does not have the two hundred million dollars required to develop a central Institute of Sport nor the estimated fifty million dollars required annually to maintain its operations ("Banks backs", 1995). Bill Garlick, former New Zealand Olympic and Commonwealth Games Association Chairman, noted that Australia has made sport an integral part of boosting the nation's profile on the international stage and has committed funds to do this. It has been suggested by sport analysts that New Zealand must ask itself whether it wants a strategy for making sport a key platform in promoting its success world wide ("Garlick Raises", 1994).

Referencing New Zealand's past sporting successes - such as athletes Yvette Williams, Peter Snell and John Walker and the 1972 gold medal winning rowing eight - as an argument for continuing our amateur and decentralised sporting structure, is no longer appropriate. The sporting scene has changed markedly in terms of professionalisation, management, sports science and organisational structure. New Zealand athletes who have competed at international or national levels have often done so with a sense of adversity at competing against athletes from nations with national sports structures and training institutes. There is an ongoing debate in this country on New Zealand's variable international sporting success. Today's international athletes, administrators and coaches are becoming more business orientated and professional with support infrastructures in their own countries. New Zealand's sporting elite often still compete as comparative amateurs on the world scene. Commentators hypothesise that New Zealanders will be left behind on the world scene if something is not done at a national level to help these

athletes develop at a world level by providing more guidance for top coaches and athlete development ("Coaches need", 1992).

The most obvious model of a sports institute to examine for New Zealand purposes is the AIS. In terms of its national sports structure New Zealand is most similar to Australia which, in turn, is similar to Canada and Great Britain. (Harris, Elliot, Fitzpatrick, Hartung and Darlison, 1984). The geographical proximity of Australia to New Zealand makes it advantageous to study as well as the fact that New Zealand as a sporting nation has close ties with Australia. The AIS has a programme whereby New Zealand athletes are able to visit the AIS and use its facilities. Sporting competitions between the two countries are numerous and sports related conferences, such as those on coaching and sports science, are often attended by experts from both Australia and New Zealand.

The Australian Institute of Sport has allegedly had a large effect on the success of Australian sports men and women over the last twelve years. The gap between New Zealand and Australia's success appears to have widened, which may or may not be due to the establishment of the Australian Institute of Sport in 1981. Despite the debate in New Zealand on the efficacy of the Australian Institute of Sport and its apparent role as the major organisation influencing Australian sport success, there has been little actual academic examination of its role. The ongoing discussion by sport bodies, participants and politicians on whether New Zealand should have a series of sports specific academies or a central Institute of Sport has rarely been based upon research evidence.

The researcher conducted a brief preliminary literature search on the research and the documentation on the Australian Institute of Sport. This indicated a need for further research on the issue of developing elite sport in a New Zealand context. The apparent success of sports

institutes and academies around the world has fuelled the debate in New Zealand as to whether we need to also consider this as an option for optimising international sporting success and confirmed the researcher's initial misgivings on current levels of research on the topic.

Consequently the following research objectives were initially formulated.

1.2 Research Objectives

To critically examine the literature on sport academies and institutes in order to determine the relative efficacy of these. Academic papers on the measurable success of sports institutes in places such as Canada and Britain will be a valuable source of information for comparison with the Australian Institute of Sport.

To undertake field research of key personnel in high performance sport to explore their perceptions of the structure of elite sports development in New Zealand. The advantages and disadvantages of academies and institutes and of a national institute of sport will be critically detailed.

To recommend, as a result of the research, optimal structures for elite sports development in New Zealand.

In order to meet these objectives the following research questions were formulated as a consequence of the literature review:

1. Given the apparent benefits of the Australian Institute of Sport model of elite sport development, what are the perceived benefits of this model, and could they be achieved through an optimal structure of New Zealand sports academies?

2. Given that New Zealand has recently made the decision to establish individual sports academies what is the optimal structure of these academies?

1.3 Structure of the Thesis

Chapter Two, Sport in New Zealand, provides an examination of contemporary New Zealand sport and the major issues inherent in it, in order to provide a context for the literature and research to be undertaken in this thesis. Sport in New Zealand is briefly examined in a developmental context to provide a background to the current debate. Contemporary sport in New Zealand is described in terms of statutory and structural components. New Zealand's sporting infrastructure, management and major sports organisations are discussed with a special focus on elite sport and factors which are perceived as influencing success in major sports.

Chapter Three, the Literature Review, provides an indication of the research already conducted in this area, both in New Zealand and overseas, and provides the basis for the research direction, substance and methodologies of this study. The literature review consists of a critical examination of literature on sports academies and institutes. The literature review examines, in detail, the structures in place for the development of elite sport in New Zealand and Australia and covers Canada, Britain and Germany in less detail. The main themes elicited from the literature are drawn together to reveal factors pertinent to the New Zealand context. From the detailed examination of the research, and informal literature review, evidence is drawn in order to determine the level of support or otherwise for the establishment of such a national institute and the form in which it should be developed is critically examined.

Research material is drawn from the CD-ROM database at the Massey University library, as well as from the Internet, and abstracts and journals orientated towards sport research. In addition, recent sports organisational research is examined in order to relate current perspectives toward the development of elite sport in New Zealand.

The literature review generated a certain basic set of research questions which guide the study. These centre on the role of sports specific academies and centralised institutes of sport, and the perceptions of key sports figures on the most efficacious form that those should take. From the research and literature clear components of the debate for and against an institute of sport are outlined.

Chapter Four outlines the methodology used. Qualitative methodologies were seen as the most relevant to explore the debate on elite sports development in order to obtain perceptions of key decision makers and those people who are going to be most affected by the structural development of sport in New Zealand. Interviews with key figures in New Zealand sports organisations are conducted in order to elicit perception on elite sport development with specific reference to sports academies and institutes. It was impractical to interview all persons in executive positions in existing academies and institutes in Australia and New Zealand and heads of sport in other countries. Therefore a questionnaire was designed to elicit their perceptions of the basic character of their organisation and determine its merits and demerits in order to obtain important perceptions on the debate which is emerging from the literature and interviews. The perceptions of elite athletes in New Zealand, past and present, are sought by way of questionnaires. Limited quantitative methods were used in the construction and analysis of the questionnaires.

This field research is outlined in Chapter Five, Elite Sport Development in Australia, and Chapter Six, Elite Sport Development in New Zealand. The Australian Institute of Sport has established itself as a major institute in the sport world. It is the nearest such institute, geographically and philosophically, to New Zealand and arrangements have been made through various New Zealand sporting associations for athletes to obtain training or guidance at the Australian Institute of Sport. It has often been suggested in New Zealand literature as a possible model for New Zealand and therefore a detailed examination was conducted of the Australian Institute of Sport and the wider Australian model of elite sport structure to provide a context for much of this thesis. Chapter Five outlines the development of the Australian elite sports system, claims for the Australian Institute of Sport's influence upon Australia's sport achievements, the role the Institute plays in Australian sport, and its current structure. Perceptions and comments elicited from interviews with key personnel at the Australian Sports Commission and the Australian Institute of Sport are reported and discussed.

Chapter Six reports the research conducted in New Zealand on perceptions of sports academies and institutes. This chapter elicits responses from key personnel in New Zealand sports organisations and examines information gathered from questionnaires from elite athletes and academy directors in New Zealand. The chapter links the field research with the literature on New Zealand's existing sports academies and institutes detailed in Chapter Three.

Chapter Seven, Discussion, discusses the findings of the field research, critically reflects on these and relates these to the literature review.

Chapter Eight, Conclusion and Recommendations, uses the findings and discussion as the basis for a set of recommendations and conclusions for consideration by decision making bodies such as the Ministry of Sport

and Recreation, the Hillary Commission, the New Zealand Sports Foundation and national sports associations. The recommendations reflect the research undertaken and provide guidelines for the establishment of a New Zealand structure for the development of elite athletes in New Zealand.

1.4 Summary

This chapter has outlined the rationale and objectives for the present research, and detailed the structure of the thesis. Chapter Two examines sport in New Zealand and provides a context for which the remainder of this thesis is set.

CHAPTER TWO

SPORT IN NEW ZEALAND

Chapter Outline

This chapter provides the context and background against which the research is set. It details the prominence of sport in New Zealand society and outlines the context in which New Zealand sport has developed. The chapter concludes with an outline of the structure and perspectives underlying contemporary elite sport development in New Zealand.

2.0 Introduction

Chapter One outlined the rationale and objectives for the research. The present chapter outlines the important place of sport in New Zealand society. The number of participants, its coverage by the media, and the economic dimension of sport illustrate its important role in the lives of New Zealanders.

2.1 Background Development of New Zealand Sport

An account of the background and history of New Zealand sport serves to establish the context for New Zealand sport today. The historical antecedents of English sport are important to an understanding of New Zealand sport (Pearson, 1978). Originally sport grew and developed in New Zealand with many inherited British influences which originated in the public schools and universities which educated England's upper classes (Pearson, 1978). Many modern sports in New Zealand today,

especially team games, are derived from games first introduced by colonial settlers. Pearson (1978) suggests that the nature of contemporary New Zealand sport is a reflection of what was imported by pakeha settlers, changes made on arrival, and the ongoing changes made to sport at later dates.

According to Watson (1993) the history of New Zealand sport can be divided into three broad periods which are bounded by social and economic characteristics rather than precise dates. These periods are the frontier period, the settled period and the modern period.

The frontier period was characterised by young transient males. Topography, climate and vegetation affected the life style of the settlers (Pearson, 1978). In the harsh working conditions rugby became transformed from the game for the elite in Britain to the game for the masses in New Zealand. The early social structure also shaped the lifestyles of the early settlers and assisted to lay the foundations of distinctively New Zealand cultural patterns (Pearson, 1978). The 'mateship' values inherent in rugby embodied courage and masculinity and suited the social needs of the community at the time. Physical recreation was often rugged and spontaneous having few consistent rules and standards with the exception of sports imported from Britain. The level of development and organisation of sport was low and often there were strong regional differences in sports and pastime activities, reflecting the origin of different settler communities (Trenberth and Collins, 1994).

The white settled society of New Zealand was numerically and politically dominant by the late 1890s. There was a noticeable increase in the formalisation, standardisation and organisation of New Zealand sport, especially in the urban centres.

The modern period has been marked by greater diversity, mechanism, technology and commercialisation, urbanisation, opportunities for women and a fading of ideologies on race and the nation (Watson, 1993). Sports in the modern society tend to be based upon the individual unlike those of the frontier and settled societies. For example running has become popular since the 1960s and squash is suited to an urban environment where space is a premium. Rather than attending the grounds to watch games many spectators throng to the television where they are more comfortable, have a better view and the luxuries of a commentator to keep abreast with the games developments, instant action replays and the ability to switch channels if the game proves to be unsatisfactory.

Sport in New Zealand has become increasingly politicised. Until the 1930s the role of central government in fostering sport and leisure activities outside education was limited. In 1937 the Labour Government passed a Physical Welfare and Recreation Act, driven by a concern about the lack of physical fitness of young New Zealanders, in an attempt to coordinate the development of recreation and sport in New Zealand (Trenberth and Collins, 1994). The Second World War halted the proceedings of the Act which, due to poor administration and a lack of support by the 1949 National Government, was not implemented. It was not until the 1970s that further attempts were made to centrally coordinate sporting and recreational activities.

Labour's Recreation Act 1973 was instrumental in resourcing and developing sport and recreational activities in New Zealand (Trenberth and Collins, 1994). During this time sport leaders were demanding more resources to be provided at a central level and more organisations to achieve better success at international level and increase participation rates. Two bodies were created, the Ministry of Recreation and Sport and the Council for Recreation and Sport. The Ministry's main role was

to encourage local government in recreation and planning and provide funding for community recreation. The Council, which was an autonomous body, had an advisory role at Ministerial level and was involved in promoting national programmes such as "Have a Go" and "Come Alive".

2.2 Contemporary Sport in New Zealand

Sport is, intrinsically, a social phenomenon and sporting events take place in a social context. Sport has an impact on society and, in terms of this thesis, New Zealand sport has an impact on New Zealand society (Trenberth and Collins, 1994)

Participation in moderate levels of physical activity has been shown to have many health benefits compared to a sedentary life style (Sarna and Kaprio, 1994) and almost a third of New Zealand's population participates in some form of sport or leisure activity in those codes applying for government funding (Sports Development Inquiry, 1985, p.17). This figure does not take into account the membership from unregistered codes who take part in sport and leisure activities. In 1994, 70% of the population participated in some sort of sport, fitness and physical leisure (New Zealand Sports Foundation, 1994).

New Zealand as a nation places significant importance on its elite sports teams and individuals and they provide us with a sense of nationalism and pride. Sport has a special place within the cultural life of New Zealand and has played a "significant role in the development of New Zealand" (Hancox, 1989, p. 31). New Zealand athletes, both male and female, have become known throughout the world, giving New Zealand an international visibility and reputation which may or may not be gained in social, economic or political areas of life.

It has been suggested that sport in New Zealand is not only an important mechanism of social control but also a powerful agency of socialisation. One value related aspect of sport is the apparently important way success in some type of sporting competition functions to develop a sense of national identity. This is illustrated by the nation-wide parades of the victorious 1995 America's Cup Team, the 1993 New Zealand World Cup cricket campaign and the 1991 and 1995 All Blacks World Cup campaigns. Outstanding performances such as those of Peter Snell, Jack Lovelock and Yvette Williams become part of our national heritage

It could be argued that New Zealand's top athletes provide role models for young New Zealanders. Numbers in the junior ranks in cricket, for example, increased after the 1991/1992 World Cup one day cricket matches. Similarly the numbers of junior rugby players increased after New Zealand's Rugby World Cup win in 1987 (New Zealand Sports Foundation, 1994). For a country of just over three million people, New Zealanders have achieved an enviable record of success in international sport. Parker (1988) notes that the "politicians of successfully active (sport) countries place the benefits that accrue from sporting participation as a high social priority. Without this support the community loses in so many ways. They back up these beliefs with large amounts of money" (p. 85).

Sporting successes contribute towards the nation's international business and marketing. In 1991 the sport industry directly and indirectly employed 23,000 people, with a total economic activity impact of $1.7 billion (New Zealand Sports Foundation, 1994; Trenberth and Collins, 1994). According to the New Zealand Sports Foundation (1994) this is worth 2.4% of the Gross Domestic Product of New Zealand. Sport is used to establish tourism profiles of New Zealand. For example, the New Zealand Tourism Board uses some of the country's most successful

sports figures to promote the qualities of New Zealand products. New Zealand athletes competing all over the world act as *Ambassadors* for the country. The New Zealand Task Force 2000 was established in 1993 to capitalise on the opportunities for New Zealand, arising from the 2000 Olympic Games (New Zealand Sports Foundation, 1994).

This important place of sport in twentieth century New Zealand is illustrated by its extensive coverage by the media. In print, on the radio and on television the amount of time and space allocated to sport has both contributed to, and is a reflection of, its social significance-the nightly news coverage in New Zealand for example is at times delayed due to extended coverage of live sport. Many expressions coined in sport have made their way to non-sport context signifying the influence of sport in society. Sport idioms such as, ball park figure, below the belt, low blow, jumping the gun, game plan and many more have become daily expressions.

Sport, being a social institution, can impact on society in either a positive or a negative way and this thesis is partially based on the researchers' personal premise that elite sport has the potential to impact on the individual and state in a positive way. The researcher recognises that for all the adherents to such an ideology, there are others who debate the theory about social construction of sport. Brohm (1978), for example, argues against the values inherent in competitive sport and his views are echoed to varying degrees by other writers such as Gruneau (1988), Hargreaves (1988) and Coakley (1994) and such theoretical perspectives and critiques are acknowledged by the researcher.

New Zealand athletes have been increasingly successful at Olympic and Commonwealth Games. In 1932, at the Ontario Commonwealth Games, New Zealand athletes won three gold medals. In the so called 'glamour days' of the 1960 and 1964 Olympics New Zealanders won just three and

five medals respectively. In 1990 at the Auckland Commonwealth Games, New Zealand athletes progressed to win seventeen gold medals (New Zealand Olympic and Commonwealth Games Association, 1994a). In Victoria New Zealand athletes won 41 medals from a population of less than 3.5 million which compares favourably to Australia on a per capita basis who won 182 medals from a population of 17.5 million. (See Appendix 1, New Zealand and Australian Post War Olympic and Commonwealth Games Medallists).

Such success at international level helps create a vibrant sporting sector and any indications of problems within the structure of New Zealand sport seem at odds with these successes. Within the global sport context, however, there is a certain disquiet about New Zealand's future sporting direction.

The major factor underpinning the success of the Australians at the 1994 Commonwealth Games was arguably the financial investment in elite sport. Athletes and administrators have highlighted the lack of funding for elite athlete development in New Zealand. John Walker, an Olympic gold medallist and member of the Sports Development Inquiry Committee, appointed in 1984 by the Minister for Recreation and Sport, believed then that New Zealand was not applying sufficient resources to the training of its promising young athletes (Sports Development Inquiry, 1985). John Banks, Minister for Sport, Fitness and Leisure, states that "the harsh reality is that we are a small nation with limited resources. We do not have the $200 million required to develop a centralised institute". ("Banks backs", 1995). Similarly Peter Dale of the Hillary Commission argues that "we cannot afford the bricks and mortar" (McKewen, 1994).

The fact that New Zealand has produced champion athletes in the past, such as the aforementioned successes at World Championships, Olympics and Commonwealth Games, has been used as an argument by the state in

the past to diffuse responsibility and support for elite athlete development (See Appendix 1.). New Zealand as a nation has appeared to assume that the success of our athletes is innate and that the high level of participation in sports activities leads to the talented athletes automatically progressing to the top of their chosen sport. If this did not happen, the onus was often placed on the individual or team concerned. Harris et. al. (1984) state "The acceptance that sport exists in a social vacuum, where all raw talent leads to success, has meant that all too often the efforts and sacrifices made by our (Australian) high performance athletes have been undervalued and have been considered a low priority by governments and the private sector" (p. 4). Similar attitudes exist in the elite sports development debate in New Zealand.

2.3 The Structure of New Zealand Sport

Government involvement in sport in New Zealand is clearly recognised with the existence of a Ministry of Sport and Recreation, and national structures administering sport programmes, encouraging participation, disbursing finances to individuals and sport bodies, and attending to elite athletes.

The Hillary Commission for Sport, Fitness and Leisure is, arguably, the most significant agency in New Zealand sport. The Hillary Commission, which replaced the Council for Recreation and Sport, was set up by Parliament in 1987, mainly owing to the impetus from the Sports Development Inquiry (1985). The fundamental purpose of the Hillary Commission is to "improve quality of life by enabling all New Zealanders to participate and achieve in sport, fitness and leisure" (Hillary Commission, 1993, p. 1). This purpose is met via the targeting of grant-aid to national sport and recreation organisers and the delivery of direct control programmes (Trenberth and Collins, 1994). The government, in

line with those of Australia and Britain, assumed the task of creating a central framework, with substantial Lottery Board Grant Funding for the purpose of bolstering, coordinating and creating more effective sports organisations.

To achieve its objective the Hillary Commission established three goals in relation to sport, fitness and leisure:

- to increase participation in sport fitness and leisure
- to enhance performance in sport, fitness and leisure and
- to improve the organisational infrastructure and programme delivery systems for sport, fitness and leisure. (Hillary Commission, 1993, p. 1)

The New Zealand sports structure consists of a number of other organisations and key sports service organisations (See Figure 1, p. 21, The Structure of Sport in New Zealand). The role of the New Zealand Sports Foundation, established in 1979, is to provide funds to outstanding athletes needing assistance to reach the top of international sport. The objective is to "assist our current and potential high performance sportsmen and sportswomen to succeed at an international level and by doing so bring credit to themselves, their sport and our country as a whole." (New Zealand Sports Foundation, 1994, p. 1). The New Zealand Olympic and Commonwealth Games Association selects athletes and raises funds to send athletes to these events. The New Zealand Sports Assembly, established immediately prior to the formation of the Hillary Commission, represents the sports organisations in New Zealand sport and serves as a mediator between the sports bodies and

Adapted from Trenberth and Collins (1994, p.106).

Figure 1. The Structure of New Zealand Sport

major organisations in New Zealand sport. Other national sport service organisations, including Coaching New Zealand and the New Zealand Sports Science and Technology Board, work to assist New Zealand's elite athletes.

The Hillary Commission established a country wide pattern of funding through Regional Sport Trusts (RST). These trusts have a focus on sports participation but are involved also in coordinating coaching courses.

In addition to these generic national sports organisations there are National Sports Associations (NSA) for each individual sport. Each NSA is responsible for the development of that sport from the participation level to the elite.

2.4 Elite Sport in New Zealand

With an understanding of the development of sport in New Zealand and its contemporary structures the thesis now turns to examine a critical dimension of the study, elite sport in New Zealand.

Moves to raise the standard of sport at the high performance level in New Zealand have resulted from an awareness of increasing levels of elite performance internationally and have been further stimulated by increased opportunities, advances in modern communication and technology and an increase in competition mobility (Coaching Research Group, 1992). Other countries (such as Australia, Britain and Canada) have responded to the challenge of high performance sport by mobilising and coordinating their natural resources and aiming to promote maximum participation and maximum performance. A diversity of regimes has developed, ranging on a continuum from formal centralised

control, such as the AIS, to an informal decentralised network, to nothing at all.

In response to moves by other countries the Hillary Commission, in conjunction with the New Zealand Sports Foundation, has recently announced the allocation of $3.45 million NZ to seventeen individual sports in order to establish sports academies for the development of elite athletes. In announcing the grants, New Zealand Sports Foundation (1995a) states that "sport is entering an exciting era and the Foundation believes the way the funds are being prioritised and targeted will play a crucial role in high performance sport up to and beyond Sydney in 2000" (p. 3).

Eight academies, (cricket, netball, tennis, yachting, squash, swimming, golf, and softball) which are included in the seventeen academy sports, are already in existence with funding from the Hillary Commission and the New Zealand Sports Foundation. These have become a major part of the structure of elite New Zealand sport. (See Figure 1.). A number of other sports, such as hockey and gymnastics, have established academies without specific academy funding or recognition from the Hillary Commission although hockey is included in the seventeen sports for an academy grant in 1995. Gymnastics continues to fund its own academy. (See Appendix 2, Sports Allocated Funds for Academy Establishment).

Prior to the initial development of academies and recent announcement of further academies, elite athlete development was left primarily up to the individual sport and individuals within each sport.

Although New Zealand sports organisations continue to think and operate independently, with some ad hoc sharing of common resources, planning and policy making, the notion of a centralised sports delivery

system has previously been aired. This is discussed in detail in Chapter Three, the Literature Review.

Despite the dominant presence of sport in New Zealand society the academic study of sport and leisure still conjures up sceptical and even amused responses from some quarters (Rail, 1988). The academic analysis of sport may include consideration of its roles and rituals, place within management and business, nature of sport as a mirror of society, sport participation as an outlet for expression of physical energies and skill (McConnell, 1996) and although there have been a number of reports and inquiries into the development of elite sport in New Zealand there is currently no academic writing on the topic in terms of the structural development of New Zealand sport . Research has been conducted into participation and attrition, sport management, sport science and coaching however such research has not provided a direct examination of the structures in place for elite sport development.

Despite the importance and usefulness of organisational analysis in sport, until recently, the field of sociology of organisations has not considered sports organisations a potential area of study (Rail, 1988). Rail goes on to discuss the importance of academic study of sports organisations. There is a growing body of knowledge on the topic of sport development structures by academics from all over the world, for example, Daly (1991), Kikulis and Slack (1995), Paton (1987) and Rail (1988). Rail (1988) suggests that the study of sport organisations as a scholarly endeavour is justified at the applied as well as the theoretical level. This statement goes beyond justifying the study of sport to identifying its practical and theoretical applications. Indeed the numbers participating, watching, and generally involved in sport warrant the study of the phenomena. From an applied point of view the good functioning of these organisations is a phenomenon central to the life of any athlete, coach or executive whether these individuals perform at the local, regional,

national or international level. Therefore, Rail (1988) and Theodoraki and Henry (1994) conclude the study and understanding of such sport organisations is crucial.

2.6 Summary

This chapter has demonstrated that the development of sport and sport values in New Zealand has paralleled the nature of developing New Zealand. This chapter has provided a brief overview of sport in New Zealand from developmental and contemporary perspectives. The background outlined in this chapter and the researcher's interest in elite sport generated three tentative research questions

1. Is there an appropriate organisational structure or structures which best facilitate the development of elite athletes?

2. Given the apparent dominance of the AIS, is it viable for this to be used as a model for the development of New Zealand sport?

3. Does the literature indicate alternative delivery systems for enhancing elite athletes?

The study now turns to the Literature Review to seek answers to these.

CHAPTER THREE

LITERATURE REVIEW

Chapter Outline

The purpose of this literature review is to examine the literature and research on sports academies and institutes in New Zealand and certain other countries in order to develop the research questions.

The literature review assists the seeking of information which may refine or answer the research questions or which may generate further research questions. There is limited literature available on sports academies and institutes. This review initially examined the available literature on sports academies and institutes indicating that a number of countries have in place structures such as institutes and academies for the development of elite sport. The literature, however, fails to provide any substantiation or justification for the decision by the Hillary Commission to establish a network of academies. The literature review indicates that further research on sport academies and institutes is required as the literature available did not answer the initial basal questions tentatively framed in Chapter Two of this study.

A body of information related to the organisation of national sports organisation (NSOs) and national sports structures was revealed. This body of literature was critically examined in order to elicit organisational structural patterns which may be applicable to the context of New Zealand sport academies.

3.0 Introduction

The purpose of the literature review is to assist in problem formulation and research question design (Rubin and Babbie, 1993). Sources searched for the present literature review included Research Review Journals, CD Roms, Internet, libraries and abstracting and indexing services and these have elicited relatively little information on sports academies and sports institutes and possible optimal structure for such institutes. Despite the national importance placed on international sport in many countries, it is of initial interest to note that few studies have addressed the first research question of this thesis, which is intended to elicit an understanding of the optimal structures for high performance athlete development.

3.1 Structure of The Literature Review

The literature review in the present study does not follow a thematic structure as with some research studies. The researcher opted to present the literature on the structures in place for elite sport development in sections, headed by country. The researcher believes that using the thematic structure would have been difficult as each country has an underlying philosophy and political agenda and differing emphases, and comparison of these would have been not only complex but futile in terms of drawing out themes for the discussion.

The researcher was faced with having to resolve the different structures the literature review might take, deciding to examine the literature in terms of the structure by country. A number of themes emerged in this process. Given that the researcher is aware of the importance of a thematic review, a brief review of themes is included at the end of the chapter.

The literature review, therefore, is presented in two parts. The first examines the structures in place for elite sport development in New Zealand, and Australia and briefly reviews the literature from other countries. In the chapter summary key themes from the review of this literature are gleaned in a thematic review.

There is an apparent lack of relevant academic writing on sports academies and institutes, and more widely on the structures in place for high performance development. The limited information has demanded that the researcher considers the wider context of research material that goes beyond academic writing and into government commissioned reports. The literature review examines sports organisational structures. A close study of this research may reveal that these findings may be of use when constructing a model of academies.

Models for the development of high performance sport have been implemented by a number of countries. France has the National Institute of Sport and PE, Canada has High Performance Sport Centres, East Germany has the Leipzig Institute, Israel the Wingate Institute and Australia, the Australian Institute of Sport (Daly, 1987; Parker, 1988). New Zealand is relatively late in developing its organisational structure for elite sport with the cricket academy established in 1991 being the first of its kind in New Zealand.

The literature review is guided by the definitions of elite sport, sports academy and sports institute presented in Chapter One.

3.2 New Zealand

In contrast to Australia and Canada's amateur sport delivery systems there is little literature to be found on New Zealand sport from a similar aspect. Although an outline by Trenberth and Collins (1994) briefly covers the historical and social perspectives on sport in New Zealand, politics in sport in New Zealand, government involvement and the structure of sport in New Zealand, it fails to analyse or develop a critical analysis of the organisational and structural aspects of the New Zealand sport delivery system. Trenberth and Collins (1994) emphasise the relative newness of the New Zealand sports system.

As yet, there are few structural, political or developmental goals and plans targeting the future of New Zealand high performance athletes. At present New Zealand appears to have adopted a "laissez-faire" attitude towards elite sport development and as a result athletes, with a few notable exceptions, appear to be ill prepared for international competition. A formal structure needs to be developed for the future of elite sport in New Zealand. Parker (1988) states that the countries that have structures and programmes operating effectively and efficiently are those with a clear vision of what they want to achieve and how. This is reiterated by Garlick who suggests that "whether New Zealand should spend more (on elite sport) was a circular question. The first question was whether New Zealand wanted to make sport an integral part of boosting the nation's profile on the international stage" ("Garlick raises," 1994). Garlick adds, "you have to decide on that before you make a decision on funding. Really the medals won at a games are dictated by the spending over the previous 10 years" ("Garlick raises", 1994).

One report suggested "If our athletes (Australian) are to compete successfully against those from other countries which have streamlined their sports systems to cater for the needs of high performance athletes,

we must similarly streamline our systems" (Harris, Elliot, Fitzpatrick, Hartung and Darlison, 1984, p. 5). One New Zealand interviewee took the time, after the Barcelona Olympics in 1992, to ask athletes, coaches and administrators how they would spend $50 million to give them the best medal prospect. "They were usually quite in depth conversations, maybe two hours long. After the euphoric talk they got down to the nuts and bolts and what they talked about was a structure with the Olympics at the top and the club at the bottom" (A3, Personal Communication, June 22, 1995).

Despite the lack of implementation, proposals for the development of an institute or an academy structure for New Zealand sport have been suggested and documented by a number of parties (Boyd, 1984; Coaching Research Group, 1992; New Zealand Council for Recreation and Sport, 1978; Parker, 1988; New Zealand Olympic and Commonwealth Games Association, 1994b; Sports Development Inquiry, 1985; Williams, 1985). From 1977, when the concept of a sports institute was first proposed, New Zealand sports organisations involved with elite sport development have had the opportunity to critically examine structures and delivery systems and decide upon the best possibilities for New Zealand sport. McLay (1984) noted that the provision of sports training centres, and questions relating to the need for a centre of excellence similar to the AIS, are issues relevant to elite sport. In some ways, New Zealand is able to use this slow developmental path to its advantage to analyse, and therefore benefit, from models and systems in place in other countries (Urlich, 1982). However, from the lack of academic writing, publications and other documents on the optimal structures for the development of New Zealand sport, it would appear that this has not been done.

Several people and reports identify the needs of elite athletes and how these could be met by a sports institute or academy structure. Boyd

(1984) suggested the concept of a sports institute in the early 80s stating that the "Kiwi Style" institute could meet three needs. First it could provide the opportunity for young and promising sports men and women to develop their talent by training under the influence of top coaches and at the same time continuing their education. Second it could provide an information service to distribute the findings of overseas and local research studies to coaches throughout New Zealand. The third need could be met by providing a centre with responsibilities for raising the standard of sports coaching in New Zealand.

The Coaching Research Group (1992) report identifies three needs of athletes in high performance sport. The first it identifies as financial support. The second is human support for it states that "for every athlete able to achieve success there (sic) must be support by family, coaches administration and sports scientists" (p.16). The third need it identifies is facilities and equipment. The Coaching Research Group suggests that all the models used by New Zealand sports are lacking in the financial, human or physical resources in one or more of the crucial areas of athlete support, training support, coaching support, sports science and technology support, competition and administrative support. The rationale for the decision to fund individual sports academies was based on this report, according to Administrator Four (Personal Communication, October 25, 1995). This document was based on the *Sport on the Move* report published seven years earlier and interviews with a sample of 25 national sports association members.

New Zealand Olympic and Commonwealth Games Association *Pathway to Gold* report (1994b) has attempted to gain a broad understanding of the opportunities available at Olympic and Commonwealth Games and the resources required to optimise New Zealand's potential if the best results are to be achieved (p. 2). The objective of this report was "the identification of ways of moving National Federations and their athletes

towards gold medal success." (p. 2). This may essentially be seen as elite athlete development.

The planning group of the *Pathway to Gold* (1994b) report spoke with 12 out of 37 national sports associations and systematically identified the key needs of the sports involved if international success in competition was to be achieved. In addition one member of the planning group visited several countries (Canada, Britain, France, Sweden, Denmark, Switzerland, Italy) in order to aid the planning process for the future development of the New Zealand Olympic and Commonwealth Games Association and to look at what programmes they had implemented for the benefit of their national federation and athletes. From these two sources the report identified six main areas of need for gold medal success; infrastructure (administration, facilities and equipment), talent identification, coaching (coaching of athletes and development of coaches), sports science and support, access to international competition and athlete incentives.

There is no discussion of how these identified needs are to be implemented to get these results and under what structure they should be developed. Elicited from the report is the general abstraction that individual sports should develop in a solitary fashion with a focus on the six key elements identified by the NZOCGA report.

Despite the needs of elite athletes being identified by several pieces of literature there is often a gap between what reports say and what is done. Coaching and coach development is identified (Coaching Research Group, 1992; NZOCGA, 1994b) as being critical in athlete development and the researcher questions the rationale behind a former elite athlete, with no coaching background, being nominated for the assistant coach position in a particular sport for the 1996 Atlanta Games ("Cyclist on", 1995)

The issue of how the needs of elite athletes are to be met is often discussed in financial terms. *Sport on the Move*, the Report of the Sports Development Inquiry Committee (1985), suggests there is a crisis in sports funding. The report states that "it has chosen an investment led strategy for the development of sport. The investment being in expertise rather than facilities. Improved performance will create a demand for facilities but improved facilities will not necessarily create improved performances" (Sports Development Inquiry, 1985, p. 53). The report saw the importance of nurturing expertise, within New Zealand's sporting tradition, but found it difficult to see the same potential arising from the level of investment needed to promote regional sports training centres.

The New Zealand Council for Recreation and Sport (1978) recognised the need for increased funding allocation to sport. The effects of current financial constraints, which limit the funds available for recreation (and sport facilities) could, it was suggested, be lessened by relaxing New Zealand gambling laws. The Leisure 77 document (New Zealand Council for Recreation and Sport, 1978) suggested football pools and more lotteries would provide a viable means of attaining financial independence (p. 7). Parker (1988) notes that other countries use a variety of ways, such as football pools and gambling resources, to fund elite sport. The issue of funding is one which remains a focal point when discussing elite sport development.

Money, together with regular international opportunities and a training set up based around the AIS and state academies, is the key to success according to Johnstone (1994). Peter Snell, New Zealand Olympic gold medallist, commented that more money from the Hillary Commission was needed for the development of elite sports coaching in New Zealand stating "Nowhere enough of our resources are going in this direction".

Retiring Athletics New Zealand coaching director, Kerry Hill, says "elite coaches are used to getting by on minimal funding" ("Coaches need", 1992). Bill Garlick, former New Zealand Olympic and Commonwealth Games Association Executive Director, says it will take a dramatic increase of money to sports if we are going to keep the general medal count anywhere or in double figures for future games (Morrison, 1992). "I am also concerned that a large proportion of our resources are going into recreation based programmes. The Hillary Commission said it was not set up to concentrate solely on sport" ("Coaches need", 1992).

John Banks, the Minister for Sport, Fitness and Leisure, states that

> The harsh reality is that we are a small nation with limited resources. We do not have the minimum 200 million dollars to spend on the development of a centralised institute or the estimated costs to run it. Instead of investing in bricks and mortar the government provides funding for the Hillary Commission coaching academy programmes to ensure that our current resources are put to the best possible use ("Banks backs", 1995).

Banks also stated "we have got to get more depth into our athletic pyramid. We are not increasing our top athlete base at a rate that is internationally competitive (Murphy, 1991). Dale says we can't afford bricks and mortar. New Zealand could have an institute by further developing our own academies in a wide variety of sports. (Johnstone 1994).

The argument over funding assumes that large amounts of government money have to be spent on the infrastructure necessary to establish a New Zealand Institute of Sport. However the structure of the delivery system, it seems, should be the primary consideration. As an example,

the Otago Community Sports Trust was established utilising existing facilities (Turner, 1984) and "the Victorian Institute of Sport in Melbourne has no buildings apart from an administration headquarters. All the facilities are hired out" (Lawrie Woodman, Personal Communication, September 27, 1995). The difference as Williams (1985) points out is the level of coordination between the AIS and State Academies and institutes.

Peter Dale, Chief Executive of the Hillary Commission, has visited many countries and says an important feature of New Zealand sport is our extensive school and club structure underpinned by an army of volunteers operating on a shoestring (Maclean, 1994). Dale says "involvement is the key, however an important spin-off is winners at the top level. In a number of sports we have tended to pop out gifted people at times". This, according to Maclean (1994), is hit-and-miss and increasingly unlikely to bring success in international arenas. Urlich (1982) states that "once people thought that if you were naturally talented it automatically followed that you would be a champion. Today however, others have developed potential talent by identifying it early, and giving it specialised treatment"(p. 14).

Literature on the development of a sports structure for elite sport development in New Zealand is limited. Discussions turn to the potential development of a centralised sports institute. In the first year of its establishment (1973) the Council for Recreation and Sport met with the National Sports Associations and found considerable interest in the "provision of national coaching and training centres" (Coaching Research Group, 1992). A submission for the establishment of a National Sports Training Centre at Queen Elizabeth II park was presented to the Minister of Recreation and Sport and the Christchurch City Council was able to report that Queen Elizabeth II Park had been designated by the minister as a National Training Centre. Funding for the Queen Elizabeth National

Sports Training Centre was apparently insufficient and by 1985 enthusiasm had declined and the Council announced an amendment of its policy of giving support to the development of sport training centres (Coaching Research Group, 1992).

Williams (1985) notes that the purpose of the paper was to "re-address the theme of a National Sports Institute" (p. 11) and acknowledges the report of the Australian Sports Study Group as being an ideal model to apply to New Zealand. Williams avoids comment based on financial or physical restraints and concentrates on the task of coordinating the contributions from sports associations, the private sector, the departments of Education, Sport and Health, the tertiary institutions, and sports research and science. Williams and the Coaching Research Group (1992) suggest that few sports in New Zealand have managed to approach a coordinated system of this type. "The underlying principle of the idea behind a National Sports Institute is that it would provide a fully-integrated and well-rounded system which would co-ordinate all those facets of sport preparation and involvement that maximise the chances of achieving aims" (Williams, 1985, p. 13). The New Zealand Sport Foundation (1995b) states:

> Ideally every sport of every size should have the opportunity for an academy. Consideration needs to be given to sports with similar training regimes sharing academy facilities. Likewise the Foundation believes there is a good case for academies sharing expensive and specialised resources (p. 7).

The proposal for a National Sports Institute is not seen as an answer to all problems associated with high performance sport, however, the concepts raised emphasises the integral role it could play in its development (Coles, 1982; Williams, 1985).

Williams (1985) suggests that the New Zealand Sports Institute would "provide a point of convergence for national coaching, international sports relations, information and sports science" (p. 14). He suggests that the structure should consist of a central branch with a system of regional branches arranged in an interactive network utilising existing facilities, staff and institutions. Essentially Williams proposes that the services and programmes could be offered anywhere in New Zealand with a central administrative and research body coordinating services. At present there are centres for the development of elite athletes such as the Otago University Sports Trust (Turner, 1984), the Wanganui Recreation and Sports Training Centre (Arnold, 1984) and the Waikato Sports Institute, however, these are fragmented throughout New Zealand. The main issue elicited by Williams is that of co-ordination of those fragmented resources into a well integrated system designed to meet the needs of high performance sport. The Working Group on Sport and Leisure Facilities (1992) adds to this comment by advocating that "dual or multi-use facilities should be fundamental to any future New Zealand sport and leisure plan" (p. 8).

The Sports Development Inquiry (1985) noted the AIS as a possible model for New Zealand's sport development. However the report suggests that "in the opinion of many Australian commentators the AIS has involved considerable investment without proving its worth yet" (p. 95). The report commented that a network of such centres would be necessary for them to be effective. This could be "a local imposition, costly and would still require considerable investment in expertise and may not achieve the desired results" (Sports Development Inquiry, 1985, p. 54). Concluding, the report did not advocate the support of such proposals, however, it did identify that future development of this type may become beneficial.

Parker's 1988 report was produced from his Winston Churchill Memorial Trust Fellowship travel to eleven countries with the aim of "researching government policies on sport with particular emphasis on mass participation, health and fitness, talent identification, regional programs and multi use facilities"(p.1). Australia, which would have been a critical country to visit given its proximity to New Zealand, close sporting ties and association with the AIS was not visited. Parker (1988) after visiting European and American models of sport development suggests regional sports institutes, a concept which he thinks is "the best possible way for New Zealand sport to provide the best all round educational opportunity for the potentially elite coach, administrator and player" (p. 118). The idea is dependent on the involvement of universities and technical institutes which can "offer a Sports Institute Network at no additional cost to anybody". A visit to England's national sport centres "re-emphasises our thinking on regional sports institutes" (p. 64).

Coaching New Zealand (1991) states initially that "the concept of an Institute of Sport demands careful study" (Section 6). The report then virtually dismisses the idea of a sports institute saying "it is unlikely, given New Zealand's demography, that a central institution would be successful" (Coaching New Zealand, 1991, Section 6). The report adds that "it is improbable that a centralised institute would be able to meet national needs as effectively as strategically placed regional centres". In contrast to Australian comments regional centres around the country "maintain a high standard of domestic competition".

The New Zealand Council for Recreation and Sport (1978) made a recommendation for the establishment of a National Sports Institute. It was suggested that the New Zealand Government, in conjunction with national sports associations, establish this facility which would be a fully staffed and equipped sport training centre for coaches, administrators, officials and players.

The Coaching Research Group (1992) and Parker (1988) advocate the establishment of regional and individual sport academies as opposed to a centralised multi sport institute. The reasons given are based on financial considerations. The main argument is that the New Zealand government at the moment does not provide enough sports funding to establish a multi sport institute. Parker (1988) suggests that "all countries spend considerably more money on sport than New Zealand and that money is important to the implementation of a successful structure, good programmes and an opportunity for people to participate" (p. 88).

As part of the sport infrastructure, sports academies were identified by a number of sports organisations as appropriate means of selecting, coaching and training and thereby developing young people with potential (NZOCGA, 1994b). The *Pathway to Gold* report (1994b) states that "such development is a long term process and needs the stability of administration and funding" (p. 17).

The Working Group on Sport and Leisure Facilities in New Zealand (1992) suggest that "France, the United Kingdom and to a lesser extent, Australia, have demonstrated that an integrated approach based on centralised advice and policy can result in more effectively planned and designed facilities to meet a full range of sport and leisure needs" (p. 8). The Sports Development Inquiry (1985), however, suggests that "many sport codes want to retain their direct access to the political system rather than be forced to collaborate with other sports"(p. 27).

Boyd (1984) and others (see, Broom, 1979; Coles, 1975, 1981; Parker, 1988; Williams, 1985), suggest utilising the backing of existing tertiary institutions' facilities and staff to facilitate the development of a sport structure for New Zealand. Woodman (1988) suggests that education

and the education system play a significant role in sports development and that this role should be expanded. Chelladurai (1986) states

> The notion of coaching refers to leadership in the pursuit of excellence. The training of these coaches should be much more comprehensive and extended over a period of time so that all the relevant knowledge can be imparted to the trainees. Further, the universities are best suited to provide such extensive and specialised training. Coach development programmes must use universities as their training centres (p. 150).

In countries such as Sweden, Canada, Norway and Switzerland the educational system plays a leading role in sport development (Parker, 1988). Emery Holmik (Personal Communication, September 28, 1995) of the National Sports Research Centre on the AIS campus noted the research in academic institutions and elite sport research do complement each other. The West Australian Institute has requested the University of Western Australia Department of Human Movement and Recreation to associate itself with the Institute for the purpose of providing sports science content for coaching accreditation courses at advanced and applied level.

Universities and departments of sport or human movement could not be expected to add greatly to the body of sport knowledge without substantial additions to their resources. Coles (1981) suggests that a new co-operative relationship between tertiary institutes and sports academies is necessary by way of increasing funding and resources to institutes and sports scientists working through the institutes either part or full time. This would facilitate a coordination of sports science and research efforts within and between sports. Parker (1988) throughout his report suggests that "New Zealand can not afford to replace the

education system in respect of the opportunity to offer our youngsters a healthy and better balanced lifestyle" (p. 62).

Coles (1982) suggests that, before a model can be developed, what New Zealand has to do is "determine to what extent we are committed to sports excellence" (p. 30).

The Sports Development Inquiry (1985) provided one explanation for New Zealand's ad hoc development of sport, this being the uncertainty of roles between the two major organisations responsible for sport at the time, the Ministry of Recreation and Sport and the Council for Recreation and Sport. In the past considerable duplication took place between these organisations effectively meaning that clear decisive leadership from a recognisable source was not present. The report advocates the development of a statutory organisation despite the apparent advantages of sport being directly administered by the government. In effect, the body created was the Hillary Commission.

A systematic approach to evaluating sports associations' appropriateness for selection to academies would assist resource allocation. The Sports Development Inquiry (1985) acknowledges that the Hillary Commission contributes funding towards existing academies and says it would be appropriate for similar programmes to be extended to other "appropriate" federations. The Sports Development Inquiry (1985) suggested the establishment of Olympic Training Centres. These, it was suggested, would provide a physical location for an aggregation of sport infrastructure, including sports science facilities for a range of Olympic and Commonwealth Games sport (Sports Development Inquiry, 1985). This is the extent of the discussion on sports academies.

Much debate over the current situation of New Zealand sport took place in the media after the success of Australia at the Commonwealth Games

in Victoria. "Australia's dominance in Victoria has provided the ideal opportunity to examine what is making our neighbour such a world force (Johnstone, 1994). Much focus was centred on the issue of funding. Professor Brian Stoddart comments, "I have no doubt that we wouldn't have done nearly so well without that sort of money going in" Exactly how much public money has been spent is almost impossible to tell because the overlapping and vaguely defined expenditure of federal state and local governments. (Ansley, 1994).

The development of a New Zealand institute of sport has previously been discussed, however, nothing has eventuated as yet. "The University of Auckland, national sporting officials and the government have earmarked part of the university campus at Glenn Innes as the site for a high-tech institute of sport" (Murphy, 1991). It was hoped that the institute, including limited accommodation for leading sports teams and athletes, would help arrest what had been identified as a drop in New Zealand's international sporting prospects. Murphy suggested that the sports centre would be markedly different from the AIS in Canberra. Instead of the bricks and mortar concept of a huge institution it would be a small centre where sports people could retreat for a wide range of expert scientific and physical advice. "Mr Banks said the Auckland Institute could be one of five eventual centres throughout the country dedicated to improving sports standards. We want an interlocking network because we have scarce resources". (Murphy, 1991).

Boyd (1984), Parker (1988) and the Coaching Research Group (1992) argue that sports vary in nature and in their numbers of participants. New Zealand has small numbers of competitors and large distances from competition centres, and so there are additional factors to be considered. Previous suggestions in the late 70s of the establishment of a New Zealand sports institute failed to generate sufficient financial support and guaranteed usage. The final argument contends that training camps in

place at present appear to be efficient and convenient for sports. However, there is no mention of how effective these training camps are in the development of elite athletes or coaches.

Literature on the efficacy of a sports institute for New Zealand drew significantly upon an examination of the Australian model and the justification for the AIS and surrounding structures. New Zealand commentator Ansley (1994) asks if the results justify the expenditure. "Australia's success, since the Montreal Games and the creation of the institute have steadily improved. Justifications go beyond glamour, national morale, international recognition and the foreign exchange generated by major world events. "Scott Nelson who spent three months in Canberra before the 1994 Commonwealth Games is adamant that fine tuning, international competition and superb training facilities and coaching helped him get his bronze at the games" (Ansley, 1994). Trent Bray New Zealand Olympic and Commonwealth Games medallist said from Sydney

> Paul Kent is training over there (Australia) and appears to have made huge drops in time so I thought I would try it out and it seems to be working. They (the Australians) seem to be a lot more prepared over here. The coaches and just about everyone in Australian are working together for the same goal, back in New Zealand it is not as much as it should be. I think they have a lot more knowledge on technique. The coach here knows so much about the sport. We've been chatting away and I've learned so much (Hinton, 1995).

The debate now is should New Zealand emulate Australia by creating its own institute of sport. Nelson says there is more to the Australian success that just the institute. "Money is the key. It is all very well having paid coaches but if the athletes can't take the time off to train,

then they can't improve." "There is no need to build our own institute of sport. Better funds go into the hands of athletes and their coaches than bricks and mortar" (McKewen, 1994).

Peter Dale says New Zealand can't afford bricks and mortar. New Zealand could have an institute by further developing our own academies in a wide variety of sports. (Johnstone, 1994). Another commentator suggests that " we have politicians and their cronies trying to convince us that us spending more money on our elite athletes will not necessarily help. Poppycock! Australia has shown us what can be achieved" (McKewen, 1994). From 1994-2000, up until the 2000 Olympics, the Australian Federal Government will spend approximately $342 million Australian on 31 Olympic sports which amounts to $57 million on average per year, just on high performance sport. States, in addition, will add funding for state based programmes. This amounts to 22 Australian dollars per head of population for the Olympic sports alone. This does not include state funding. In comparison the New Zealand government appropriation to sport is $106 million New Zealand on all sports up until the year 2001 (New Zealand Sports Foundation, 1994). Just over $11 million will be spent in 1994-1995, just under one fifth on what the federal government of Australia spends in a year, for 31 sports. This amounts to 30 New Zealand dollars per head of population for all sports. Acting AIS director Bob Hitchcock reckons 86% of the Australian Commonwealth Games medals all passed through the AIS doors (Johnstone, 1994).

The Hillary Commission recently responded to the needs of New Zealand elite sport with the announcement in June 1995 of significant financial backing to high performance sport in New Zealand (New Zealand Sports Foundation, 1995a) to assist in developing sports academies for a select 17 priority sports. The basis for the decision to move to an academy structure for the development of New Zealand sport appears to be based

on limited information. Peter Dale declared that the basis of the coaching academies was the Coaching Research Group (1992) report which was the result of an investigation by a team of independent people, headed by Trevor Hatherton (A4, Personal Communication, October 25, 1995).

Effectively, the Hillary Commission has made a decision to allocate funds to national sports associations to establish academies in order to develop elite sporting potential. In the past the federal government in Australia has provided assistance directly to NSOs for supporting athletes attending national championships and international events, bringing international and national coaches together for conferences, conducting championships and improving national administration and coaching programs. Lawrie Woodman, Manager of Coaching at the AIS, comments that the alternative, to providing money to the AIS, is to give it all to the sports and let them do what they like with it. This is essentially what New Zealand does at present. He does not think this approach works "because a lot of the sports are not up to it. Without assistance even the best organised sports would have difficulties. The programs provide extra focus and services which help sports achievers get their goals." Woodman adds that NSOs are based around volunteers who have different priorities and different views of the world which can go against getting the best possible results (Personal Communication, Lawrie Woodman, September 27,1995).

The selection criteria for the seventeen priority sports were outlined in a media release 14 June 1995 produced by the Hillary Commission. It stated "the seventeen sports are ... the best placed to deliver results at major world championships, or Commonwealth and Olympic Games, over the next five years" (New Zealand Sports Foundation, 1995b). The sports record of success is part of the selection criteria. This includes medals received, finals reached (top 8 and 16) and top half of the field reached, for significant team events only. This, for example, means that

rugby, a potential winner at the World Cup, receives funding for an academy. Gymnastics, in comparison, is not potentially a medal winner at the Olympics or World Championships but has won medals at the last two Commonwealth Games. The Hillary Commission does not say how these latter eligibility criteria will be enforced, leaving eligibility open to criticism.

Further developments in high performance sport come as a result of the High Performance Review of New Zealand sport in 1995. As of July 1996 the Sports Foundation will be replaced with an organisation that will combine the Foundation and the Hillary Commission's high performance unit. "This in effect will combine the best features of both organisations which will have a contract with the Hillary Commission which will supply the funds" ("Curtain will", 1995). Already there are critics of this recommendation, for the new organisation will have to manage funds and policy issues that arise from government in its involvement in high performance sport, install a rigorous process for assessment of funds and ensure that the direction of high performance sport is consistent and integrated (Romanos, 1995). All of which the Sports Foundation does now, according to Romanos. Mills (1982) suggests that "we (New Zealand) must look critically at the decision making process and the decision makers, and ask whether the satisfaction of vested interests will produce the best possible future."(p. 25).

The literature review now turns to a critical examination of the Australian model of elite sport development.

3.3 Australia

3.3.1 Development of the Australian Sport Structure

The present research has a focus on structures in place for elite sport development. It is important, however, to identify the evolution of the AIS and state academies from a developmental perspective.

The Aborigines, the first inhabitants of Australia had their own traditions of sport. These included sports such as wrestling, spear throwing and primitive forms of football (Cashman, 1995). Other forms of sport were associated with every day rituals associated with survival and the economy such as hunting and tracking (Cashman, 1995). The bulk of the population in Australia in the late 1800s was made up of convicts who also had their own forms of sport. According to Cashman (1995) convicts mingled in crowds who watched cricket and attended horse racing meetings but were normally associated with the darker side of organised sport, involving themselves in more informal recreations. The convicts were supervised by the military for whom sport was a way of life and a means by defining their social status (Cashman, 1995). The military had the resources and interest to promote sport in Australia.

The arrival of greater numbers of free settlers from the 1820s created an environment in which the institutions of organised sport emerged in a more sustained manner (Cashman, 1995, Westerbeek, Shilbury and Deane, 1995). The social structure of the early settlers shaped the distinctively Australian cultural patterns (Pearson, 1978). The Australian bushmen and digger traditions provided stereotypes about the Australian outback and as Pearson, (1978) has commented the values idealised in the bushman of mateship, courage and masculinity were translated to sport. Organised sport was very much a part of early Australia and

Cashman (1995) suggests that the informal sport which existed in the first colonies was an important part of the early settlers' survival.

Traditional British sports, such as cricket, rugby, soccer, tennis, golf and equestrian, with traditional values of amateurism and their 'character building' ability were initially introduced. Germans imported gymnastics, American miners introduced baseball but Australians only managed to develop a few sports themselves. Australian rules is one of these and according to Stoddart (1986, as cited in Westerbeek, Shilbury and Deane 1995) was developed to keep cricket players fit over the winter months. In Australia, and certainly in other countries in which sports were introduced such as America and New Zealand, the society and physical environment contoured the sport culture of the country.

Sport in Australia achieved wide social acceptance before the 1850s however organised sport lagged well behind the first sporting nation, Britain (Cashman, 1995). Due to a lack of resources and infrastructure, a lack of regular time for leisure and small population the Australian sports system grew into a community based club structure, with emphasis placed on sport in schools, which produced a system predominantly catering for mass participation in sport (Bond, 1989; Westerbeek, Shilbury and Deane, 1995, Cashman, 1995).

Regional parochialism has been one of the most enduring elements of Australian sport. Parochialism draws upon sporting and political inequities which includes dominance of the most populated states and the greater sporting resources of the more powerful states (Cashman, 1995). Daly (1991) noted the effect of parochialism on the AIS, which aided motivation for the development of the state academies of sport and a change in emphasis in the role of the AIS (p. 47).

From the time of the Melbourne Olympic Games the success of the Australian athletes was overwhelmed by the scientific preparation of the Eastern Block countries and other Western nations (Westerbeek, Shilbury and Deane, 1995). Due to Australia's inability to adapt to more scientific and professional ways it fell behind other countries and lost the initial advantage of its early development of a comprehensive sport system. Bloomfield (1973) suggested that "the volunteer system of club leadership...must be preserved at all costs. In order to function efficiently however, there must be well informed guidance from a centralised body" (1973, p. 3).

Prior to the 1970s federal government involvement was minimal (Semotiuk, 1987). With the exception of the National Fitness Act and a programme introduced in 1951 providing grants towards the cost of Life Saving Assistance Programs, assistance consisted of ad hoc grants towards the cost of sending representative teams to international competitions, specifically Olympic and Commonwealth Games (Semotiuk, 1987). According to Semotiuk (1987) prior to the formation of the Federal Department of Tourism and Recreation in 1972, funding for sport and recreation was primarily the responsibility of the sporting organisations themselves. The Australian government considered sport important enough to develop a policy position on it. Semotiuk (1987) suggests that the election of the Hawke Labor Government in 1983 and their subsequent re election in 1985 has provided a great stimulus for the sport and recreation movement with increased funding, a reintroduction of initiatives abandoned by the Liberal Party, and an elevation in the status of the sport and recreation portfolio to share ministerial status with tourism.

Before a detailed examination of the structures in place for elite sport development is undertaken, a brief description of the overall Australian sports delivery system is necessary. It is important also, when examining

such structures, to determine the goals underlying the country in terms of sport development and the reasons the systems were initiated, as these impact on the reasons behind the structures developed.

Australia has a complex sports delivery system with three levels federal, state and local involved. Local government involvement in sport in Australia has been significant for many years. The development of sport in Australia relies on club sport and a community base to provide the bulk of its potential elite athletes so the continuation of support for local level sport is crucial. The extent to which the local government provides for sport and recreation activities and facilities is highlighted in the Commonwealth of Australia, *Going for Gold* report (1989). The report showed that local government had contributed seventy three percent of the 900 million AUD total government expenditure on sport and recreation. It is noted by the researcher that although support at the local government level and club level provides the basis for the future development of elite athletes, the main focus of local government is recreation rather than sport and so it will not be considered further in the present research.

Government involvement in sport at the state level emerged only in the early 1970s. Each state has its own government department for sport and recreation. Initially these departments began promoting mass sport participation but soon they had the dilemma of whether to develop elite sport or increase mass participation (Westerbeek, Shilbury and Deane, 1995). When the states developed their own state based institutes of sport (the first of these being in 1982, the South Australian Sports Institute) for the development of elite sport to operate in line with the AIS, the decision was partially made for them (See Appendix 3, Establishment Dates of Australian Sports Academies and Institutes). Funds from the state budget are allocated for the development of the state institutes and the development of elite sport but the remainder is

spent on the community and on sport and recreation for all. Westerbeek, et al. (1995) provides a breakdown of the total spending of the State of Victoria's Sport and Recreation budget. (See Table 1, Spending Breakdown on Sport in the State of Victoria).

Table 1.

Spending Breakdown on Sport in the State of Victoria

Sport and Recreation, Victoria	Expenditure Aust Million Dollars(1993/4)
State & Community Facility Development	4.2
Sports Development	3.7
Victorian Institute of Sport	2.2
Community Recreation & Camps	4.0
Sport Administration & Smaller Programs	1.9
TOTAL	16.0

Adapted from Westerbeek, Shilbury and Deane, 1995

The funding for sport in Australian is provided by the federal government through the Australian Sports Commission (ASC). The ASC is a statutory authority founded by an Act of Parliament and is responsible for the delivery of service to sport in Australia (Westerbeek, Shilbury and Deane, 1995). The funds come directly from the Department of the Environment, Sport and the Territories. The ASC provides financial support and other support services for the participation level to the elite sport level. The ASC's two objectives are to increase participation in sport and sport activities by Australians and to develop sporting excellence by Australians (Australian Sport Commission, 1993). The AIS, established in 1981, is the national institute responsible for the

development of elite athletes in Australia (Westerbeek, Shilbury and Deane, 1995).

Prior to 1989 the AIS and ASC were two separate entities (Harris, et al. 1984) but it was felt that "If Australian athletes are to compete successfully against countries who have streamlined their sports systems to cater for the needs of high performance athletes, we must similarly streamline our systems" (p. 10). It was proposed that ASC be established as a statutory authority answerable to Parliament through the Minister for Sport, Recreation and Tourism. In 1989 the ASC amalgamated with the AIS. This federal level is the focus of the present research, given that funding for elite sport is distributed at this level for development programmes.

This amalgamation was supported by Frisby (1986) who found that bureaucracy is an effective method of managerial control. The results of the study, which may apply to any country, revealed that "the more voluntary National Sport Governing Bodies are characterised by some of the features of bureaucracy, the greater the likelihood of goal and systems effectiveness" (p. 60).

The AIS is one division of the structure that makes up the ASC. (See Figure 2, p. 53, The New Structure of the Australian Sports Commission). A modified structure for the ASC was announced on September 28, 1995 at a general staff meeting. The change in the structure of the ASC corresponds to the changing role and emphasis of the organisation with special emphasis on the development of elite athletes in preparation for the Sydney 2000 Olympic Games. A discussion on the new structure and role is found in Chapter Five.

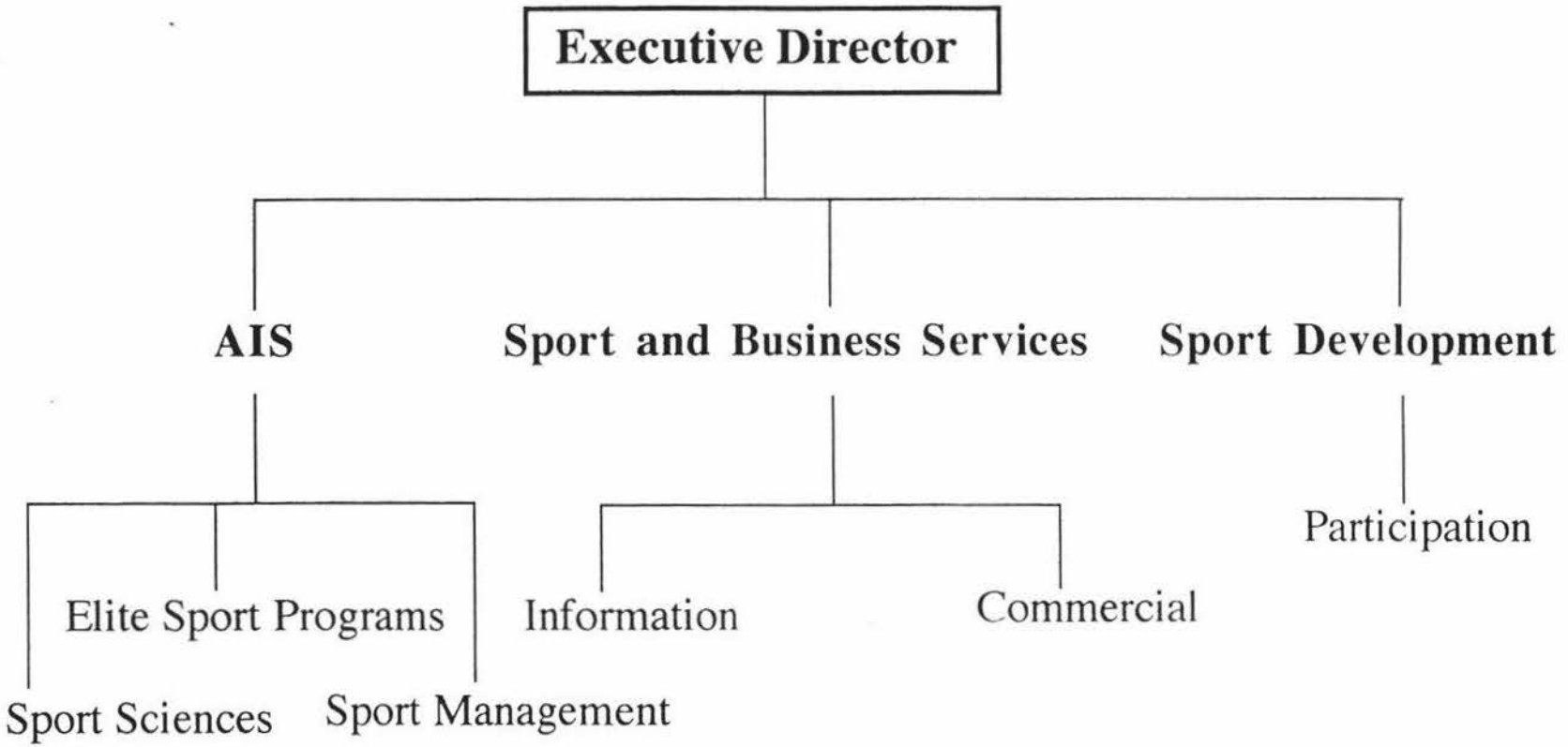


Figure 2. The New Structure of the Australian Sports Commission

3.3.2 The Background to Elite Sport Development

Australia was successful in sport with its existing sports structure before the AIS. In 1962 Sport Illustrated judged the three leading nations in each of forty sports and Australia ranked sixth out of thirty-four nations overall (Daly, 1991). When scores were weighted on a per capita basis Australia was placed first (Daly, 1991). After winning eight gold, seven silver and two bronze medals at the Munich Olympics in 1972, the Montreal Games in 1976 did not produce one Australian gold medallist, just one silver medallist and four bronze medallists (Vamplew, Moore, O'Hara, Cashman and Jobling, 1994) (See Appendix 1.). The only other year Australians did not win a gold medal at the Olympics was in 1920 at the Antwerp Olympic Games (Vamplew, et al. 1994). The lack of medals is said to be the impetus for the Sports Institute Study Group (1975) headed by Allan Coles (Carrol, 1991a; Daly, 1991). However, Carrol (1991a) suggests that most of the ground work of the AIS was done before the 1976 Games, the results of which concreted the concept of a national institute of sport. The report made firm suggestions for a centralised institute of sport for the development of elite athletes in response to "Australian sports development having been haphazard, uncoordinated and parochial" (Coles, 1976).

Semotiuk (1987) suggests that the 1972 and 1983 Labour governments recognised the importance of sport to Australia as a nation. As a consequence of this recognition the Government increased its intervention into Australian sport and demonstrated that with funding and support, elite athlete development could be enhanced. The funding enabled the establishment of the AIS, incorporating the most modern facilities, sport science and sport medicine units and the ability to import top coaches. Essentially the government involvement enabled sport to have the funds to develop as it always wanted.

Two federally commissioned reports, The Role, Scope and Development of Recreation in Australia (1973) and the Sports Institute Study Group (1975, in Coles 1976), provided the background initiative for the development of the AIS (Anonymous, 1989; Carrol, 1991a; Daly, 1991). Under the leadership of Dr. Allan Coles, the Sports Institute Study Group (1975, in Coles, 1976) visited the major sports institutes in Europe in order to examine what a number of sport successful countries were developing in terms of elite sport (Daly, 1987). No single institute became the model for the AIS, however, ideas were gleaned from all of them (Coles, 1976; Daly, 1987). These institutes include Cologne Sports High School in West Germany; Liepzig Institute in East Germany; Lenin Central Institute for Sport in Russia; Wingate Institute in Israel; National Institute of Sport and Physical Education in France and Swiss School for Physical Education and Sport in Magglingen (Daly, 1987).

A number of writers (Bloomfield, 1973; Daly, 1985,1987) suggest that in addition to the structural revolution taking place Australians found themselves amateurs in a world of sporting professionals. "The Australians posses a proud sporting past with little future unless they planned for their success" (Daly, 1984 cited in Westerbeek, Shilbury and Deane, 1995). The common recommendation of the Coles and Bloomfield reports, drawing on overseas models, was to establish a national sports institute to further the development of elite athletes and coaches (Anonymous, 1989). The Minister of Tourism and Recreation at the time, Frank Stewart, stated that "if Australia wishes to maintain sporting standards which are compatible to its size and international sporting regard, an expressed national commitment is necessary" (Carrol, 1991a). Former Sports Minister John Brown suggested an even deeper motivation for the establishment of the AIS " was the belated acknowledgment of the debt owed to Australian sports people and a recognition that if, as a nation, we valued sporting achievement, no longer could we rely on individuals being able to devote time and their

own resources to such endeavours" (Australian Sports Commission, 1993, p. 7). Daly (1984, cited in Westerbeek, Shilbury and Deane, 1995) states that "Australian sport is among the most unorganised and uncoordinated in the world...in the past our champions have succeeded in spite of our organisation not because of it."

Bloomfield (1973) highlighted a number of broad policies which underlay the development of sport and recreation in Australia. One of these was that the club system in place in Australia was the basis of sport and recreation in Australia, and should remain so. It was felt, however, that the above system should be supplemented by the use of professionals and semi professionals in both the administration and coaching areas. "Competent leadership at all levels should be the basis for sound sport development in Australia" (Bloomfield, 1973). Reasons for this are firstly, that the professionals can educate and aid the volunteers, administrators and coaches to do their jobs more efficiently, and secondly because the numbers of volunteers is dwindling and there are fewer people available to do work on a voluntary basis. Some systems have floundered in Europe (France, Italy and Spain) because they were developed without suitable leaders or trained personnel.

Chelladurai (1986) suggests that there are all kinds of diversities found in coaches ranging from their levels of specialisation and competition, to their different types of sport (team versus individual) and type of institutional affiliation (school, club national team). Because of this Chelladurai says it is difficult for coaches to organise themselves and therefore not surprising that governments (for example, Canada, Australia and India) have assisted in the organisation of coaches into a viable profession.

Another policy recommended by Bloomfield (1973) was to create a permanent headquarters from which sport and recreation could be

administered and promoted throughout Australia. The suggestion was that the Federal Government establish a National Institute of Sport and Recreation in Canberra. This centre would function in a similar way to other such institutes in European countries which have already demonstrated that they are a necessary part of any national sport and recreation system.

It was proposed that the institute would provide leadership and programmes for sport. National coaches would have a centre where they could carry out educational and training programmes. Education programmes would be both basic and applied including courses in human physical performance (biomechanics, skill acquisition and psychology) and practical courses. Bloomfield (1973) proposed that the national institute would be a logical place for Australian teams to conduct their training before leaving Australia to compete.

The facilities, it was proposed, would be modern and functional in order for top level courses to be given and international teams could train at the institute before overseas competition (Bloomfield, 1973). Research in the area of fitness, the science of coaching and sports medicine were proposed as being among the most important functions of the institute (Tadbolt, 1982). It was proposed too that the staff at the institute would need to be of high calibre. The coaches would have to fully trained professionals. The professional research staff would need to be trained at the highest level - the doctoral level was proposed. Professionally trained administrators would be needed to coordinate these functions and the personnel involved. Many ministries (Canada, France, Germany, Holland) subsidise their national associations for administrative assistance. One administrator in Australia hoped that "the kitchen table era of sport administration would end and that the government would support the administration of sporting associations as was done in many other countries" (Bloomfield, 1973, p. 34). Munro (1970, cited in

Bloomfield, 1973) noted that "many times we marvel that we have managed so well to hold our own through the efforts of selfless sport executives operating a large enterprise in their spare time against countries that have sports structures which are much more sophisticated." (p. 35). That comment, directed at administrators of Australian sport, may easily be applied to the New Zealand situation.

The Australian Labor Government during the late 1970's was beginning to consider sport and recreation as a tool to be used by the party to "revitalise the quality and direction of national leadership in Australia" (Semotiuk, 1987, p. 152). The Labor party maintained "that if Australia wanted to have a fit and healthy nation and to regain its position as a top sporting nation, it would have to be prepared to commit its financial, physical and human resources to achieve those ends" (Semotiuk, 1987, p. 156). One initiative in this process was the appointment of the Study Group for the Development of an Australian Sports Institute, whose task was to investigate and make recommendations about the need and feasibility of a National Sports Institute (Coles, 1976). The primary term of reference given to the study group was to:

> examine the existing provision in Australia for the adequate preparation and training of sportsmen and women, coaches and sport medicine personnel and make recommendations as to the need for a national sports institute to improve the present situation (p. 54).

The terms of reference go on to say that should a need be established, the study group should investigate how other countries cope with this problem to provide for sport and physical recreation from the very basic to the most advanced level of performance with the view to recommending the best approaches to be taken in the Australian situation. Submissions to the report made it abundantly clear that

Australian provisions for elite sport development at the time were either ineffectual or non-existent.

It was not the responsibility of the Study Group to examine the research on the needs of sport in Australia. It was envisaged that the underlying philosophy was that a national institute would provide the opportunity for all those who wished to participate in sport to their fullest desire or skill. To implement such a philosophy, in any sports system, money is necessary and more specifically coaches, administrators, sports scientists and medics, facilities, scientific knowledge and organisation are needed (Coles 1976).

The contemporary AIS is a close manifestation of the model national institute of sport and recreation advocated by Bloomfield (1973) and Coles (1976). Bloomfield (1973) stated that the majority of European countries began without such organisations but within a short period of time found it necessary to develop them in order to coordinate sport and recreation programs, services and research. The functions of the national institute of sport and recreation, proposed by Bloomfield (1973) are similar to those now in place at the AIS and state institute and academies in Australia.

One dimension of the proposed national institute which has not been implemented is the area of 'recreation services'. The facilities at the AIS and state academies and institutes are available for public use which are utilised on a user pays basis. According to John Gilbert (Personal Communication, September 27, 1995) the facilities are expensive for recreational individuals. The National Training Centre programme provides financial assistance to the sports which were not selected as AIS sports. These sports were able to visit and utilise the AIS for camps and as a training base prior to international competition. Today the facilities are too expensive even for national teams to use resulting in people not

utilising the facilities to their capacity. Currently, the AIS is an elite sport centre with little allocation for recreational facilities or programmes (John Gilbert, Personal Communication, September 28, 1995).

Initially Coles (1976), outlining the study group's thinking thus far, had quite a different vision for the structural development for elite sports to what actually manifested itself. Coles suggests that Australia is quite different socio-economically, geographically and demographically from other countries. For tiny countries such as Israel and Switzerland a centralised institute is sagacious. Coles states that "for Australia, with its heavily urbanised population centred around widely spread cities, its strongly developed state institutions and its local traditions, a single institute is not sensible" (p. 55). Further, the need for accessibility to services and programs is crucial and therefore a decentralised structure for Australia is advisable. The report of the Sports Institute Study Group (1975, in Coles 1976) advocated the decentralisation of the sports institute. The report argued for a "central administrative core in Canberra and strongly developed branches in the states" (Daly, 1985).

It was thought that the administrative core would be located in Canberra (as it is today) serving the region but also coordinating the function of strongly developed branch capitals. This was based on the principle that "people precede bricks and mortar and synthetics" (Coles, 1976, p. 57). In general, the function of the AIS is to co-ordinate and co-operate sport in all the ways that were not currently being done.

The study group recognised the need for the AIS to serve sport independently and not become an arm of the Public Service. The AIS however became a part of the ASC in 1989. Funding, it was envisaged, would still flow through the federal government but there would be freedom from centralised control and bureaucracy. Chapter Five elaborates on how the AIS stands contemporarily.

Coles (1981) notes the intense nature of sports institutes in some European countries where they offer a wide range of functions, such as research, coaching and administration, training and competition facilities, sport information, accommodation for athletes and in some cases for coaches and administrators. Examples are in Wingate in Israel, Warsaw in Poland, Cologne in West Germany and Budapest in Hungary. What Coles was emphasising was that where the one institute envelopes a comprehensive range of functions it is clear that the sports development interests of the country can be served in a more effectively coordinated way than otherwise. The sports specialists must undoubtedly maximise the chances of goal attainment by working in close communication with one another. Coles (1981) suggests that this sense of an integrated approach identified in East Germany, Poland and Hungary were at the time not apparent in Australia. He adds that "if it is agreed that it should be; can it be? is the question to be answered" (p. 43).

Coles (1981) suggests that the comprehensive structures of the European institute models are not entirely possible in Australia, due to the differences in historical developments in sport and higher education. He thought it may, however, be possible to secure integrative advantages of the European institutes as previously mentioned. Coles notes that the AIS may be able to do this because of the deliberately forged links between the AIS and the Canberra University Sports Studies course. The Illawarra Academy of Sport for example draws from the University of Wollongong for its sport science.(Commonwealth of Australia, 1989).

Coles (1981) also makes a subtle note of the parochialism which is evident in Australian sport stating "The AIS is committed to raising the standard of Australian sports performers and has been funded to obtain excellent facilities and full time coaches. Unless the states are expected to share the same national purpose and therefore warrant appropriate

financial commitment on the part of the federal governments, comparable state development could not be expected" (p. 43).

Chun (1990) and Murphy (1991) note that the sporting club structure is supplementary to the AIS and important in the development of elite athletes. The responsibility for participation ultimately rests with the sport itself (Commonwealth of Australia, 1989).

3.3.3 The Australian Model of Elite Sport Development

Having provided the background leading up to the present sports situation in Australia it is now fitting to examine the current state of Australian sport in the context of elite sport development.

The Australian Sports Commission has two objectives:

1. Increase participation in sport activities by Australians

2. Excellence in sport performance by Australians (Australian Sports Commission, 1993, p. vi).

Additionally, the AIS has three objectives:

1. To provide resources, services and facilities for Australians to achieve excellence in sport and further their skills in education and vocation. The emphasis is dependent on the coach of the programs and the coaches' philosophies. Charlie Walsh for example "is 100% focused on world championship and Olympic medals with little concern for the holistic development of the athletes" ("Charlies Way", 1994).

2. To foster co-operation in sport between Australia and other countries

3. To integrate Australian wide support programmes for elite athletes (Australian Sports Commission, 1993, p.7).

The Australian Institute of Sport, opened in 1981, offers full facilities, services and finance to fulfil the identified needs of high performance sport (Daly, 1991). On the site in Canberra are residences for the athletes, a dining hall, pool and gymnastics hall, the national outdoor stadium and national indoor stadium and a comprehensive sport science and medicine unit. Canberra is the headquarters of the AIS and ASC management and administration and incorporates the National Information Centre.

Eight sports were initially invited to become part of the AIS. This has been, and continues to be, controversial, according to Daly (1991) who states that there was "some envy of the advantages repeated by those sports which had been selected to be included in the institute initially." (p. 40).

Scholarships are applied for, and the athletes who receive these are able to live at the AIS in Canberra and now in the decentralised AIS sites across Australia. The AIS has a number of residential programs decentralised from Canberra the first of which was the hockey program in Perth in 1983 (Daly, 1991). Other AIS programs are based in Adelaide, Brisbane, Gold Coast, Sydney and Perth (See Appendix 3.). These are a mix of residential and non residential programmes. The question of which sports should be involved with the AIS programmes and which sports should be funded at the elite level has been in contention since the beginning of the AIS. According to the Commonwealth of Australia (1989)

> for Australia as a nation to try and provide for over 100 sports at the elite level is overly ambitious and almost certainly ineffective. The committee would suggest that there be a reassessment of the guidelines for national sporting organisations with a view to reducing the number of sport eligible for assistance for admission to the AIS as a residential unit (p. 41).

As a consequence, 31 Olympic sports are funded through the Federal Government.

In addition to the decentralisation of the AIS programs, most states have now established institutes or academies of sport to complement the National program (Spence, 1995) or are part of one of the other decentralised AIS programmes. The AIS in Canberra, according to Carrol (1991b), was a testing ground for elite athlete development and showed that an intensive elite program was feasible and could gain public acceptance. Wally Foreman, the director of the Western Australia Institute of Sport suggests that "the AIS played an important role in establishing a support structure and focus for elite athletes and in many ways was a catalyst for the state based programs" (Carrol, 1991b). The main advantage is the fact that athletes can train in their own environment (Spence, 1995). David Bink, a member of the 1990 Commonwealth Games cycling team says that when he got to the AIS (Adelaide) he went downhill. "There was no sense of family" ("Charlies Way", 1994).

Although the state academies and institutes are now an integral part of the Australian elite sport delivery system these are not without problems. Parochialism between the states and between the states and the AIS is a point of strong contention (Daly, 1991). Jim Ferguson, the Executive Director of the ASC, mentioned this also at the "all staff meeting" on September 27, 1995, calling for a national plan for sport in a "unified

organisation". Bloomfield (1973) noted that "in a State-Federal system such as in Australia, neither body should usurp the function of the other" (p. 17).

There are eight state academies and institutes within Australia (See Appendix 3.). These institutes and academies deliver similar programs to the AIS: generally this is financial support to high performance athletes and competition related expenses plus sports science and medicine support. The state institutes and academies, which were originally conceived as feeders into AIS programs, duplicate AIS programs. This role was not always accepted by the states and is changing as the ASC moves towards an increasingly decentralised system for delivering the sport services (Carrol, 1991b; Australian Sports Commission, 1994).

There is a strong suggestion that the AIS should, and will eventually, become a training centre for national teams and squads and for sports science research (Judy Flanagan, Personal Communication, September 27, 1995). Wally Foreman suggests that "the AIS is no longer pre-eminent in the Australian sports system. It still has an important role but the future of elite sport development is in the hands of the States (Carrol, 1991b).

The state academies and institutes differ from the AIS in that they do not offer residential programmes. Some of the state institutes and academies are not bricks and mortar. For example the Victorian Institute of Sport, based in Melbourne, has offices but no permanent facilities. The sports scientists, and other service providers are on contract and the associations provide venues from which the coaches work (Lawrie Woodman, Personal Communication, September 27, 1995). The academies are part of a national network for elite athletes, providing athletes from their state with the opportunity to improve their performance through access to coaching, facilities and sports science and

medicine (Carrol, 1991b). This was in line with the original plan for the Institute, outlined in the Sport Institute Study Group, which advocated branches of the AIS in states (Daly, 1991).

So the AIS is no longer the only place for athletes to receive quality coaching and sports science and medical support (Pyke, cited in Carrol, 1991b) and it must be ensured that the precious resources available to sport in Australia are not duplicated. Carrol (1991b) suggests that "the future role of each institution in the national network needs to be defined to avoid duplication to ensure the efficient use of resources available for elite sport" (p. 4). It would appear that in Australia there is a strong move towards the understanding of the need for national coordination of effort. This can be demonstrated by the AIS networking with state academies and the development of the Intensive Training Centre Programmes (ITCP).

The concept of the National Training Centres Network is aimed at further decentralising the sports delivery system. Thirty one sports are involved with the National Training Centres Network which is, as the Australian Sports Commission (Australian Sports Commission, 1995) proclaims, "perhaps the most significant advance in Australian sports management since the formation of the AIS in 1981." Athletes are able to live and train wherever their performance is likely to be most enhanced. The ITCP development is the responsibility of each individual sport, using all the support services provided by the AIS and the state institutes and academies of sport. "With the ITCP they can get the coaching sports science and other backup services". The critical factor according to Ken Norris (Personal Communication, September 27, 1995) is the network of coaches driven by an institute national coach. Each NSO has to have an endorsed development plan which points out the role of the regional coach, the state coach, state association and state institute.

In the case of basketball an ITCP was established in 1990. At present there are nine programmes with one in every state and territory and two in Victoria. There is one full time coach in each program and a network of part time and volunteer coaches under that. Funding for the ITCP is from three sources - Australian National Basketball, state basketball organisations and state institutes of sport (Patrick Hunt, Personal Communication, September 27, 1995).

The Bloomfield report (1973) recognised that more support should be given to sports organisations for their administration costs. According to Bloomfield, government ministries in Canada, France, Holland, Poland and the German Democratic Republic subsidise administration in their national associations.

The Australian government has made a commitment to substantially fund elite Australian sport until at least the Sydney 2000 Olympic Games. Funding for elite sport has been increasing steadily each year (Australian Sports Commission, 1995) and will continue to rise until the 2000 Olympics. Appropriation of funds to elite sport is constantly changing in response to the changing environment and shift in emphasis of the ASC. At present the financial emphasis is on elite sport and more specifically Olympic sports. The focus will remain here until at least the 2000 Olympic Games in Sydney. The figure for government appropriation to the ASC for the 1993-94 financial year was $63,363,000 Australian (Australian Sports Commission, 1993). It is noted that the figure for 1995-96 is significantly higher, increasing each year until the 2000 games. Therefore is it more appropriate to show the percentage spent on each division of the ASC.

These percentages are as follows;

Elite sport	33.86 %
Sports Development	14.44 %
Sports Management	22.66 %
Sports Sciences	6.10 %
Information Services	2.16 %
Marketing, Communications	1.57 %
Corporate Services	14.21 %
Total	**95.00%**

(Australian Sports Commission, 1993)

Other divisions of the ASC such as information services and sports science provide services to elite sport development and so the allocation to elite sport is indirectly a higher proportion than this figure.

Evaluating the performance of the AIS is complex and for a number of years there was no documented evaluation of the AIS. According to Daly (1991) and John Gilbert (Personal Communication, September, 27, 1995) funds were relatively unrestricted in the early days of the AIS and spending was unaccounted for, evident in the bronze statues which are positioned around the site. Daly (1991) suggests that "the time had arrived when the Institute had to be more accountable" (p. 106). As late as the 1988 Strategic Plan for the AIS evaluation measures were still being established. "An extensive series of protocols are being developed in terms of evaluation plans for the institute." (Daly, 1987, p. 27). The lack of evaluation procedures has in the past meant the AIS was left open to criticism.

In discussing evaluation and effectiveness of national sport governing bodies, Frisby (1984) used world rankings, changes in world rankings and effectiveness rankings (which accounts for the number of countries

competing) to analyse the degree to which these organisations achieved their performance goals. These are the most obvious measures but others include medals won, personal best performances by athletes and teams and number of athletes and teams receiving assistance, but Frisby (1984) and others (Carrol, 1991b; Volkwein and Haag, 1994) suggest that these are too simplistic and effectiveness of performance should not be used as the sole criteria for the evaluation of a sport system. Chun (1990) asks whether Australia has been able to improve its performance standard at an international level after the intense efforts toward athlete development. Arguably, he suggests the answer can, in part, be obtained by reviewing the results of the 1984 Los Angeles Olympic Games and the 1988 Seoul Olympic Games. Australia also looks at international standards, and projections for 2000. "On the macro level, from 1994 we have mapped the performance expectations on the way so we know exactly where we want to go in each sport. Below that we have other levels of monitoring performance indicators." (Sue Baker Finch, Personal Communication, September 28, 1995).

More recently, with the increase in funding for Olympic sports, extensive evaluation and accountability procedures have been established. "It is taxpayers money so sports must be accountable and that is why there are strong principles underlying the program (Personal Communication, Sue Baker Finch, September 28, 1995). Leland (1988) states that evaluation is one of the most challenging jobs in order to help coaches improve on their weaknesses and build on their strengths.

Australia continues to invest millions in funding to elite athlete although sports participation is actually low (KcKay, 1991). The Sports Institute Study Group (1975, cited in Westerbeek, Shilbury and Deane, 1995) states that:

> Proponents of mass leisure sport programmes have insisted that money be spent more equitably and that too much was being spent on the sport's elite. Proponents of high performance sport have argued that its development costs were greater than for leisure sport and that money was needed if talented athletes were to develop to their full potential (p. 48).

Coles (1981) notes

> I do not believe that it was the AIS alone that led to Australians relative resurgence towards the top of the medal count. It is only symptomatic of a much wider concentration of effort on the development of sport within the country (p. 30).

He supports this by commenting that

> All the State Governments have decided to implement a policy towards either State sports training centres or sports institutes. They have got behind the national accreditation schemes, the application of sports science and the close integration of sports medicine (p. 30).

Administration of the Australian elite sport delivery system is, according to Bloomfield (1973), a problem. Bloomfield suggests that the majority of sports associations in Australia have major administration problems because of the massive amount of coordinated work to be done at the national and international level. Administration of sport has changed significantly over the last 20 years from an informal operation to a system of international sport organisations providing linkage from school to club to international levels. Rail (1988) suggests that sport organisations share a number of structural features with complex organisations such as a division of labour, a structure of authority, a

communication system, a set of policies, and a set of criteria for performance evaluation (Rail, 1988; Wilcox, 1994; Theodoraki and Henry, 1994; Kikulis, Slack and Hinings, 1992). This also implies that sound business and management principles, which apply to organisations, must apply to the sports organisation.

On this issue, Stuart-Weeks (1989) suggests that the pace of performance has quickened and that the attitudes of the past, in Australian sport, will ensure the ambition to stay at the top. He suggests that funding provides a window of opportunity but in order for this opportunity to be realised, management must change. Martin-Weeks states that there is already an obsession with restructuring and rationalisation so why not apply these principles to sport.

Stuart-Weeks (1989) envisages a single unified organisational structure with developing plans and strategies at the national level with full input from the delivery services thorough a decentralised structure.

3.4 Other Countries

3.4.1 Canada

Despite the increasing amount of literature on the Canadian sports delivery system (Kikulis and Slack, 1995), Canada has not developed a multi sport institute, more its own version of a network of academies. Hawes (1986) suggests that Canada "has developed a network of organised sports" (p. 122).

Prior to the Fitness and Amateur Sport Act in 1961, the Canadian government had little interest in international amateur sport (Orders and

Chelladurai, 1994). The catalyst for the shift in the Canadian amateur sport delivery system was a report by the Department of National Health and Welfare in 1969 (Kikulis and Slack, 1995). The report was indicative of the state of the administrative and technical programmes for sport in Canada and called for the NSOs to improve their operations (Kikulis and Slack, 1995). According to Macintosh, Bedecki, Hinings and Zimmermann (1987, cited in Kikulis and Slack, 1995), the recommendations made in the task force report gave the federal government the impetus for more direct involvement in the Canadian's amateur sport delivery system and in particular the development of NSOs. An agency for the development of Canadian amateur sport, Sport Canada, was created in 1971 and along with this arose a network of support agencies such as the Coaching Association of Canada, Canada Games Council and the Athlete Assistance Program (Kikulis and Slack , 1995).

Scholarship programmes for elite athletes have existed in Canada for over 20 years. The government applauded excellence in sport by supporting those athletes who were training, attending school and/or experiencing financial difficulties, with grants ranging from $500-$2000 Canadian annually. As the 1976 Montreal Olympic Games approached, the government's emphasis shifted from a financial need based programme to a performance-dependent programme in an attempt to focus athletes more on their training rather than their financial needs (Orders and Chelladurai, 1994).

Following the 1976 Olympics, in which Canada performed poorly, the federal government assumed authority over existing athlete assistance programmes and consolidated them into one programme, known as the Athlete Assistance Program (AAP). The Canadian government recognised that there was a need to provide financial support to elite

athletes because of absence of athletic scholarships in Canadian universities

Orders and Chelladurai (1994), noting the lack of evaluation for the AAP system, examined the effectiveness of the programme in improving the performance of athletes on the scheme. The results of the study clearly showed that the AAP was associated with increased performance of Canada's elite athletes (swimmers and track and field). The study indicated that a large number of athletes were dropped from the programme after one year of support suggesting that the nature of the AAP support is not continuous enough to keep them in the system until they reach their peaks.

Given the magnitude of the financial implications and the magnitude of the AAP it is, according to Orders and Chelladurai (1994), surprising that little has been done to evaluate the system. The purpose of the study was, therefore, to determine the effectiveness of Sport Canada's Athlete Assistance Program. The results clearly showed that the AAP has been associated with increased performances of Canada's elite athletes (Orders and Chelladurai, 1994).

Orders and Chelladurai (1994) concluded by saying that due to the magnitude of the budget for the AAP it is important to justify the cost of the programme through both qualitative and quantitative means.

Armstrong, Hansen and Gauthier, (1991) developed a model for evaluating the High Performance Sport Centres (HPSC) stating that evaluation is a critical managerial function. In addition evaluation can help reduce and prevent any costly errors. They acknowledge that the process of evaluation calls for a comprehensive review of the programme, thereby directing ongoing efforts to improve programme efficiency and effectiveness. When concluding Armstrong et al. (1991)

noted that the evaluation process implemented at the initiation of the HPSC concept may now be obsolete or irrelevant, adding that criteria must continually reflect the standards and objectives of the HPSC. The evaluation process must also be adapted to the nature of each HPSC.

The above studies (Armstrong, Hansen and Gauthier, 1991; Orders and Chelladurai, 1994) examine the evaluation process and effectiveness respectively, of these programmes but fail to suggest any optimal structures for further developments or suggest any changes that could be implemented to create the most desired structure for the development of high performance athletes. Although there are athlete development and funding programmes established in other countries it is difficult to determine the effectiveness of these structures in relation to the New Zealand sports context. What is apparent from these studies is the need for effective evaluation measures to be built into the structure of elite sport development, irrespective of what that structure may be.

Up until 1980, the Canadian government, despite its high investment into high performance sport, gave the notion of high performance training centres little consideration, although, Armstrong, Hansen and Gauthier (1991) suggest that the highly touted success of single and multi sport centres has not been ignored by Canadian amateur sport experts concerned with improving the potential of Canada's elite athletes. A major observation has been the current prevalence of sports institutes placing emphasis on athlete needs for high performance.

Broom (1979) suggests the need for national sport training centres or sports institutes had been recognised in Canada for at least fifteen years. Broom reviewed the experience of a number of countries which had operated such training centres for up to thirty years and conducted personal interviews with key personnel in sports academies and institutes and sport related associations to gather their perceptions on the

development of multi purpose sports centres. Broom provides a case for sports institutes reviewing the experience in West Germany, England, Holland, France, Switzerland and the communist block, applying the knowledge to Canada's sport system, and unique characteristics.

The European experience clearly indicated that the sports institute must be in close proximity to a major population and easily accessible. The Coaching Research Group also indicated this by a proposal to develop a centralised institute in Wellington utilising existing infrastructures. The European experience also indicated that it is important to combine as many complementary functions as possible and use the facility as much as possible. If use is maximised then cost is minimised.

In Canada, due to the immense territorial size of the country, single sports institutes were unrealistic. (Broom, 1979; Hawes, 1986; Hayes, cited in Armstrong, Hansen and Gauthier, 1991.) The cost of travel in terms of time and money, the limitations imposed by climate and inaccessibility to many potential users dictate a decentralised approach. The increasing concentration of population in a few well-spaced areas make regional or provincial institutes more appropriate. Canada already has a network of universities across the country with physical education departments. These facilities are least used during the summer months and the universities are located in highly populated areas. In addition the size and relatively small population lend itself logistically to a decentralised approach to elite sports development The HPSC is essentially a partnership with the host facility, the municipality, the national sport organisation, the provincial sport organisation, the federal government (Sport Canada) and the provincial government (Armstrong, et al, 1991).

Broom (1979) advocated the development of a structure to aid the development of elite athletes by the development of a sports institute

and university campus combination which could evolve into comprehensive centres for sports development and study. "This way would be cheaper than establishing entirely new institutes which would drain existing personnel and effectively spread knowledge thinly across the country (Broom, 1979, p. 60).

In 1980 the federal government commissioned a study on sports' development centres. In 1983, based on the results and recommendations of the study, Sport Canada released policy and general criteria manuals to help guide the general establishment of High Performance Sport Centres (HPSC) (Armstrong, Hansen and Gauthier, 1991). In 1987 there were 80 High Performance Centres in operation in Canada with eight more planned for 1987-88 (Gorman, 1987).

The Canadian HPSCs are recognised as providing high performance sport programmes, managed within Sport Canada's High Performance Unit, for improving the preparation of Canadian athletes for international competition. These are essentially individual sports programmes with financial assistance from the federal government for the operational costs, coaches' salaries, facility rentals and sports specific services such as sport sciences (Gorman, 1987). In Canada 31 of the 43 Olympic sports now subscribe to the notion that the institution of high performance training centres would be to their benefit (Gorman, 1987). "By establishing a centre it is possible for a sport to bring together top quality facilities, coaches, support services providing not only a superior training environment but a cost efficient one as well"(Gorman, 1987, p 38). "The amount granted to each sport is determined by factors including the size of the team, the equipment necessary for the sport the technical complexity and the number of available medals" (Gorman, 1987, p 38). The centres are continually evaluated with a view to ensuring that they make a clear contribution to the development of high

performance athletes. The sports centres are not totally federally funded with the sports having to lobby for addition funding.

Canada in the early 1980s had a jigsaw of high performance centres which needed to be put together for some kind of unity (Broom, 1979). John-Pierre Tibi, who has managed the centre programme at the federal level since 1985, says that to be successful federal provincial cooperation is critical (Gorman, 1987).

Four components were identified by Armstrong, Hansen and Gauthier (1991) as major needs for high performance athletes which include athlete support; training, competition and administrative support; coaching support; and sport science/medicine/paramedical support. The basic premise of sports institutes is that successful preparation of elite athletes for international competition requires simultaneous and compatible attention to these major factors and Hawes (1986) suggests that "the most critical technical problem facing Canadian amateur sport is the development of coaches for communities, schools, clubs and international athletes" (p. 121).

Much of the scholarly debate on the Canadian amateur sports system has focused on the response of the national sport organisations' federal policy initiatives and financial contributions (Kikulis and Slack, 1995; Orders and Chelladurai, 1994). Since the early 1970's there has been increased intervention by the Canadian federal government in amateur sport (Kikulis and Slack, 1995). In the period between 1984 and 1988, Canadian NSOs were influenced by institutional pressures from Sport Canada, the government agency for sport, to change their traditional operating procedures and move to a more professional bureaucratic organisational design (Kikulis and Slack, 1995).

Individual sports organisations have their own organisational structure which, according to Kikulis, Slack and Hinings (1992) is not generic but varies between organisations. Kikulis, Slack and Hinings (1992) propose that the bulk of the literature has focused on changes in amateur sport organisations and evolutionary movement towards a more professional and bureaucratic design. Kikulis, Slack, Hinings and Zimmermann (1989) suggest that this change means that the structural arrangements of amateur sport organisations have become increasingly characterised by more professional staff, more formalised operating procedures and a hierarchical system of authority. What the authors argue is that this does not identify the differences between national sports organisations and there is the danger of oversimplification of the similarities between national sports organisation. (Kikulis, Slack and Hinings, 1995). They therefore identify, systematically, the structural patterns of 59 sports organisations and place them into eight clusters of organisational structure.

What Kikulis, Slack and Hinings (1992) uncover is a set of institutionally specific design archetypes for NSOs which are the " Kitchen Table", the "Boardroom" and the " Executive Office". Each of these archetypes has its own degree of organisational values and organisation structure. The paper does not explain why some NSOs have adopted the design type they did but does help explain the variety in organisational design and the pattern of change in these organisations.

3.4.2 Great Britain

Five National Sports Centres are in existence in Britain, funded and operated directly by the Sports Council (See Table 2, National Sports Centres in Britain). They are dedicated to providing the highest standard

of training and competition, facilities and services to achieve sporting excellence (Henwood, 1994).

Table 2.

National Sports Centres in Britain

Centre	Sports Involved
Bisham Abbey National Sports Centre	*tennis, hockey, weight lifting, football, rugby union, golf, squash, sailing*
Crystal Palace National Sports Centre	*athletics, swimming, diving, martial arts, basketball*
Holme Pierrepont National Water Sports Centre	*rowing, water skiing, angling, windsurfing, sailing*
Lilleshall National Sports Centre	*football, gymnastics, cricket, table tennis, archery, hockey, golf, volleyball, rugby league*
Plas y Brenin National Mountain Centre	*mountaineering, climbing, canoeing, orienteering, skiing*

From Henwood (1994)

The main mission of each National Sports Centre is to encourage the development of excellence in partnership with the National Governing Bodies of Sport. Under the leadership of the Central Council for Physical Recreation the National Sport Centre concept was born. In 1972 the ownership was passed to the Sports Council and the sites

became British in their direction and use. In total 69 National Sport Governing Bodies use the national centres (Henwood, 1994).

> The centres are open to the Welsh, Scottish and Irish, although each home nation has separate smaller excellence facilities, for example, the so called Welsh Institute of Sport. How these will fit in to the British Academy only time will tell. The academy is attempting to cover 20 sports but again this is more realistically achieved on a regional basis. At present there are quite a few cities in the United Kingdom going to bid for the Academy or a regional slice of it (Nigel Dobson, Personal Communication, E mail, October 12, 1995).

In 1989 the Council opened the management of the centres up to competitive tendering. This has meant major changes. In 1989 there were 250 people employed at the five sites, now there are 35 (Henwood, 1994). The centres have a management contractor operating their main customer services. This has induced more cost effective management, increased use of the sites, preservation of the highest quality standards and a saving of 1.6 million pounds of public money (Henwood, 1994). Some of the savings have gone into the development of the National Cycling Centre in Manchester, opened on 1 September, 1994, which will be operated under the same policy as the existing five centres (Henwood, 1994).

On funding, Henwood (1994) noted that excellence costs stating that "at the same time many believe that the price must be paid if Britain is to preserve and enhance its standing in the world of sport" (p. 13). Financial assistance will be given to the top sports men and women. Scholarships to the British Academy of Sport, regional institutes and individual sports academies will be awarded. In addition bursaries and scholarships to institutions of further and higher education will be offered

and training and competitions paid for by the governing bodies of sport and the Sports Councils (Department of National Heritage, 1995). Nigel Dobson a PhD student at Sheffield Hallam University, United Kingdom, is presently identifying the provisions available for elite athletes in Britain. He suggests "The National Centres are extremely active in the decision process and looking for as much new 'lottery' funding as possible" (Nigel Dobson, Personal Communication, October 27, 1995).

Great Britain has only recently announced the formation of a British Academy of Sport. The Government White Paper "Raising the Game" (Department of National Heritage, 1995) outlines the Government's proposals for the new academy. According to the report much of what is needed to assist British sports men and women to develop to the highest level of sport is already in place with the Sport Councils national sport centres, the National Sports Medicine Institute and the National Coaching Foundation. What is lacking, however, "is a coherent unified programme to allow those with the greatest potential to use that talent to the best effect" (p. 35).

The government envisages that the British Academy of Sport will provide top class training facilities, expert support services, quality residential accommodation, financial support for athletes, access to educational facilities, personal development programmes and information services (Department of National Heritage, 1995). Basically what is planned is a network of high quality facilities which would be more locally accessible but working towards the standards set by the Academy. The key to the Academy is the development of technical services "the key to top level performance" (Department of National Heritage, 1995, p. 36). The Sports Council is about to release a consultation document concerning the proposed structure of the Academy (Nigel Dobson, Personal Communication, October 12, 1995).

The British proposal outlined in *Raising the Game* (Department of National Heritage, 1995) is not without its problems. Already there have been objections from Wales, Scotland and Ireland about the centralised nature of the academy. Nigel Dobson (Personal Communication, October 12, 1995) suggests that "a critical analysis of the Australian model, in a democratic country not unlike Britain, would suggest establishing an integrated network of regional sports academies". He adds that Britain and Australia share similar characteristics in terms of geographical spread, population and the presence of clear divisions within the political unit and also the apparent lack of co-operation and lack of academic writing (Nigel Dobson, Personal Communication, E mail, 1995). "In my view the sensible option is for the Academy to take a regional structure" (Nigel Dobson, Personal Communication, October 12, 1995).

The report concludes with the following statement "promoting sport in schools and beyond does depend on partnership between schools, higher educational institutions, sporting bodies, local authorities, clubs, the private sector and the Government. No single partner can act alone... and maintain a clear view of the importance of sport within society and the importance of achieving the broadest possible access to sporting opportunity" (Department of National Heritage, 1995, p. 40). The paper reviews sport generally and emphasises school sport, stating that "sport in schools is the single most important element in the sporting continuum" (p. 6).

Frisby (1984) supports the theory that the input of acquisitions or finances into an organisational system does not necessarily guarantee that desired outcomes will be achieved. Administrator Two (Personal Communication, June 23, 1995) agrees that performance does not necessarily increase in proportion to the funding.

3.4.3 Germany

The relative strength of Eastern and Western countries in terms of high performance sport is of interest when considering the optimal structures for elite athlete development. The results of the 1988 Seoul Olympics show the advantage that the East has held over the West (Chun, 1990). Since the 1970s Western countries such as Britain, USA, France, Canada and Australia have been establishing training centres for elite athlete development, the function of which is to provide athletes scholarship for full time training, high level coaching and sports science facilities. Still there was a shortfall between performances between East and West. Chun (1990) suggests three key differences in the sports systems. Children are developed in sport at the base level in Eastern countries. Volkwein and Haag (1994) reiterate Chun's point that the secret to the success of the east (Germany) was the early selection of talented sporting children at the age of 4 or 5 and the systematic training of these youngsters in sport schools. Ninety seven percent of schools in East Germany, for example, were directly linked to varying sports organisations where qualified instructors, teachers and parents taught sport (Brettschneider, in Wilcox, 1994). In the East, children with athletic potential are selected at an early age as opposed to the West which does not have an early talent identification system. Chun (1990) suggests that the nurturing environment of the East is much better than that of the sporting clubs of the West for the development of talented children. Thirdly the East has a well planned talented children development system whereas the West has a more random system.

The German Democratic Republic (GDR) was an example of the total instrumentalisation of movement of culture to the interest of the party state (Brettschnider, in Wilcox, 1994). With the fall of socialism, the East German top level sport system had to fall as well because it was

directly tied to the political system. The sport-politico system worked well as far as elite sport was concerned. The sports structures which made sport in the former GDR so successful, and sport so dominant, no longer exist which makes it a useful sports structure to critically examine. The organisations that had supported the mass sports system have disintegrated. Top level sport in Germany is currently benefiting from the effects of the long term planning of the former GDR (Brettschneider, in Wilcox, 1994).

In contrast to the GDR the West German system was and still is based on a federal system and was geared, as in New Zealand sport, toward leisure, fitness and participation. In comparison to the East, the support that the top level West German athletes received was small and insignificant (Volkwein and Haag, 1994). The figures that were spent on sport in both the Germanies were still considerably more than what New Zealand and even Australia spends on sport. The West Germans for example spent about $70 million (US) per year whereas the East Germans pumped 2 billion US dollars of centralised government funding into sport annually. There was one coach for every three athletes in the East German sports system, compared to one coach for every twenty athletes in the West German system (Volkwein and Haag, 1994).

The East German sport system was a highly centralised apparatus and in no way a model for a democratic policy (Volkwein and Haag, 1994). Sport was used as a political tool to promote the communist ideology. The athlete, the dehumanised tool, was only respected if he or she was successful (Volkwein and Haag, 1994).

3.6 Summary

The summary of the literature review draws together the main themes elicited from the literature review.

In June 1995 the researcher engaged in this present study held preliminary discussions with persons from New Zealand national sports organisations. These discussions were to elicit perceptions on the present state of New Zealand sport and on the decision to move to an academy style of sport delivery for New Zealand. These informal discussions, and an initial overview of the literature on sports academies and institutes, indicated that the decision to set up independent sports academies was based on subjective reasoning of sports administrators with little validation. Therefore there is a need for a systematic literature review on the topic of sports academies and institutes

Clearly there is limited literature on the optimal structures for elite sport development.

The literature review elicited a number of critical factors essential in elite athlete development which were present in the models examined. These factors are coaching (Woodman, 1988; Hawes, 1986; Armstrong, Hansen and Gauthier, 1991; Coaching Research Group, 1992, Williams, 1985), funding (Coaching Research Group, 1992; Parker, 1988; Sue Baker-Finch, 1995), administration and management (Rail, 1988; Kikulis and Slack 1989; Williams, 1985), competition (Armstrong, Hansen and Gauthier, 1991), facilities (Williams, 1985, Coaching Research Group, 1992), sport science and medicine (Coles, 1981; Coaching Research Group, 1992; Parker, 1988), sport research (Williams, 1985; Coles 1981, Bloomfield, 1973), and coordination (Williams, 1985).

According to the literature review, these factors should facilitate an improvement in elite sport. In order for this to be achieved a structure was needed for the delivery of these requirements. The literature examined elite sport development in New Zealand, Australia, Canada, Britain and Germany and all these countries had developed, or were in the process of developing, a structure for the delivery of elite sport. The structure for elite sport development ranged from centralised in Germany to decentralised in Canada and Australia. Britain is in the process of re-evaluating the current system of regional academies.

Fundamental components of these structures emerged from the literature. These included, an integrated approach to elite athlete development, the networking of human and physical resources, a funding source which was usually governmental, a national focus on the goals to be achieved, administration and management principles, a process of evaluation and accountability and the opportunity for all athletes to develop.

From the literature review a number of factors are critical in the development of elite athletes. Prevailing over these components is the need to develop a structure of elite sport development. A centralised model is not necessarily critical for elite sports development, however, a structure of some kind is critical.

Limited literature is available on the organisational structure of the Australian sport delivery system which has undergone considerable transformation in recent years from a highly centralised model to one of increasing decentralisation. The Canadian system is more similar to that of New Zealand given the fact that they have not established multi sport development centres rather decentralised structures aimed at funding athletes.

Whatever structure is developed it is essential that the principles of administration, business and management are applied to the sporting context for, as Trenberth and Collins (1994) suggest, ultimately benefits will only accrue to organisations whose structures and processes are expressed in modern managerial terms.

After an analysis of the literature it is clear that the answers to the research questions are not present in the literature and the literature review highlighted the need for further research before decisions are made on the optimal structures necessary to facilitate elite athlete development in New Zealand.

As a result of the literature review the basal questions stated in Chapter Two were reformulated to the research questions below.

1. Given the apparent benefits of the Australian Institute of Sport model of elite sport development, what are the perceived benefits of this model, and could they be achieved through an optimal structure of New Zealand sports academies?

2. Given that New Zealand has recently made the decision to establish individual sport academies what is the optimal structure of these academies?

CHAPTER FOUR

METHODOLOGY

Chapter Outline

The chapter begins with a definition and discussion on qualitative research methodology. As Jacobs (1988) suggests, qualitative research is not one approach but many different approaches, therefore, interviews and questionnaires, within the boundary of qualitative research, are employed to elicit the required information for the study. In this chapter these methods are discussed, as well as integral considerations such as triangulation, reliability of qualitative techniques, validity and ethics. The chapter will also describe quantitative research methods employed in this research.

LeCompte and Goetz (1982) suggest that researchers in qualitative research need to present their methods so clearly that others can use the original report to replicate the study in order to confirm reliability.

4.0 Introduction

A growing number of authors in sport research have supported methods of qualitative data gathering and analysis in place of traditional quantitative approaches (Cote, Salmela and Russell, 1995; Salmela, 1994). Salmela (1994) advocated that qualitative interviewing processes provided sports science with a clearer understanding of the information being elicited in complex sport organisation. The literature review revealed limited information on optimal models for elite sport

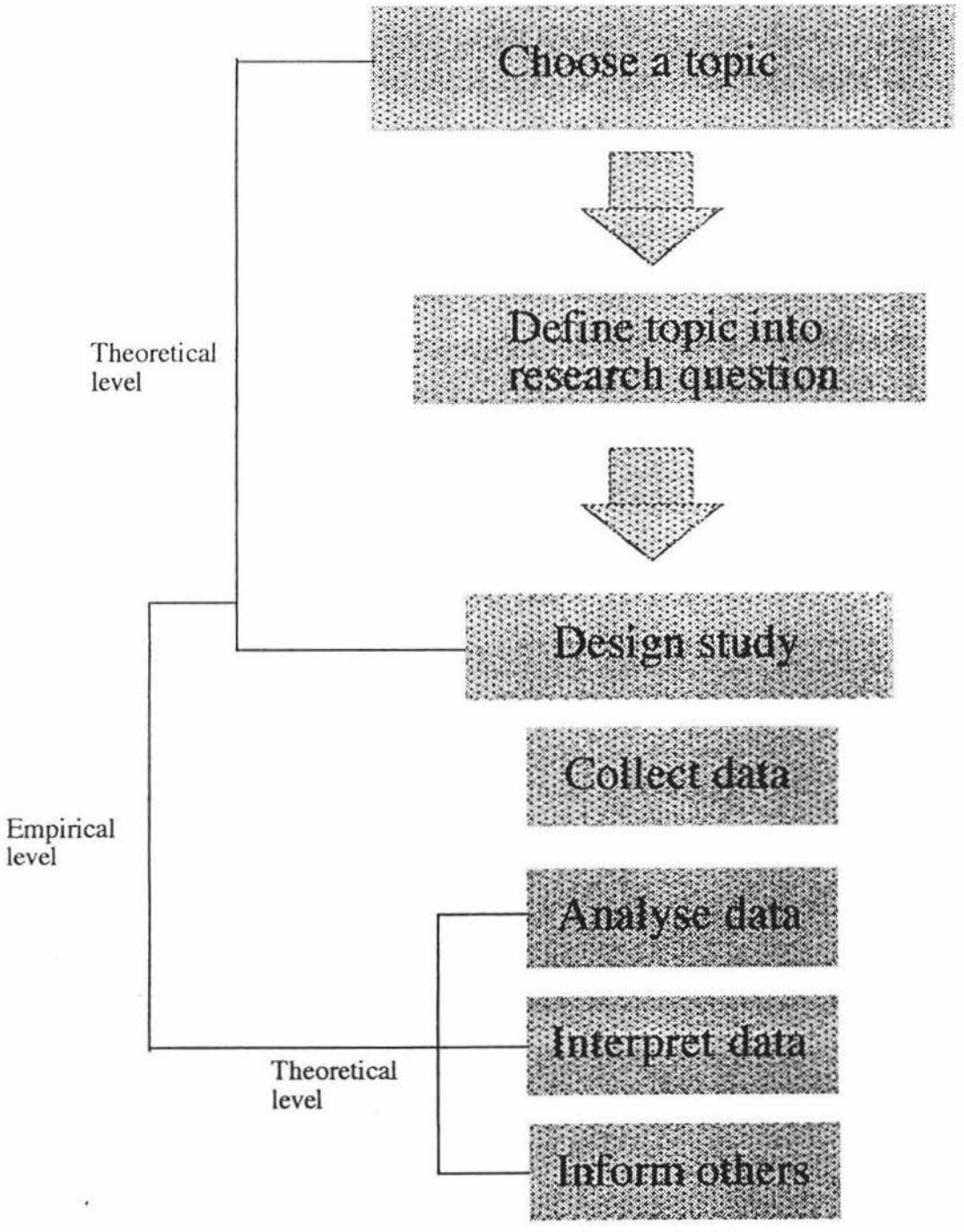
development, although, there are a number of sport commentators' perceptions expressed on sports academies and institutes.

There is a direct and causal link between the research questions, stated at the end of the literature review, and the methods employed to carry out the research. Supporting this, Locke (1988) states that it is the research questions which dictate the method. In this study the researcher is concerned with understanding in detail the opinions and perceptions held by key sport people on the topic of the structure of elite sport development, the optimal development of athletes in New Zealand and how such persons came to develop those viewpoints. Qualitative research involves the understanding of phenomena, perceptions and personal theories in ways that do not require quantification. This research is concerned with the complexity of human dimensions in ways which make qualitative methods especially applicable. The present research is not concerned with measurement or quantification of data as much as understanding and meaning of data, therefore quantitative methods are not as applicable as qualitative methods.

This research process followed Neuman's model of research which is detailed in Figure 3 (See Figure 3, p. 90, Steps in the Research). This chapter will now consider Qualitative research and specifically examine interviews and questionnaires which form the basis of the research.

4.1 Qualitative Research

The application of qualitative research in physical education, exercise science and sport science is relatively new, however it is not new in other fields such as anthropology, psychology and sociology (Denzin and Lincoln, 1994; Thomas and Nelson, 1990).



Neuman (1994, p. 114)

Figure 3. Steps in the Research

Many definitions of qualitative methods have been attempted (Bogdan and Biklen, 1981; Denzin and Lincoln, 1994; Harvey and MacDonald, 1993). Abercrombie, Hill and Turner (1984) provide a definition which states what qualitative methodologies are not, that is; "Qualitative analysis refers to an analysis which is not based on precise measurement and quantitative claims" (p. 341). Denzin and Lincoln (1994) define qualitative methods in a positivistic or naturalistic frame stating that "qualitative research involves the studied use of and the use of a variety of empirical materials - case study, personal experience, introspective, life story, interview, observational, historical, interjectional, and visual texts - that describe routine and problematic moments and meanings in individual's lives" (p. 2). Qualitative research encompasses a range of methods, as Bogdan and Biklen (1981) suggest, being an umbrella term referring to a number of research strategies that share certain characteristics. Qualitative research is also called naturalistic, ethnographic and field research. Other phrases associated with qualitative research are symbolic interactionism, inner perspective and interpretive all of which convey personal and descriptive research.

Qualitative researchers use a wide range of interconnected methods with the objective always to get a better fix on the subject matter at hand. There is a link between the present research, qualitative methods and ethnographic methods. Ethnography may be perceived as being located in the general domain of qualitative research. As a style of research, the qualitative mode draws upon modes which are congruent with ethnographic research. Given this overlap there are elements of ethnographic research in the present study. The central features of ethnographic research founded on the researcher's attempt at naturalistic inquiry. This refers to research which attempts to grasp the 'natural processes of the actions and interactions.' (Bogdan and Biklen 1981). Secondly, the researcher attempts to get the subject's point of view as opposed to imposing their views on the research situation. Thirdly, the

researcher is reflexive, that is, has a critical attitude toward their research practices, theoretical models and presuppositions (Harvey and MacDonald, 1993). The present research attempts to do this.

Hammersley (1992) writes on deconstructing the divide between quantitative and qualitative research suggesting that ethnographers regularly make quantitative claims in the verbal form, using formulations like 'frequently', 'often', 'sometimes', 'generally' and 'typically'. Essentially the difference between words and numbers is not as divergent as is sometimes suggested. Critics of qualitative research argue that the difference between the two is in the precision and that to be precise quantification is necessary. Hammersley (1992) argues that precision does not necessarily mean numbers and that the specifics of a situation can often be described by qualitative methods as opposed to quantitative ones (p. 165).

Smith (1983) describes points of disagreement between quantitative and qualitative research of particular interest to the present research. He asks how each perspective relates to the goal of the investigation. Whereas with quantitative research the purpose of the research is to explain and predict relationships and create laws universally applicable, qualitative research rejects the possibility that laws will ever be found. This is demonstrated in the present research where laws will not be made, but rather a model developed which is open to adaptation in situational contexts. Locke (1988) states that qualitative research is devoted to complete and thorough description and analysis. It should, if done properly, be extremely cautious and conservative about suggesting in any way that events are related.

Further to the discussion on qualitative and quantitative methodologies, Reichardt and Rallis (1994) suggest that to critique each methodology

form allows the researcher to identify one's own weaknesses and limitations within the research.

Harvey and MacDonald (1993) suggest that basically all research methods have disadvantages, advantages and limitations. "Research methods are not neutral in how they represent the world, therefore some researchers use more that one approach as a means of dealing with this problem in a study" (p. 188). Therefore, the remainder of the chapter will discuss the two dimensions within qualitative research that the researcher will employ which are interviews and questionnaires. A theoretical outline of these two modes will be discussed and justified within the realms of the study. With respect to interviews and questionnaires aspects of reliability and validity, data collection and ethics will be discussed.

4.2 Interviews

4.2.1 Practical Applications of Interviews

"An interview is a face to face verbal correspondence in which one person, the interviewer, attempts to get information or expressions of opinions or beliefs from another person or persons." (Greendorfer and Hasbrook, 1991, p. 30). Much personal data is collected as a result of time spent talking to people which may range from casual conversations through to a series of interviews.

Interviews have a special value in quantitative research. When conducting interviews, as opposed to questionnaires, the interviewer can probe the respondent into revealing the information he or she really wants. The interviewer can make sure, in the interview situation, that the

respondent understands the question asked. An incomplete or short response in an interview can be followed up with another question along the same lines, whereas this is uncommon in questionnaire surveys. By personal visitation the interviewer is able to gain an understanding of the respondent's context (Krathwhol, 1993). In conducting interviews Cote, Salmela and Russell (1995) suggest giving no leading hints about what would be an appropriate answer but for the interviewer to encourage the interviewee to share his or her expertise and knowledge on the subject by nodding, words of thanks, support and praise that will help the interviewee feel more comfortable and feel that the information is of value.

Denzin and Lincoln (1994) suggest an interview focus group would be appropriate for obtaining a number of opinions on a specific subject. A focus group would be beneficial for the purpose of this study. The interviewer would be asking the same questions of a number of people in similar position in sports organisations. Ideally, an interview focus group would have allowed people within the New Zealand sports context to hear other perceptions on the academy debate and test their ideas against others. In reality, however, a focus group interview was thought to be inappropriate as it would be impossible for this researcher to get all the subjects together in one place at the same time. Additionally, a focus group may stifle open debate on the topic if people are reluctant to express controversial or personal views in front of peers. Personal interviews allow the interviewee to speak confidentially and openly to the interviewer on the research topic.

4.2.2 Types of Interviews

The face-to-face individual interview is a conventional way of collecting data and is used as both a principal method of gathering information and

as an additional method in a triangulated study (Harvey and MacDonald, 1993).

Indepth interviewing is sometimes called unstructured (Harvey and MacDonald, 1993), open-ended or non-directive (Bogdan and Biklen, 1981) and in the context of this study it will be referred to as open-ended, semi-structured.

Indepth interviews may be structured, semi structured or unstructured. Unstructured indepth interviews are sometimes called open ended interviews rather like conversations. The interviewer has no pre determined set of questions and the respondent is encouraged to talk about particular areas that are of interest to the interviewer. In contrast, scheduled interviews are designed to seek out information relating to categories that the researcher has decided are important (Harvey and MacDonald, 1993).

Semi-structured indepth interviews are those in which the interviewer has a checklist of topic areas or questions. The intention is still to get the informants to talk in their terms, hence questions tend not to be too specific allowing for a range of possible responses, and therefore it is a more focused interview than the unstructured interview.

With structured indepth interviews the interviewer has a set of specific questions and the questions are framed as open questions to encourage the respondent to talk at some length about specific areas of interest. The structured indepth interview is often customised for each respondent. Unlike standardised surveys, interviews are not used to collect responses to specific questions that can be compared across a whole sample (Harvey and MacDonald, 1993).

The extent to which structured, semi or unstructured interviews develop the frame of reference of the informant, depends on the way the interviewer probes the informant. If all data obtained are in response to the predetermined questions then, as with structured interviews, the data are unlikely to go beyond the researcher's own categories. However if probes are more flexible and responsive to the informant's comments, they can draw on the informant's meanings, eliciting data and categorising experiences in the informant's own terms (Harvey and MacDonald, 1993).

The advantages and disadvantages of interviewing have been documented. Briefly, because of its potential flexibility and adaptability, an interview may elicit a personal and in depth response from an interviewee by allowing for probing (Howe, 1988). For this reason the researcher travelled to the Australian Institute of Sport in Canberra, to conduct interviews with key personnel, rather that conduct questionnaires by mail. The face-to-face individual interview permitted the interviewer to record impressions of non-verbal responses and the milieu of the interviewee. In the one to one relationship of the interviewer to the interviewee the interviewer, through the interactive dialogue of questions and answers, has the capacity to govern the flow of information. Denzin and Lincoln (1994) state that because the goal of unstructured interviewing is understanding, it is paramount for the researcher to establish rapport. The term rapport means that is the interviewer listens, uses a relatively natural way of getting information in a familiar, comfortable form of social engagement.

Harvey and MacDonald (1993) identify the difference between ethnographic interviews and formal structured interviews. Ethnographic interviews, unlike formal structured interviews, do not ask all respondents the same question in the same order. There may be no formal set of questions at all with respect to ethnographic interviews.

Scheduled interviews are designed to seek out information in aspects which the interviewer regards as important. Ethnographic interviews, alternatively, attempt to gain access to the point of view and frame of reference of the informants themselves. The primary aim of the ethnographic interviewer is to uncover the meanings that the informants construct about aspects of their social world. In this respect they have more in common with participant observation than survey interviewers (Harvey and MacDonald, 1993). Ethnographic interviewing encourages informants to talk in their own terms and gradually probes their meanings and frames of reference. Initially the researcher attempts to understand the informants' terminology and perspectives through their responses. Over time the concepts and relationships that appear the most important can be elaborated on by asking the respondent to explain what they mean in more detail.

Open-ended semi-structured interviews are used for two purposes. Firstly, they are used as exploratory interviews usually as a prelude to scheduled interviewing. Secondly, they enable the researcher to describe personal outcomes in their own terms from their own perspective. A perspective is the point of view from which persons make sense of their life experiences (and in the case of this research, sport and organisational experiences) and make meaning from their lives (Howe, 1988).

4.2.3 Interviews for the Present Research

Preliminary semi-structured, open-ended interviews were held with key personnel in sport organisations in New Zealand such as the Hillary Commission and Coaching New Zealand. (See Appendix 4, New Zealand Sport Organisation Interviews). These served to obtain some initial perceptions on the state of New Zealand sport, the optimal structures for the development of elite sport and perceptions on the

academy versus institute debate. These initial interviews, although important in the groundwork stages, also provided practice for the researcher in interviewing techniques.

A second set of interviews with key personnel in New Zealand sports organisations was conducted later in the year. Letters were sent to leaders in the following organisations - Coaching New Zealand, New Zealand Sports Science and Technology Board, New Zealand Sports Foundation, New Zealand Sports Assembly, Hillary Commission for Sport, Fitness and Leisure and New Zealand Olympic and Commonwealth Games Association - outlining the research, requesting an interview, and supplying the interview schedule (See Appendix 4.). In the letter an offer for the final conclusions and recommendations to be supplied from the research to the interviewee was given.

To extend the researcher's understanding of the subject area, interviews were also held with leaders of New Zealand sport associations. These included the Executive Director of the Hockey Academy, the Director of Coaching in Badminton and a key member of Athletics New Zealand. These people have a direct involvement with the research issues on a day-to-day basis. Hockey developed an academy in 1994 with little support from the Hillary Commission and Badminton was the 18th sport on the list for an academy in 1995. Because of this these people hold critical perspectives on the development of sport academies in New Zealand.

Interviews were also conducted with key personnel in Australian sport at the ASC and AIS, using a similar, semi-structured open-ended, interview schedule as with key personnel in New Zealand sports organisations. This was critical in terms of the research as otherwise unobtainable reflections on the Australians model of elite sport model were elicited.

(See Appendix 5, Names and Positions of Australian Sport Interviewees, September 27-29.)

Denzin and Lincoln (1994) state that "Each person in an interview has his or her social history and perspective. What they say can not be taken for granted" (p. 276). The researcher must take this into account when analysing the information in the interviews. In part, this will be resolved by conducting a number of interviews with people in similar positions in the New Zealand sport context and Australian context. Additionally, questionnaires will provide further information to substantiate the interviewee comments. The validity of survey data depends on persuading a scientifically selected group of people to provide accurate information about themselves, their opinions, background perceptions, activities - all to a complete stranger (Cannell, in Denzin and Lincoln, 1994).

4.3 Questionnaires

Questionnaires gather large amounts of data from many subjects. The aim of the questionnaires is to elicit perceptions and comments from a large number of people, inexpensively, which makes this method desirable for the present research. In this research the information sought can not be found in books, journals or government reports which makes the questionnaire an appropriate tool for the study.

Rossi, Wright and Anderson (1983) consider the suitability of questionnaires when asking about sensitive topics. A questionnaire may be inappropriate for certain subjects on a sensitive topic. In the case of this study, however, the information asked does not demand sensitive disclosure.

Rossi, Wright and Anderson (1983) comment that there are many criticisms of using standardised questionnaires. These include: people understanding the questions differently; respondents forced into an unnatural reply; no opportunity to qualify or justify their answers and explain their opinions more clearly. Once it is printed there is little the researcher can do to alter it, even if new information comes to light which influences the nature of the questions. Rossi et al. (1983) comment that there is no alternative to questionnaires in some situations. The researcher found that completing the ground research or obtaining a full understanding of the topic was beneficial when constructing and administering the questionnaire. This approach ensures the researcher knows enough about the topic to construct a questionnaire which will elicit the pertinent information in the most efficient way.

The challenge is to construct and develop a questionnaire that will meet the needs for data generation. The process involved deciding what information was required, drafting the questionnaire, writing it with help from an experienced supervisor, piloting the questionnaire and amending it as necessary.

4.3.1 Questionnaires for the Present Research

Two questionnaires were constructed. One questionnaire was for elite athletes, past and present, and the other for directors of existing academies in New Zealand (See Appendix 6, Questionnaires for Elite Athletes and Academy Directors).

The first three questions on both questionnaires contain basic demographics. Krathwhol (1993) suggests that it is often best to leave demographic or potentially sensitive questions until the end, after the respondent is more relaxed about answering the questionnaire. For the

purposes of this study the researcher felt that the demographics are basic and non-threatening for the respondent and therefore were placed at the start of the questionnaire. The first few such questions, drawing upon basic respondent knowledge, were seen as easing the respondent into the answering process. The questions for the elite athlete questionnaire attempted to elicit perceptions on a number of aspects on academies and institutes in a New Zealand context. The final question was an open ended question inviting comments on any other areas of elite athlete development in New Zealand. The questionnaire was constructed with careful regard to length while still eliciting the information required. This was so as not to threaten the respondents with a difficult and time consuming exercise, and encourage their response. Similarly, the space left to answer the questions was purposely left short with the exception of the final, open ended question.

The questionnaire for the academy directors is slightly longer than the elite athlete questionnaire. It contains more demographic and personal information. Following this, the questionnaire follows a similar format to the elite athlete questionnaire with short answer questions and open ended questions to finish.

The constructed questionnaires were piloted with members of staff in the Management Systems Department at Massey University and a number of post graduate students. The questionnaires were then mailed out to the subjects. Mail out questionnaires are the cheapest to administer and respondents were geographically dispersed throughout New Zealand making personal administration impracticable. The poor response rate with mailed questionnaires is their single biggest problem according to Denzin and Lincoln (1994). It was anticipated that, because the respondents were a targeted population of elite athletes and academy directors, the response rate would be high. In addition, the questionnaires were on topics which had direct relevance to the subjects'

lives which might facilitate a response. The Academy directors were prompt at responding to the letter requesting information on their respective academies and it was assumed they would also respond well to the questionnaire. It would be the second contact made by the researcher to several sports who were familiar with the research.

Accompanying the questionnaire was a covering letter of transmittal outlining the research, ensuring their confidentiality and thanking them for their time in responding. Krathwhol (1993) suggests the letter of transmittal includes an element of intrinsic interest to inspire a response as well as follow ups. He further comments that the letter of transmittal is important in setting the frame for the research and enticing the response, which re-emphasised the need for careful development, testing and piloting of the questionnaire. The letter finally asks whether the respondent would like a copy of the conclusions and recommendations of the study.

Within both interviews and questionnaires, dimensions of the respondents' backgrounds were examined as a form of life history however the researcher stresses that this is not a major method within the study. The purpose of obtaining personal information on the subjects is to assess whether there are any similarities in life paths within academy directors and key personnel within sport organisations. This may lead to conclusions on preparation and skills required in the job. Life history method is not a major part of the present study and is discussed within the context of this chapter merely to note its relevance within the setting of the questionnaires.

4.4 Reliability and Validity

In all fields that engage in scientific inquiry, reliability and validity of findings are important. A common criticism directed at qualitative research is that it fails to adhere to canons of reliability and validity (LeCompte and Goetz, 1982). It is often argued that observational studies are not reliable because there is no consistent way of measuring the data. It is difficult to check the reliability of a questionnaire, for example. (Harvey and MacDonald, 1993). LeCompte and Goetz (1982) suggest that results of ethnographic research are often regarded as unreliable and lacking validity and generalisability. They go on to say that by admitting into the research frame the subjective experiences of both researcher and participant, ethnography may provide an understanding lacking in other approaches to investigation.

Reliability is defined by Bogdan and Biklen (1991) as a fit between what researchers record and what actually occurs in the study setting. Similarly, LeCompte and Goetz (1982) suggest that reliability is concerned with the replicability of scientific findings. It is argued that with qualitative research generalisability is not a factor and the aim is not to provide generalisations to whole populations but to examine in detail one small population. One argument explaining why qualitative researchers often find the criteria for external and internal validity and reliability difficult to adhere to is because the criteria were devised for use in conducting quantitative research (Denzin and Lincoln, 1994). Denzin and Lincoln add to this by saying that we cannot know anything with complete certainty. Further research on topics, such as the present research, is therefore justified and essential in the quest for certainty. The question in a qualitative research context is what do we know and how is that knowledge justified?

Validity is concerned with the accuracy of scientific findings. To establish the validity of research the conclusions must represent reality in terms of attitudes, characteristics or behaviour (Marshall, 1994). Internal validity refers to the extent to which scientific observations are authentic representations of reality. External validity addresses the degree to which such representations may be compared across groups.

Reliability, as with validity, is dependent on the resolution of both internal and external design problems. External reliability addresses the issue of whether independent researchers would discover the same findings given the same set of conditions. Internal reliability refers to the degree to which other researchers would establish the data in the same way as the original researcher.

Attaining absolute reliability and validity is an impossible goal for any research model. However, ethnographers have used a variety of strategies for enhancing reliability and validity. To illustrate, Merriam (1988) listed six strategies to ensure internal validity. The first of these is triangulation. Denzin (1970) defines triangulation as "the combination of methodologies in the study of the same phenomenon" (p. 522). Mathison (1988) suggests that good research practice draws upon triangulation. By this she infers the use of multiple methods and data sources to enhance validity and reliability. The researcher in this study is using two methods, interviews and questionnaires, previously described in this chapter, to triangulate.

Haag (1994) notes the need for triangulation. First, triangulation combines naturalistic and rationalistic or qualitative and quantitative methods to get more information on the real world and second because movement, play and sport are very complex phenomena, and they have to be seen in a varying socio-cultural context, accomplished by a variety of methods.

Similarly, Mathison (1988) establishes three outcomes of triangulation. The first is convergence, that is, data from different sources, methods and investigators will produce evidence that will result in a single outcome on a particular phenomenon. The second outcome of triangulation is inconsistency among the data and the third is contradiction.

Triangulation of methods will be used in this study. The methods involved are interviews, questionnaires and a small element of quantitative analysis. Each method is described more fully in this chapter.

Although reliability in qualitative research is argued to be difficult to obtain, validity is an issue for qualitative researchers to achieve. Merriam (1988) explains a number of strategies to ensure internal validity. The first of these is plausibility, with checks of taking the data and interpretations back to the subjects. Long term data collection and repeated checks assist in ensuring validity as well as do peer examination and evaluation of findings. Two additional strategies include involving participants in all aspects of the investigation and clarifying the researcher's own bias and theoretical orientation at the outset of the study. (Thomas and Nelson, 1990).

The researcher used a researcher's note book as a tool to enhance internal validity through critical self reflection and aid discussion of the developing research with the supervisor as a form of peer examination. The researcher's note book was used for evaluation of findings and noted perceived internal or external biases when conducting the research. For instance, the researcher warmed to a particular subject who was open and inviting in the interview context, which may bias the way the interview developed. The note book also contained other aspects which the researcher felt were important to the study. In addition to identifying

biases, the note book served to add points to the research previously unforseen by the researcher, such as further informants or sources of reference.

Researchers' opinions prejudice bias and affect their data. Researchers have wrestled for years with the fact that it is too easy for the prejudices and biases of the researcher to bias the data, especially when the data must go through the researchers' heads before they report the data. Qualitative researchers must objectively study the subjective states of the subjects. An experienced colleague critically listened to random transcripts to ensure the interviewee was quoted in context. Similarly questionnaires were examined by colleagues to eliminate potential question bias. In addition, time must be spent on interviews, questionnaires and data collection. Bogdan and Biklen (1981) also suggest that the data must bear the weight of any interpretation bearing in mind that the researchers' goal is to add to knowledge rather than pass judgement.

4.5 Data Collection and Analysis

Data collection in qualitative methodology is essentially based in the study of people, rich in description of people, issues and perceptions and conversations and because of this is not easily handled by statistical and scientific procedures (Bogdan and Biklen, 1981).

Sage (1989) argues for the use of qualitative methodologies for physical education and sport research purposes, suggesting that the qualitative approaches fault scientific methods as being narrow and increasingly sterile. In place of this, qualitative approaches emphasise the use of personal knowledge and insight gained in social interaction. Forms of data collection in the present study are questionnaires and interviews

Data analysis in qualitative research is conducted both during and after the data gathering, which leads to discoveries during the study and critical reflection on the data which leads to new theories and substantive issues. Thomas and Nelson (1990) suggest simultaneous data collection and analysis which enables the researcher to focus on the specific questions asked in the study and therefore direct the data more effectively.

The questionnaire data collection was relatively simple in comparison to the interviews. The standardised questions, set spaces for answering and the absence of probing by the researcher simplified the raw data. Analysing the questionnaires was achieved by systematically moving through each question and grouping similar answers by themes. Quotations were extracted to highlight points made or which explained a theme comprehensively.

Denzin and Lincoln (1992) comment on analysis and interpretation of interviews, suggesting that in some research reports the data collected appeared to flow as if there were no contradictory data or confusing, unqualified statements made (p. 372). In reality interviews may become difficult to interpret, with the researcher becoming weighed down by the volume and unstructured nature of the interview process and outcomes. They suggest that to expose the researcher and subject as humans rather than faceless and invisible objects ensures the reader learns of two people and two cultures as opposed to one. Transcripts of interviews were used for analysis. These were each read a number of times to gain familiarity, to reuse a technique by Cote, Salmela and Russel (1995). From the readings main themes were elicited and quotes were extracted to emphasise main points.

In addition the aforementioned researcher's note book was used to remember points, and add background and situational and contextual data not apparent on the interview recording.

For the data analysis and writing up of the results, names of New Zealand interviewees have been concealed. It is assumed that this research will be widely read in New Zealand so this effectively eliminates any way that quotes can be associated with specific identifiable persons. In addition the topic at present is at the forefront of discussions with the recent announcement of the High Performance Review recommendations and there is value in the names being concealed for political reason. For the purpose of this thesis all New Zealand interviewees were called administrators, and labelled A1, A2... A11.

In Chapter Five, the names of the Australian interviewees were used as the topic of Australian elite sport development is not as sensitive in New Zealand and comments by administrators in Australian do not effect the current situation and decision making on elite sport in New Zealand.

4.6 Ethics

Ethical problems seem more acute in qualitative than quantitative research because of the intensity and sustained nature of the face to face contact between the researcher and the participant (Harvey and MacDonald, 1993). Some now believe the integrity of traditional experiment research design models is often compromised because of safeguards proposed by an over zealous lay public (Kroll, 1993).

Traditional ethical considerations have revolved around informed consent, right to privacy and protection from harm (Denzin and Lincoln, 1994). Scientific misconduct, fraud and ethical issues in human research

turn to the question of 'conflict of interest' (Denzin and Lincoln, 1994, p. 39). A conflict of interest may occur when an employee's outside activities influence the university's business or other decision making activities in such a way that there is personal gain from the outcome of the research. Here the issue is of research objectivity where there is personal or financial interest.

Political and social concerns have abridged the freedom of inquiry and certain lines of inquiry have become sensitive and controversial. The mere fact that an informed consent form is signed does not automatically sanction the researcher as ethical. The research itself must be ethical (Kroll, 1993).

Other ethical issues in research writing and reporting include fabrication of data, inaccurate documentation, failure to report discrepant data, citation of fraudulent work and publication bias (Denzin and Lincoln, 1994).

Some scholars feel that indepth interviews are unethical arguing that the techniques and the tactics of interviewing are really ways of manipulating respondents (Oakley, 1981; Denzin and Lincoln, 1994). In this study, although the interviewing is indepth, the topic to be considered in the interviews for this research is not considered potentially harmful to the respondents and does not involve the personal lives of the respondents. The questions are aimed at obtaining information from key people who are knowledgeable in their field. However, extreme care must be taken to avoid harming the interviewees. The interviewees will have authorised consent to do so by way of a signed consent and will be informed on what the research is about and its purpose. In addition information will be handled in such a way that it does not disclose subjects and ensures confidentiality. The questionnaires were "mailed in" and therefore,

according to the Massey University Code of Ethical Conduct do not require a written consent (Massey University, 1994).

Massey University has a code of ethical considerations for conducting research involving human subjects. The interviews and questionnaires used in the present research have followed the process set out by the Massey University Ethics Committee.

The data were assimilated and formatted in accordance with the American Psychological Association Publication Manual (1994).

4.7 Quantitative Methods

In the present study quantitative methods are employed to a limited extent. Although there has been some debate over the combination of quantitative and qualitative research methods in one study, Kidder and Fine (cited in Merriam, 1988) argue that there is little wrong with combining quantitative and qualitative measures. They continue stating that the combination forms a kind of triangulation that enhances validity and reliability. Quantitative research methods allow researchers to collect numerical data so that amount or quantity of the research variables can be measured (Greendorfer and Hasbrook, 1991). Questionnaires may be considered either qualitative or quantitative depending on the nature of the questions (Denzin and Lincoln, 1994). The present research contains elements of quantitative methods which are elicited through primarily qualitative methods. The questionnaire contains question of both a qualitative and quantitative nature resulting in the quantitative analysis of some questions such as the demographic data, sample size, and response rate with the remainder of the relatively more open ended questions, which ask for opinions and perceptions, to be analysed qualitatively.

Krathwohl (1993) states that "survey research exposes a group of people representative of a target group, to which the researcher expects to generalise, to common situations and records their reactions" (p. 361). Survey research contacts a specifically chosen group out of the population of informants and that group assumes the status of the whole group. "The role of statistical sampling techniques in survey research is limited to generalisation within cases, since then the population is likely to be finite" (Hammersley, 1992, p. 175).

Survey research has some distinguishing characteristics: the care with which the sample is chosen so that inference can be made to the target group; the care with which the data are collected whether by questionnaire or interview; and the integration of data collection and analysis (Krathwohl, 1993).

Sample size for the survey is important for generalisability of the information elicited (Krathwhol, 1993). For certainty that an estimate is correct we need a large sample. Additional cases increase the accuracy of the estimate considerably for small samples. Halving the error, for example, requires quadrupling the cases.

It is noted that there are a large number of factors which contribute to the development of elite athletes, not funding alone so caution is taken in this study not to make errors in causal explanations (Neuman, 1994).

Basic quantitative methods are used to explain variations within New Zealand academies such as personnel, staff incomes, and funding for academies.

4.8 Researcher Predispositions

It is important to note that in entering to any methodological field a researcher brings a certain set of prejudices, biases and philosophical frameworks.

The researcher had an involvement in sport at an elite level for eight years and had developed an opinion on New Zealand sport structure which had potential bias for the study. Alternatively, the researcher's knowledge of New Zealand sports structure and organisations and of elite athletes may be seen as an advantage in this research context. Denzin and Lincoln (1994) note the effect the researcher's predispositions have on the interview, however, few mention the interviewee's predisposition so guarding against the effects on their perspectives. The interviewee's predispositions may effect the level and detail to which information is disclosed and the extent to which rapport is able to be established.

The researchers note book, noted previously, and weekly meetings with the research supervisor ensured that the researcher's predispositions were minimised.

4.9 Summary

The methodology chapter has justified the use of qualitative methodologies for this research. The methods used in the research, questionnaires and interviews, are detailed as well as an examination of data collection and analysis. The need for reliability and validity is noted and this chapter has presented ways to ensure this.Chapters five and six present the results and analysis from the interviews and questionnaires conducted in Australia and New Zealand.

CHAPTER FIVE

ELITE SPORT DEVELOPMENT IN AUSTRALIA

Chapter Outline

The purpose of Chapter Five is to detail the current role the AIS undertakes and outline the present structure and organisation of the Australian Institute of Sport. In order to detail the role and structure in the present day context the history of the Australian sports structure is briefly considered.

The literature review suggested that the structure of the sports system is important in the development of elite athletes. As the methodology chapter noted, qualitative research is increasingly being used in sport research. Chapter Five presents perceptions on elite sport development presented by main themes, extracted from interviews of key personnel at the Australian Institute of Sport and the Australian Sports Commission.

The final section of this chapter considers the implications of the Australian high performance sport model for New Zealand.

5.0 Introduction

As indicated in Chapter One the apparent success of the AIS in the development of Australia's elite athletes has been a topic of much discussion. The literature review revealed that the concept of a New Zealand Institute of Sport has been examined by a number of people in New Zealand (Boyd, 1984; Coaching Research Group, 1992; Williams, 1985). In terms of the present research there was a need, therefore, to

critically examine the AIS and associated structures and identify elements of these which were influential for elite athlete development which could be adopted in the New Zealand context.

5.1 The Current Structure of Elite Sport in Australia

Cited in articles, books, promotion booklets, journals and information packs was the 'structure' of the Australian Institute of Sport prior to September 27 1995 (Daly, 1987, Westerbeek, Shilbury and Deane, 1995). At an Australian Sports Commission 'all staff' meeting held on September 28 1995 a new structure for the ASC was announced with changes occurring for the AIS, with the official announcement made on Wednesday 4 October 1995. (See Figure 2.).

The seven departments of the old structure are now effectively consolidated into three departments:- AIS, Sport and Business Services and Sports Development and Policy, in the new structure. Under the AIS banner comes sport sciences, elite sport programmes, and sport management. Under the Sport and Business Services is marketing, commercial and information services.

Jim Ferguson, Executive Director of the ASC, outlined the "new" structured AIS as having seven principles which are:- centred around the athlete, coach driven, interdisciplinary, technical focus, greater national perspective, coordinated national delivery network and finally international best practice (Personal Communication, September 28, 1995).

Ferguson pointed out several important aspects of the new AIS. The AIS and ASC would strive to have no overlapping roles and effectively operate as one organisation with one direction. People and nations such

as New Zealand, South Africa and England visit the AIS to see how the Australians are producing world class athletes and they are trying to emulate the practices of the AIS and Ferguson noted that Australia could not afford to sit back and rest on its laurels. The change meant a redefinition of the role of the AIS to take Australia through to 2000 whereas the flat structure over the years had meant that it was too difficult to obtain proper integration.

Jim Ferguson at the "all staff" meeting announced "one of the ASC to 2000 strategies and a national plan for sport and that the new AIS would have a greater national perspective and total integration" (Personal Communication, September 28, 1995).

As previously mentioned the new AIS is concerned with elite athlete development around Australia. In addition the state academies of sport are concerned with elite athlete development in each state and the ITC programmes create further decentralisation of the Australian elite sport delivery system.

The role of the AIS, as outlined in the Literature review, is to develop elite athletes in Australia. This role has, in the context of Australian sport, changed over the fourteen years the Institute has been in existence and employees (Judy Flanagan; Ken Norris; John. Gilbert, Personal Communication, September, 27, 1995) anticipate a continuing role change after the 2000 Olympics. As the role of the AIS emphasises different perspectives so the structure changes to accommodate this. Judy Flanagan (Personal Communication, September, 27, 1995) states that the AIS was desperately needed in Australia. Now the state academies and institutes are coming up to the same level as the AIS, which allows the athletes to stay at home in their own environments and have the same services. She speculates on the future of the AIS suggesting that "it may become an open sport complex at a national level

and not have a residence programme" (Judy Flanagan, September, 27, 1995).

This chapter now turns to the findings from field interviews with key personnel at the AIS, Canberra from September 27-29 1995 (See Appendix 5.).

5.2 Perceptions on Elite Sport Development in Australia

After an analysis of the interview transcriptions a number of recurring themes were identified from key personnel interviewed. These are presented below.

5.2.1 An Integrated Approach

Most respondents emphasised the need for an integrated national development for sport. This included a set of national goals for the realisation of that plan. Lawrie Woodman (Personal Communication, September 27,1995) suggests that "one of the new directions for the AIS is to have a more national role. Our residential programmes have to fit in with our national elite plan. We have to effectively try to develop a partnership with the state institutes and ensure optimal delivery."

The state academies also recognise the need for an integrated approach. Ken Norris (Personal Communication, September 27, 1995) states that "we (the ACT Academy of Sport) are providing an integrated support service for the athletes. The purpose of the women's hockey ITC Program is to coordinate the national programme. The responsibility of the ITCP and the coach in each programme is to help assist the

development of athletes below the academy squad. This provides a cascade effect."

"The National Elite Sports Council (NESC) establishes a link between the AIS, ASC and all of the state academies and institutes. This is the formal linkage" (Ken Norris Personal Communication, September 27, 1995).

The programmes are also individualised continuing the overriding national focus theme. Patrick Hunt (Personal Communication, September 27, 1995) states that "the (basketball) programmes the kids are involved in vary from state to state but there is a national curriculum for offence and one for defence" He adds that "the success of the programme is based on the fact that it is a national driven programme driven through the states". The ITCP networks, currently being developed, also work within a national development framework. Ken Norris states "The purpose of the ITCP for women's hockey is to combine the resources of the ASC state institutes, academies of sport and the Australian Women's Hockey Association in a co-ordinated programme which provides maximum benefits to athletes. I think it is important that there is coordination between the sports funding agencies and the service deliverers."

It is not only the athlete training programmes that have an integrated approach but also the other programmes which help develop the holistic approach to elite athlete development. These include the services such as the Athlete Career and Education (ACE) programme. Judy Flanagan (Personal Communication, September 27, 1995) said of the ACE programme, introduced to the AIS in 1994, that the programme is now being followed in every state institute and academy as well as the AIS. "This programme is one of the first integrated programmes which has gained the support of all the institutes and academies" .

5.2.2 Networking

Interwoven into the theme of integration is the theme of networking between bodies involved in elite sport development within the AIS and outside. Lawrie Woodman states "There is strong networking. The National Elite Sports Council (NESC) is a forum where a lot of the cooperatives and decisions are made. The whole system is a lot more mature and effective that it was a few years ago. There is more cooperation and less competition" (Personal Communication, September 27, 1995). Deborah Hoare (Personal Communication, September 28, 1995) complements this comment by adding that "the state talent coordinators must have an integrated approach. For the system to be efficient and effective we must be able to cooperate". She adds "the key to success in a country of this size, and especially in a country of your size, is co-operation."

Physically the state academies and AIS are linked by computer. Sue Baker- Finch (Personal Communication, September 28, 1995) says "The aim is to get all the national organisations and networks of state academies linked by computer so there is free information flow, and access to a central data bases and a monitoring data base. The ASC and the sports need to pull information out". Similarly, the National Information Network aims at providing relevant up to date information to coaches and athletes (Nerida Clarke, Personal Communication, September 29, 1995).

> "The high level of integration and networking has meant that the state academies of sport and institutes can now provide opportunities for athletes which were not available to them with the more centralised AIS. Cycling is based in Adelaide for

> example. Previously if someone wanted to be in a national programme they had to move to that programme" (Ken Norris, Personal Communication, September 27, 1995).

Heather Reid (Personal Communication, September 29, 1995) suggests that there are "variations of communication and structure of delivery within sports and in some sports, such as basketball, the organisation has full control. In other sports you'd find that the particular state associations have the power to dominate through central national control."

Judy Flanagan said that the ACE programme is currently being accredited with the Australian national training authority so that the athletes come out with the beginning of a qualification (Personal Communication, September 27, 1995).

The link between the university and the institute would work well as Homlik suggested

> the research is very applied (in sport) because the sport researchers have access to the actual athletes as opposed to the academic institutions. Some academic research is not as applied as some coaches want. Australia does have a strong programme whereby graduate students apply for graduate scholarships in their specialised field and work at the AIS for practical experience. Additionally some institutions sent students to the AIS as part of their formal course work. (Personal Communication September 28, 1995).

Nerida Clarke of the National Information Centre noted that there used to be more networking with New Zealand stating that " We used to get a bit of information from New Zealand but it has become more difficult

and we don't get as much any more" (Personal Communication, September 29, 1995).

5.2.3 Parochialism

Despite the statements of allegiance to the concept of networking and integration of facilities, programmes and resources, parochialism remains strong. Almost every person interviewed mentioned the high level of parochialism currently existing in Australian sport. Judy Flanagan (Personal Communication, September 27, 1995) stated that there was "a lot of political back fighting between the states (academies). Ken Norris (Personal Communication, September 27, 1995) said "the major impetus for the state academies being established was partly jealousy and partly the problem of athletes being up rooted from their homes" and "there has been the them and us thing over the years with (state) academies and the institute". In addition Lawrie Woodman notes "the level of jealousy related to the levels of government. They all want to take credit for their efforts" (Personal Communication, September 27, 1995).

Some programmes have avoided parochialism. "Deborah's programme (talent identification) is one which has been a good successful programme in all areas and bypassed the state parochialism" Emery Holmik (Personal Communication, September 28, 1995).

According to Ken Norris "New Zealand is at a major advantage in terms of establishing sports system due to the lack of states and the multi-layered government structure of Australia"(Personal Communication, September 27, 1995).

5.2.4 Coaching and Coach Development

Spence 1994 provides a figure of systematic planning and management for high performance sports coaching

"The critical thing is the network of coaches driven by an institute's national coach" (Ken Norris, Personal Communication, September 27, 1995). He adds "Each NSO must have a development plan which points out the role of the regional coach, state coach, head coach, state association and state institute". Further to this Patrick Hunt states that "the programmes are driven by coaches not athletes or administration"(Personal Communication, September 27, 1995).

Coaching of elite athletes in Australia follows a holistic approach to athletes development.

The focus of the programmes is essentially around the athlete. (and their overall development). The 'new' AIS will be centred around the athlete" (Jim Ferguson Personal Communication, September 28, 1995).

"We (ACE programme staff) are always looking to find ways to accommodate the athletes' needs" (Judy Flanagan, Personal Communication, September 27, 1995). "The programme is always looking at ways they can optimise what they are giving that athlete" (Patrick Hunt, Personal Communication, September 27, 1995). Another respondent says "The idea of the programme is to assist with the overall development of the athlete" (Sue Baker-Finch, Personal Communication, September 28, 1995).

Bob Hitchcock adds that "in New Zealand it all depends on what the approach is going to be, either holistic or performance based" (Personal Communication, September 27, 1995).

5.2.5 Evaluation and Performance Indicators

Despite the lack of evaluation and performance indicators at the AIS in the past, as mentioned in Chapter Three, all programmes have an evaluation component which must be met to receive continued funding. These are primarily based on performance. "The state institutes and academies are funded in proportion to their success (Judy Flanagan, Personal Communication, September 27, 1995).

"Hockey has national performance indicators...and protocols which our sports scientists here (at the ACT) must abide by. The success of the ACT is based on performance. Performance indicators include the number of national squad numbers who originate from the ACT, and the numbers of athletes who graduate to the AIS teams, performance of ACT teams in national competition." (Ken Norris, Personal Communication, September 27, 1995). He adds that "everyone is accountable to everyone and I guess that standardises the procedures"

Patrick Hunt states " I make 3 visits to each programme each year and write reports on each programme. Accountability is through my reports and at championships I see if the levels have increased. Quarterly reports are filled out by head coaches of the programmes and the guidelines for these documents are given to all those involved so everything is standardised." (Personal Communication, September 27, 1995). (See Appendix 7, Evaluation Form for Australian Basketball).

Sue Baker Finch comments on the need for evaluation of performance saying

> this is taxpayers' money and you must be accountable and that is why we have such strong principles underlying the programme. The sports must show that they can use the funding most effectively and for those sports who don't then the money will be divided to sports who are showing performance improvement at the highest level. They will receive increased money. The first major review will occur at Atlanta on a case by case basis. We have specific indicators, no generalities, but clear and precise performance indicators. (Personal Communication, September 28, 1995).

"On the macro level, from 1994 we have mapped the performance expectations of each sport on the way so we know exactly where we want to go in each sport. Below that we have other monitoring performance indicators" (Sue Baker-Finch, Personal Communication, September 28, 1995).

5.2.6 Funding

Funding is a major factor in the development of elite athletes in Australia. Sue Baker-Finch puts the funding in perspective " if you look at the $400 million going into sport over six years that is over a million a week for six years of taxpayer money" (Personal Communication, September 28, 1995) The increasing amount of money spent on elite sport development in Australia is continually questioned by the public. Ken Norris comments that

> "as an educator and a full time sports administrator it is justified by a whole range of things. To provide opportunities for people to reach their potential and the results at the end of the day are a

> product of that. Also the coach infrastructure and the development of athletes are all justification" (Personal Communication, September 27, 1995).

He adds "in our country sport is an important way of life". Sue Baker Finch (Personal Communication, September 28, 1995) suggests that the vast amount of funding will be justified by performances in Sydney and the huge expectation of accountability on the sports' associations behalf".

Heather Reid looks at funding from a gender equity point of view and from a perspective outside the ASC. She says "only 35% of the Olympic sports are available to women. Waterpolo, for example, is an Olympic sport but it is only participated in by men. The commission does not set out a gender equity policy" (Personal Communication, September 29, 1995). Perspectives on funding vary. Emery Holmik (Personal Communication, September 28, 1995) suggests that in comparison to some industries $135 million is not a lot. Manufacturing, he argues, gets that in one year.

> Other divisions of the ASC such as the Information Services and Sports Science provide services to elite sport development which indicates the allocation to elite sport is indirectly a higher proportion than the figures indicate. Although funding levels have been established until the 2000 games the allocation of those funds to each sport may change with the first major evaluation of performance occurring after Atlanta. (Sue Baker Finch, Personal Communication, September 28, 1995).

In addition to the federal government funding, state academies receive funding through state governments for their state based academies, institutes and programmes. The NSOs were asked how much it would

take to fund them fully to prepare to the highest level for the 2000 games. Basically those Olympic sports will receive that funding, which is approximately $450 million Australian. That equates to 1 million dollars a week until the 2000 Olympics. The message is that we believe that funding and performance correlate". (Sue Baker-Finch, Personal Communication, 28 September, 1995).

Not surprisingly, there is debate over the amount of money being spent on elite sport in Australia especially as it is spread over only the 31 Olympic sports. In comparison with New Zealand, the criteria upon which Australia chooses sports for elite funding is purely whether a sport is part of the Olympic Games. The situation then arises where sports who have previously had a limited funding are suddenly allocated a huge amount and told to start producing results (Sue Baker Finch, Personal Communication, September 28, 1995).

5.2.7 Government Involvement

Simply, Lawrie Woodman states that "we have total government support. The AIS comes under government legislation" (Personal Communication, September 27, 1995).

The government involvement in elite sport in Australia is clear from initiatives put in place for its development. "the OAProgramme was announced by the federal government in 1994 in response to the fact that we have the Sydney 2000 Olympics" (Sue Baker Finch, Personal Communication, September 28, 1995).

Heather Reid adds that "there are gender and equity problems with the national structure which means that local government has to reimburse

kids for travel and the like". (Personal Communication, September 28, 1995).

5.2.8 Personal Perceptions

A critical question remains, is this the ideal and optimal model for the development of elite sport? "I think we've got it right. It (the ACE programme) is in its early stages and there are services" (Personal Communication, Judy Flanagan, September 27, 1995). Heather Reid thinks it is the best structure we could expect, we always want more money. The national sports organisations working through their state bodies and then directly through the clubs and teams is a reasonable structure" (Personal Communication, September 29, 1995).

Heather Reid continues, adding that the system is fairly good for elite athletes. She identifies one problem with the broad definition of "elite" athletes.

> You need to make a distinction between types of elite athletes. At the moment Australia funds Olympic elite athletes but there are also the non Olympic elite such as the Australian netball team. They are elite athletes. If you look at the gymnasts they are Olympic athletes but when you look at their performance at the recent world championships they didn't get anyone in the top forty seven" (Heather Reid, Personal Communication, September 29, 1995).

Bob Hitchcock suggests that "the optimal delivery system should be athlete focused and provide all the facilities and everything they need to succeed" (Personal Communication, September 27, 1995)

5.2.9 Continuous Improvement

What it comes down to is a process of continuous improvement and quality control. Jim Ferguson noted that the ASC should be "recognised as a best practice quality organisation" (Personal Communication, September 28, 1995). There are two critical success factors needed to achieve this, the first is to develop and implement a programme which improves the quality of ASC services and the second is to provide resources that enable continuous improvement. Always modifications. A more national approach needs to be developed for all. Ken Norris also thinks the Australian sports delivery system is working, stating "I think you can always make improvements but I think that the basis is pretty right" (Personal Communication, September 27, 1995).

As the base line for performance is constantly being raised by our competitors, the AIS will have to continue to be innovative and address the issues relevant to elite performance (Lawrie Woodman, Personal Communication, September 27, 1995).

5.3 Summary

From the brief outline of the development of Australian sport it is clear that sport in New Zealand and Australia developed along similar lines. Both countries were frontier societies at the time English sports were introduced (Pearson, 1978) and organised sport emerged. Sport in the two countries in the past has primarily been developed through schools and clubs. Elite sport development was always recognised however. Australia was the first to notice the social, economic and nationalistic properties of sport which European and Eastern Bloc countries had understood for years. The intervention of the Australian government, during the late 1970s, was critical in the development of the AIS and,

through the 1980s, the development of the state academies and the decentralisation of the Australian elite sport delivery system.

This chapter has outlined the perceptions on the Australian model of elite sport development. The Australians are continuing to develop their model as "basically we can't rest on our laurels because the rest of the world sure isn't" Patrick Hunt Personal Communication, September 27, 1995). There is no use in trying to emulate the Australians because sport operates in a differente environment here. New Zealand must therefore research and consider developing its own model if elite sport is to be developed to its full potential. The following chapter details the research on elite sport development in New Zealand.

CHAPTER SIX

ELITE SPORT DEVELOPMENT IN NEW ZEALAND

Chapter Outline

The literature review demonstrated there are many alternatives for and factors which determine the structure of elite sport development in a country. This chapter presents the findings from the research conducted on elite sport development in New Zealand. The methodology chapter outlined the reasons for using questionnaires and interviews for this type of research. The first part of this chapter presents results from the questionnaires, sent out to elite athletes and academy directors in New Zealand. These were reviewed systematically through the questions. The second part of the chapter elicits through interviews with key personnel in New Zealand sports organisations their perceptions on elite sport development. In addition, interviews were conducted with one academy director based in Auckland and a director of coaching of a non academy sport. One prominent sports critic was interviewed using similar questions.

6.0 Introduction

Chapter Six presents the results from field research in New Zealand which involved obtaining perceptions on elite sport development with specific attention given to academies and institutes and their role in high performance sport. The questionnaires for elite athletes and academy directors were analysed separately as the questionnaires for each group were different. The questions were analysed individually in the order that they appeared on the questionnaire (See Appendix 6.).

Interviews were held with key personnel in New Zealand sports organisations (See Appendix 4.). In addition, interviews were held with key personnel from three national sport associations, - New Zealand Hockey, New Zealand Badminton and Athletics New Zealand in order to elicit perceptions from people involved in New Zealand sports organisation at the highest level.

Analysis of interviews was conducted inductively in the same way as for the Australian interviews as outlined in Chapter Four, with the researcher searching for themes. The researcher has attempted to use the same themes for Australia and New Zealand. This however was difficult given the differences in New Zealand and Australia's level of sport development and in their elite sport delivery systems.

6.1 Perceptions on Elite Athlete Development Questionnaires

6.1.1 Results from the Questionnaires

Questionnaires were sent to 70 elite athletes from New Zealand, five athletes from fourteen sports. The athletes selected were past or present elite athletes. Elite athletes were defined as those who had reached the highest level of competition in their chosen sport. Sports with existing academies were chosen as the athletes may have developed perceptions on the academy through personal involvement. These sports were yachting, tennis, hockey, golf, softball and netball. Rugby and cricket were also chosen as the two New Zealand sports with the most registered players. These selected sports also represent a large number of athletes. The remainder of the sports were chosen because of their

recent or past successes at the Olympic Games and Commonwealth Games. These sports were swimming, triathlon, cycling, rowing, badminton and athletics.

Questionnaires were sent to current academy directors of the eight sport academies established in New Zealand, which represented the population of academy directors.

Table 3.

Response Rates from Elite Athlete and Academy Director Questionnaires

Respondents	No approached	No respondents	% responded
Elite athletes	70	31	44.2%
Academy Directors	8	6	75%

The low response rate for elite athletes, as shown in Table 3, was expected. Due to the need for athletes to attend top competitions some athletes who were sent questionnaires were overseas competing. These included members of the New Zealand cricket team who were in India, two of the tennis players who were playing on the international circuit, some of the triathletes who were attending World Cup events throughout winter and one of the swimmers who is training in Australia. In addition, due to the Privacy Act, addresses for some athletes were unobtainable. In such cases the questionnaires were then sent in bulk to the sports association, with stamped addressed envelopes for return, and the associations were asked to address and forward the enclosed envelopes to the athletes concerned. The researcher was then dependent on the individual sports association for the questionnaires to reach the athletes. The researcher understands that, in some sports, the association did not

forward the information on to the athletes as no replies from anyone in that sport were received.

Similarly, with one of the sports academies, there was no address for the academy and the questionnaire was sent via the association, care of the academy director. It was then the responsibility of the sport association to forward the questionnaire. The questionnaire was not returned by this particular academy director.

Other researchers have had similarity low responses from athletes. Armstrong, Hansen and Gauthier (1991) administered questionnaires to athletes, head coaches, HPSC managers, NSO representatives and sport consultants on their perceptions and opinions regarding the evaluation of HPSCs in Canada. The response rate for athletes was 24% and for head coaches was 38%.

As expected, the response rate for the Academy Directors in New Zealand was high (see Table 3), however, considering the relevant nature of the research to their particular vocation the researcher would have anticipated a full response rate. In comparison, Armstrong, Hansen and Gauthier (1991) had only a 31% response rate from High Performance Sport Centre managers in Canada. National sport organisation representatives and Sport Canada consultants had 100% response rates.

6.1.2 Elite Athletes

The ages of respondents ranged from 19 years to 57 years. The male to female ratio of questionnaires sent was 38:32. (See Appendix 8, Selected Results from Elite Athlete Questionnaire).

The questionnaire asked respondents to comment on the statement "academies are not necessary in order to develop elite athletes" which elicited varying responses. Apart from one respondent all respondents assumed their own definitions of academies and proceeded to answer the question. Most suggested that academies were not necessary. However the response was usually qualified in some way to suggest that although academies were not necessary they did assist in the development of elite athletes. This is illustrated by the following comments. "No, academies are not necessary but they help with individual athlete development at a high level" and "no, but they do provide a supportive environment for the athlete" and "no, but the support systems and resources especially sports sciences and medicine must be available and accessible." Another respondent made a comment which neatly sums up the gist of all the other comments by saying "no, they are not necessary - in much the same way that it isn't essential to drive a Porsche - but if you wish to drive very fast, often and with a great degree of safety, a Porsche would be desirable."

Some of the respondents thought that academies were necessary for the development of elite athletes by commenting that "unless there is structured coaching and benefits provided for athletes then the other demands on their lives will get in the way making competition at top levels impossible. Other countries have academies in order to keep pace. New Zealand should have one or we can't hope to compete against the best in the world " Another respondent thought academies were necessary and qualified the statement by suggesting that "it must be set up right and be planned for with good management." Another elite athlete suggested that although academies were necessary bricks and mortar were not. Another athlete suggested that "the top people are the key to the academy especially sports science and coaches - academies are a way to pool resources."

Respondents had similar perceptions on the key personnel in a sports academy. These could be summarised as;

Director or manager	Coach
Administrator	Sponsor or funding body
Support service staff e.g. nutritionist	
Athlete	

When asked what the athletes perceived as the most outstanding features of an academy, responses varied. The responses were listed then grouped into the following;

Coaching	Athlete services
Continual feedback	Testing and evaluation
Culture of the academy	Vision and commitment
Funding	Key people
Opportunities	Holistic approach
Accessibility	Shared experiences
Talent identification	Facilities
Planning and management	Programmes.

The elite athletes shared similar perspectives on what support should be given to international level athletes. Some thought that athletes should have total support from key personnel, services, coaching, facilities and funding. The main issue mentioned by most respondents was that of funding assistance for athletes and coaches. One athlete commented that "my sport sees a lot of the money but it is frittered away by administration and the athletes see nothing of it." Funding was in most cases directly linked to support for overseas competition. One athlete suggested loan opportunities for athletes in a similar scheme to the student loan scheme. Expert coaching was perceived as an important support factor for elite athletes. Interestingly, two of the most

experienced athlete respondents mentioned that often the New Zealand work ethic was what has made New Zealanders so competitive. They went further to say that if athletes are given too much this often ends in complacency rather than having to work for their success. To quote one athlete "we must make sure we don't reward mediocrity."

Most respondents thought the evaluation of academies should be based on athlete performances suggesting that "athletes and personnel should be accountable for their performances" and "not only the end result but the intermediate evaluation of the athlete advancement" and " evaluation should be through long and short term goal setting." Some thought that as well as performance in sport, evaluation should be made of the athletes social advancement in education or business. The evaluation of performance, it was thought, should be measured against international standards and benchmarks "it is no use benchmarking against New Zealand standards unless we are the best in the world in that area." Although most respondents perceived performance and results as the best evaluation one respondent thought the academies should be evaluated on the principle that "did the academy provide assistance to the athlete when required?" Another suggested evaluation should be based on performance as well as planning and management and the programmes being run. Only one respondent mentioned coach development as an evaluation of an academy.

When asked for perceptions on the establishment of individual sports academies or an institute of sport the responses were varied. Some favoured individual sports taking responsibility for their own codes and "each sport should have their own academy because they know their own sport." Another respondent suggested that, although New Zealand was small, having one centralised institute meant a lot of travelling for athletes and coaches. Another advocate of individual sports academies suggested these should be "flexible, mobile, adaptable and dynamic."

A number of people suggested individual academies be developed in addition to a centralised body which had services and expertise that all sports could utilise. "Academies for individual sports but with a centralised body to provide information common to all sports." Another athlete suggested "perhaps a centralised institute should be established to provide a pool of experts to aid sports specific academies around the country." One respondent suggested that New Zealand is too far down the road with individual sports academies to establish a New Zealand Institute of Sport. Two people said that New Zealand was too small to be establishing individual sports academies, suggesting the pooling of resources into one institute.

For some respondents the idea of a New Zealand institute was the best way to develop elite athletes. One athlete thought that most sports in New Zealand are not big enough to fund their own sport and "a collective institute would be good." Another said "So much of sport is, and can be, cross referenced and a centralised institute would benefit all those involved in terms of interaction and networking" and another "I favour a New Zealand institute because of the networking and mutual benefits which arise from it."

Some other respondent had a variation of those two themes. One person suggested regional sports science and sports medicine centres around the country accessible to high performance coaches and athletes and athletes who don't have coaches." Another respondent favoured "a sport academy college with education from form three to form seven then linking with tertiary education. The best can only come from giving the elite athlete the best opportunities." He goes on to say "mix potential athletes of all sports together to create a healthy learning environment. Training becomes part of their education not separate. For example

swimmers train at 5am in order to get to school whereas the optimum training time may be noon."

6.1.3 Academy Directors

Personal characteristics of the academy directors, elicited from the questionnaires, are detailed in Appendix 9, Selected Results from Academy Director Questionnaire. All respondents described the purpose of the academy similarly. The purpose in general was to assist athletes to reach their potential, and in some cases the international level was specified. One director thought the purpose was simply to develop players and coaches. For one the prime purpose was to implement the sport's operational programme.

No academy had more than two full-time permanent staff members with the majority having just one. One academy had no full time staff members and the academy director was also the Executive Director of that sport. The administration and organisation of the academy was done by the national association staff. The roles of the full time staff varied. Most had an administrator, whether this included an administration role or not. Two of the academies had a Programme Director. Only two of the full time staff members were coaches. One of the respondents stated that coaches were not paid.

Five of the academies had part time staff. One academy had 25 part time staff including 20 coaches, two video operators and numerous incidental staff. Most academies had fewer than this with most of the academies employing a coach or coaching director of some kind. The remainder of the roles were secretarial and administrative.

In response to the question on how should the academy best meet the needs of the athletes, the replies were similar. Athletes' needs were met by providing expertise, programmes, and coaching in order to enhance the athlete to the highest level. One of the academies meets the athletes' needs by providing them with education if they do not succeed in their chosen sport.

The facilities provided for the athletes varied in nature between academies. Academy directors indicated that facilities were stretched. One response to the question of facilities available was "none - we need this! Have to beg for the use of facilities." Others described the facilities available for their athletes as "decentralised" in "networks." Most of the facilities are not owned by the academy but hired except for one academy which has permanent training faculties and accommodation for the athletes.

Funding came from a combination of the Hillary Commission, the Sports Foundation, memberships, the national sports association concerned (membership funds and fundraising), and corporate sponsorship.

Evaluation of the academies differed in complexity and depth. For some of the academies, meetings with the sport and the sponsor, the Hillary Commission, was the extent of the evaluation process. For other academies evaluation forms are completed after each camp and meetings are held after each event or cycle. In one case the academy director evaluated performances, although "the evaluation was a comment on progress rather than a measure that could be compared across groups or used as a measure of achievement." In this case the academy director submitted the 1995 academy evaluations which state, for example, "the attitudes of all players in the squad were first rate. All participants worked hard and a pleasing aspect was their attention to fitness" and "the squad practiced diligently, professionally and enthusiastically. They were

well coached. The talent is there." In addition, subjective ratings were given to each player in terms of potential and current achievements.

Other academies were evaluated on the basis of performance of the athletes however no details were provided on how this was done.

The final question gave the respondents the opportunity to describe an ideal sports academy and asked them to describe the major features of this academy. The responses were interesting. Most advocated the development of regional academies. "Provide facilities in major regions such as Auckland, Wellington, Christchurch, where athletes and coaches could have unlimited access to develop elite athletes." Another director stated that "regional programmes at grass roots level which filter through to the national academy programmes" would be best. The payment of coaches was noted by a number of directors and full time athletes were mentioned by four of the directors. Residential accommodation was mentioned by two of the directors. Interestingly, one of the academy directors mentioned the development of athletes' careers as well as their sports skills development as features of an ideal academy.

6.2 Perceptions on Eite Athlete Development Interviews

Interviews were held with key personnel from service organisations pertinent to New Zealand sport as outlined in the methodology chapter (See Appendix 4.). Key figures from sports associations, with and without academies, were interviewed, as outlined in the methodology chapter. In addition, exploratory interviews were conducted early in the year with key personnel from these organisations to obtain initial perceptions on elite athlete development in New Zealand, to practice interview techniques and assist in research question formulation. These

initial interviews, however, provided some insightful perceptions on elite sport development in New Zealand and as such, will be included with the perceptions obtained from later interviews. To put the first set of interviews into context, the Hillary Commission funding for a further seventeen coaching academies had just been announced when the researcher conducted the initial interviews. While the interviews conducted early on in the research may not have the same critical depth as those based on the literature review some key points and issues were revealed. The second set of interviews were held after visiting the AIS.

The respondents are referenced in the following discussion of results as Administrator 1 (A1), Administrator 2 (A2) as explained in the methodology chapter.

6.2.1 Definition of an Academy

Given that the concept of sports academies is relatively new to New Zealand, interviewees were asked to first define a sports academy.

This elicited varied responses. One administrator described the academies as "Coaching academies" for the next tier of future elite sports players. "They are not designed to win medals today they are designed to win medals tomorrow." (Personal Communication, A4, October 25, 1995). He added that "they are based around coaching, and this is our opinion and it is based on research that the clear path to the development of the future for us is based on national level coaches, the application of sports medicine and sports science to athletic development. Three components." One academy director stated that the role of the academy structure is to get players to their potential level faster and whatever level they choose they will be better prepared for it." (Personal Communication, A1, September 22, 1995). Another interviewee

suggested that there was a difference between academies and coaching. "Academies can help a coach but coaches can exist without academies, as they do here now" (Personal Communication, A5, October 25, 1995). One administrator could not really give an indication of a definition or the role of the academies "I'm not 100% sure how the current academies have been set up. I will be helping to set up a structure for the 17 academy sports that gives them the opportunity to support their high performance plans." (Personal Communication, A2, June 23, 1995).

"From our point of view the academies should really be called schools of excellence. Those environments where you have a group of athletes and fine tune them for ultimate gain, and that being international competition." (Personal Communication, A5, October 25, 1995).

One academy director commented that the concept of bringing national teams together for a camp is a waste of time. "These camps are called academies" (Personal Communication, A1, September 18, 1995). "The academy is based on three weekend camps which involves exams for revision and retention and emphasis is placed in discipline. These weekend camps are held in various locations."

"Every sports leader should be thinking about the next generation and these academies are set up for that. What is really important is not so much the excellence but the athletes' potential to impact on society. To think any other way is short term thinking." (Personal Communication, A4, October 25, 1995). As Hawes suggests however, "whatever values are placed upon sports events in the international arena at the level of the individual there can be no doubt that the end endeavour of the athlete is the pursuit of excellence." (p. 121).

6.2.2 Networking and Integration

"At the end of the day I think they will be coordinated quite well because we have a lab standards programme and we make sure that tests done in Auckland and Christchurch, for example, are standardised" (Personal Communication, A2, June 23, 1995). He adds that "we certainly have some disadvantages but size is an advantage, there is a tight network."

"I would say that the academies are a step in the right direction, provided they are not run in isolation from the whole scheme." (Personal Communication, A3, June 23, 1995). The extent to which New Zealand sport is not integrated is more obvious from the interviews.

> "We have not networked as well with the national coaches as we could have although now we see the value of it and we have had recent meetings with national coaches and we have had some interesting meetings with academy directors. So we are still very much in the learning stage at the moment." (Personal Communication, A4, October 25, 1995).

"It is not so much that sports don't want to share ideas it is more that they do not have the opportunity to do so." (Personal Communication, A2, June 23, 1995). Another administrator adds "We have no formal link with the academies apart from through the coaches. Networking between the disciplines is vital." (Personal Communication, June 22, 1995).

One prominent administrator in New Zealand suggested "there is a lot of animosity between key sport organisations in New Zealand suggesting that they had a lack of focus and did not really know what they were

doing" and adds that "this is due to the lack of government focus in high performance sport." (A11, Personal Communication, October 18, 1995).

6.2.3 Coaching and Coach Development

As mentioned previously one definition of an academy was given as " a coaching academy." As one interviewee explained "The emphasis should be on coaching." (Personal Communication, A8, November 24, 1995).

"Then over time there became a greater awareness that there should be greater funding of coaches." (Personal Communication, A5, October 25, 1995).

"I am committed to the coaching academy principle because I know full time national coaches in major sports around the word is what is making the difference so they should be full time or paid." (Personal Communication, A4, October 25, 1995).

On a holistic approach to athlete development, one administrator suggests

> The reality is that the bulk of our athletes are amateurs. What do they do after sport? They are the kind of issues we are addressing as part of our sport foundation briefing. This year we have announced $50,000 worth of educational scholarships. (Personal Communication, A5, October 25, 1995).

6.2.4 Evaluation and Accountability

One administrator suggests "sports can do what they like with the money once we have agreed on the targets. The targets are set with the

agreement of one of the management team and provided they achieve those goals we don't care how they spend it." (Personal Communication, A4, October 25, 1995). In direct contrast one administrator in a high profile sport organisation comments that

> this business of academies going off and doing their own thing is a cop-out. That's like saying sport is for sport. It is to a point. When you are investing millions of dollars into it you go beyond that. You say is that money used for the best purposes? The best intent. I am not driven by Treasury here, I am driven by sound business practices.

The administrator continues

> No audits have been done on them (the academies). There are targets set but who is to determine if those targets are realistic or not and if the targets are met? I suspect the targets have a high degree of comfort built into them. What concerns me...is that the targets are being set by people who know little or nothing about the sport concerned,... let alone about achieving the very best from those academies and the very best go through in a very tough world of international competition. (Personal Communication, A5, October 25, 1995).

The same administrator says that "I would say that every academy that we were involved with would have to undergo a rigorous audit.". A director of coaching of a non-academy sport in New Zealand says that he has been in the job for four years and has not been asked for one audit or evaluation report saying "Sports have few evaluation procedures. I have asked that there be evaluations done but I've given up. Sports have to 'get real' " (Personal Communication, A7, November 27, 1995).

> Academies have set up a set of standards. The problem is that it does not say what the academy is going to do it just says we have these standards. They are not good standards. We are still involved in the numbers game. If the standards are too high, then no one will do it (Personal Communication A8, November 24, 1995).

> The [sport name] academy is reviewed each year and if it is not working they would abolish it. Players are traced throughout their development, and our sport has data from 6 years back. They want to know how many players progress from each level to the next. [Sport name] does not want to waste money, the athletes will know if it is working or not and they will be the first to tell those involved. (Personal Communication, A1, September 18, 1995).

One administrator suggests that

> The evaluation procedures are fairly standardised. We are only really interested in 4 or 5 measures. We don't want to do their job for them. That's their job. So you only want some key things to know that it is working. Fitness levels at certain levels, bowling averages, scores for a particular sport. (Personal Communication, A4, October 25, 1995).

6.2.5 Funding

One respondent, on the issue of funding says

> I have heard the argument, that we could not replicate the AIS because it is too expensive. That is only a matter of degree. The

> AIS is a huge infrastructure that is part and parcel of the ASC, the AIS is only just a part of the ASC. I have heard people say the it costs $100 million to set up. That is nonsense. In a country of this size with a population of three million [the size of Sydney] we have more...than Sydney will ever have. (Personal Communication, A5, October 25, 1995).

The administrator continues by stating that "I would argue that the amount of money being poured into academies, and it is committed for the next 5 years until Sydney, could be used a lot more effectively." (Personal Communication, A5, October 25, 1995).

> I have concerns that some sports may be paying lip service to the concept (of academies) in order to get the funding and don't manage the process very well. Welfare payments to the athletes rather that developing the infrastructure you need to produce sports people at the best of their ability. (Personal Communication, A8, November 24, 1995).

6.2.6 Government Involvement

One prominent administrator states that "as a government agency it would be irresponsible to take over the responsibility of sport and tell them what they have to do. Whoever has the gold makes the rules and I resist that." (Personal Communication, A4, October 25, 1995). In direct contrast another administrator states that "we pay lip service to "its your sport and you tell us." Equally there is "If you don't perform we will get your president up to our office." (Personal Communication, A5, October 25, 1995).

On Government involvement in sport one administrator says

> I think there is too much government involvement in sport in this country, provide the funds by all means and those funds should be managed properly and accounted for there is no debate about that. There needs to be clear contracts and everything set out. Just like every other sector of New Zealand. (Personal Communication, A5, October 25, 1995).

"I believe that a large part of the responsibility lies with the government to make sure some funding is made so that our sporting culture can continue." (Personal Communication, A3, June 22, 1995). Another person suggests that corporate sponsors will disappear if the government gets too involved in sport funding. He suggests that "sponsors will say if the government gets involved then corporate sponsors will say "If the government wants to get that involved let it pay for the lot." (Personal Communication, A5, October 25, 1995).

6.2.7 Personal Perceptions

"There wasn't any consideration of a centralised sports academy after the first ten minutes. The sports didn't want it, we couldn't afford it and of course the Australians don't want it now and they are decentralising." (Personal Communication, A4, October 25, 1995).

I don't see a reason why we could not set up one perhaps two, North and South Island academies, or centralised institutions where they can undergo standardised tests and programmes on the grounds that you are maximising that resource twelve hours a day seven days a week. (Personal Communication, A5, October 25, 1995).

> The ideal academy would be one with its own set of plans written and developed for themselves by themselves that would work for the sport. It would have a strong recruitment base and a strong performance base. And a seamless progress from the individual as a player from Kiwi Sport to the Olympics or to the level of their ability. (Personal Communication, A4, October 25, 1995).

One administrator mentioned that the Germans have a different sport culture to New Zealand and that a system like that would not work in New Zealand. The Australian system also is too different from our own and would also not work. (Personal Communication, A1, September 18, 1995).

"I would argue why does NZ not set up a centralised structured body, and the money being put into those academies could be used to provide funding for those sports and a number of other sports who do not have access to academies to actually utilise." (Personal Communication, A5, October 15, 1995). The same administrator adds "I don't think that any thought has been put into these academies, I don't think clear policies have been developed for academies, I don't think there have been any guidelines developed. I think it is ad hocery."

The same administrator adds

> Before I even started I would know what is going on around the world - the leading countries in performance and see what they do. It may be that it ends in an academy type concept. If that was the case I would sit back and say this is what they had in common. They have an emphasis on high performance, focus on providing proper funding for that. Then they have a residential base, or a centre for excellence, an area where the experts come

together. And you start building the model on that. (Personal Communication, A5, October 25, 1995).

I have concerns that some sports may be paying lip service to the concept in order to get the funding. But they (the sports) don't manage the process very well. I think that at present the government is supporting welfare payments to the athletes rather that developing the infrastructure you need to produce sports people at the best of their ability. (Personal Communication, A8, November 24, 1995).

6.3 Summary

From the research on elite sport it is clear that people involved in elite sport development have varied perceptions on how athletes should be development and what shape the structure that should take. At the highest level of New Zealand sport there were opposing philosophies on the role of the government in elite sport and what structure New Zealand should implement for its development.

Chapter Seven, the Discussion, draws upon the literature on the structure of elite sport development and the results from interviews and questionnaires conducted in New Zealand and Australia.

CHAPTER SEVEN

DISCUSSION

Chapter Outline

Chapter Seven discusses the models of elite sport development examined in the literature review and the research conducted in Australia and New Zealand are considered critically in terms of the possible benefits New Zealand may imitate in its model of elite sport development.

The discussion first examines the critical factors essential for the development of elite athletes. Following this is an examination of the Australian model of elite sport development and the elements that could be transformed to the New Zealand context. The discussion finally presents some possibilities on the optimal structure for elite athlete development in New Zealand.

7.0 Introduction

The aim of the research was to determine the apparent benefits of the Australian elite sport delivery model with the intention of developing the optimal structure for elite sport in New Zealand. To establish the optimal structure for New Zealand sports academies the research initially considerd the critical elements required for elite athlete development. These elements were considered and briefly explained in terms of their role in elite sport development.

Given that New Zealand sport decision makers have moved to establish individual sports academies and given the factors required to develop elite athletes, the discussion then turns to an examination of the optimal delivery system for those critical factors.

7.1 Critical Factors in Elite Athlete Development

The essential elements required for elite athlete development were identified in the literature review. These factors, elicited from the research, were funding, coaching and coach development, administration and management, athlete support for training, competition, facilities and accessibility to those, sport science and medicine, sport research and co-ordination.

At the most basic level, funding is critical for elite athlete development. Even with no structure for the development of elite sport, athletes need the finances to apply the above elements to their own development. Sue Baker Finch (Personal Communication, September 27, 1995) recognises that performance is dependent on funding and with this argument the ASC requested an increase in funding for sport from the federal government for the Sydney Olympics even before the venue for 2000 was announced. Parker (1988), Johnstone (1994), Coaching Research Group (1992), and New Zealand Council for Recreation and Sport (1978) recognise the importance of funding. As central government is responsible for the bulk of sports funding in many countries (Australia, New Zealand, Canada, Britain) the issue of government involvement is intrinsically tied to funding. From the research it is clear that without the support and commitment from government, elite sport suffers from inadequate resources and qualified personnel. Australia through the 70's had minimal government funding for sport (Semotiuk, 1987).

Coaching of athletes and coach education were highlighted by the questionnaire results and interviews as being critical in the development of elite athletes. This is manifested in the New Zealand academies being defined as 'coaching academies' (Coaching Research Group, 1992) and in Australia the emphasis placed on coaching as a profession (Woodman, 1988).

Sports science and sports medicine are noted by many as being critical in elite athlete development (Coles 1981, Coaching Research Group, 1992, Ross Smith, Personal Communication, September 29, 1995) as was sport research.

Competition, too, is considered critical in elite athlete development. Competition is essential for monitoring of training effectiveness in athlete development. This was highlighted by elite athlete respondents in the questionnaire. Facilities for training and competition and athletes' accessibility to these were noted in the literature and the research.

7.2 Benefits from Elite Sport Development Models

From the research, a number of benefits were elicited from the Australian model of elite sport development. These are networking, integration, government support, coaching and coach development, the holistic approach, clear roles and focus, management and business principles, a sense of ownership of the system, evaluation procedures, continuous improvement, sport science and sport research.

The research provides justification for the need for delivery structures for elite sport development. Fundamental to the definition of sport is that it is structured. All forms of sport have a set of rules and are limited by

space or time. Sports organisations, therefore, need to be structured and organised in order to best develop sport.

From the literature it is apparent that the needs of elite sport development should be accommodated into some kind of structure for optimal delivery of these (Daly, 1991, A3, Personal Communication, June 22, 1995; Woodman, 1988; Williams, 1985). Australia initially developed the AIS, centralised at Canberra, and has now developed a decentralised system involving state academies and the further decentralised Intensive Training Centre Programme. Canada has developed a decentralised network of High Performance Sport Centres, Britain is in the process of developing a British Institute, incorporating the existing National Sport Centres, and Germany has a centralised institute.

Sports academies and institutes have been developed in a number of countries (Germany, Australia, Canada, Britain). These structures basically incorporate the critical elements in elite sport development. Theoretically, however, any structure of elite sport development which incorporates all the elements critical to that development, should also enhance athletes' advancement. The reason for developing sport academies and institutes is based on the premise that they bring together the needs of the athletes in the most efficient and effective way. Further, they aim at accelerating the development path for the athletes.

The need for a centralised institute of sport for New Zealand was noted by Boyd (1984), New Zealand Council for Recreation and Sport (1978) however the limiting factor was that these proposals focused on the funding aspects of elite sport development. The research noted that although funding was critical in elite sport development the structure and level of integration can dictate the efficient use of those funds. A number of people in New Zealand advocated the development of a decentralised

system of elite sport development which, in light of the research, appears to be the way countries are developing. However it seems also, from the literature, that New Zealand and Australia have different justifications for establishing decentralised systems.

Williams (1985) discussed the concept of an integrated, coordinated model for New Zealand sport development which focused on the structure the model should take rather than the financial aspects. The research supports his view that an effective, unfragmented structure is needed which does not necessarily have to be centralised. What is critical is that the critical elements of elite sport development, and the noted benefits of the Australian model, should be present to develop an optimal sport delivery system.

As noted by Turner (1984), Williams (1985), administrator five (Personal Communication, October 25, 1995), Parker (1988), and the Coaching Research Group (1992), New Zealand has the key elements in elite sport development in place and through the academies the Hillary Commission is attempting to provide some structure for their development. However, the difference between New Zealand and other countries in terms of efficiency and efficacy, is the level of integration and cooperation which occurs in sport. This is reflected in the results from New Zealand interviews and questionnaires presented in Chapter Six. There was concern by some respondents that New Zealand's key sports organisations were merely paying lip service to elite athlete development with the introduction of sports academies. Evidence for this may be manifested in the lack of literature and justification for the decision to establish individual sports' academies.

In New Zealand the advocates of a decentralised system noted that New Zealand could not bear the cost of a centralised system. New Zealand's relatively small population, based in a few main centres, and the size of

the country were further justification for establishing a decentralised system. In contrast, Australia has a population approximately six times that of New Zealand and there is funding support for sport through the Australian Federal Government.

The size of country and smallness of population contributes to the issue of the structure of elite sport development. New Zealand with its small population and size should, theoretically, lend itself to a centralised model for its development. In contrast Canada and Australia with small populations spread over large areas create a logistical problem when it comes to creating a sport delivery system.

Australia and Canada and Britain have demonstrated that a decentralised system is favourable. However, the system must be integrated. For example, the AIS and state academies of sport are fully integrated by the standardisation of programmes and the administration and management headquarters for the AIS and ASC are located in one place for full coordination.

In order to satisfy the Hillary Commission's definition of a sports academy, the proposed individual sports academies must contain sport science and medicine components, development plans and coach development plans. It appears that some of these functions could be rationalised into one resource which all sports could use. Finances would then go into one sports science unit, rather than 17 as proposed by the Hillary Commission. This would be a more efficient use of the limited government funds. Increased integration and cooperation would mean that a network of academies or regional academies would cost less than the relatively autonomous academies being established at present. One prominent feature of the New Zealand literature was the issue of cost accounting (Coaching Research Group, 1992, Boyd, 1984, Murphy,

1991, Parker, 1988). These documents considered financial elements before structural elements.

However, the differences in an optimal sports structure for a particular country ultimately depend on the goals of that country's sports system. Countries such as Germany, and to a lesser extent Australia, use sport as a political and economic tool and as a result there is a high level of government support and organisation. In New Zealand and Britain the amateur tradition inherent in sport remains and is reflected in the organisation and structure of sport. If an optimal model of elite sport development is the goal for New Zealand, then the structure of that development is critical. Had the Hillary Commission examined the critical elements of sport development and how these could be optimally delivered, then it would have been apparent that it was the structure of the delivery system which was critical, not the establishment of an institute. They would also have found that the optimal development for New Zealand sport, according to the present research, did not mean the establishment of an institute of sport.

An example of the above point is found in Australia. It was apparent that the objectives of the AIS and ASC were clear in the interviewees' minds, evident from the similar responses given to the questions. In addition, it was apparent from the interviews in Australia that the AIS and ASC personnel were clear in their own roles and where they fitted into the overall scheme. In contrast, although academies are currently being established in New Zealand, interviewees involved in their development could not give the researcher clear goals for the academies or the same answer for the definition of an academy. Fundamentally, a clear definition of an academy should have preceded any development. Those involved, such as the personnel in those sports who are now in the process of developing their own academies, should have known the definition of an academy. That they did not can be seen in the different

perceptions on sports academies between key personnel in New Zealand sports organisations detailed in Chapter Six and in the Australian system, detailed in Chapter Five.

The Australian government made a clear commitment to elite sport development and supported this decision with funding to allow it to happen. In New Zealand, despite the decision to fund individual sports academies, as Chapter Six notes, some respondents have concern over the role of the academies, and the position of government on elite sport development. Key figures in New Zealand sport (A5, Personal Communication October 25, 1995; A1, Personal Communication A8 Personal Communication November 1995) perceived the decision to fund sports academies as paying lip service to the concept. It is clear that these people are not confident in the decision made by the Hillary Commission.

New Zealand must determine if it is dedicated to the development of elite athletes, and ultimately that decision rests with the government. The research indicated that models of elite sport development which are successful have been developed with input from all of those involved. This issue is reflected in the principles of quality management, in which the employees have a sense of ownership over their work and the more control the better the outcomes. In terms of New Zealand's elite sport development few people involved with the developments were considered.

From the outset, then, there is a difference in opinion between the athletes and the body establishing academies. This point refers back to a reference above about those involved having input into the development process. Had the Hillary Commission sought opinions of athletes and coaches then perhaps the academies would be centred on what the

athletes' needs are rather than what the Hillary Commission presumes their needs and goals are.

The results reflect this lack of consideration with relatively small numbers of academy directors and elite athletes envisaging individual sports academies as being the optimal way of developing elite athletes.

The literature suggests that the continued development of elite athletes is dependent on a reliable source of funds. In New Zealand sport is primarily funded through the central government but as Australia has found there are down sides to government control of sport. As the results from Australia exemplify, there is constant uncertainty over the continuation of funds after the 2000 Sydney Games, with some people suggesting (eg. John Gilbert, Personal Communication, September 28, 1995) that the current high level of funding in not sustainable and the future of Australian elite sport support is uncertain. A5 was concerned with the level of government involvement in sport which was reiterated in Daly (1991) in the Australian context.

Given that public money is being spent on sports academies in New Zealand there is a need for regular audits. A number of respondents and the literature made the point that quality management and sound business principles must apply to the sport setting (Williams, 1985; Rail, 1988). The necessityfor the evaluation of programmes was noted by personnel at the AIS, respondents in New Zealand and within the questionnaire results. The research found that all aspects of Australian elite sport development were evaluated. Patrick Hunt (Personal Communication, September 27, 1995) noted that the head coach, athletes and management all complete evaluations forms quarterly (See Appendix 6.). Funding is reviewed depending on the evaluation results. It appears that with the level of funding from public money there should be evaluation of its use and accountability.

Frisby (1984) noted that performance based evaluations are not necessarily the most effective way of measuring the success of sports organisation and suggests a combination of the goal model and systems would more adequately represent organisational effectiveness in a sport setting. Some respondents holding key positions in New Zealand sport organisation virtually disregarded the need for evaluation procedures. Apparently evaluations in sports organisations are minimal. One requirement of the individual sports academies is an evaluation procedure which is based on goal setting and achievement of those goals, on a sport by sport basis. The research and results suggest that there are a number if inherent problems with this. The goals set by the academies need to be of an international standard if the outcome is elite athletes. There is no use in setting standards on a New Zealand level as these are generally lower than world standards. Further, if the goals are set too low athletes may lose motivation to continually improve. Evaluation procedures and measurements need to be standardised across all sports so that athletes in different sports can be compared and testing can be done at a number of locations by various people obtaining comparable results. Administrator 5 (Personal Communication) and Patrick Hunt (Personal Communication, September 27, 1995) and Administrator 8 (Personal Communication) noted the importance of international benchmarking suggesting that if the goals were set at an elite international level then the goal setting and attainment method of evaluation may be appropriate. The research supports this, suggesting that if the academies set up by New Zealand, are aimed at elite athlete development then the standards should be at the international elite level. This is assuming that New Zealand has the potential elite athletes to reach the standards required.

One funding related issue focuses on the level at which sport funding should be aimed, the elite or participation. A4 noted that funding directed to participation would increase the base of athletes competing,

and natural talent would emerge at the top of the pile. This has been refuted by Harris, Elliot, Fitzpatrick, Hartung and Darlison (1984) and A5. The Australians have demonstrated that an increase of funding to elite sport development helps to advance all the aspects of elite sport development mentioned previously in this chapter. In addition, Coles (1975, cited in Westerbeek, Shilbury and Deane, 1995) noted funding for high performance sport costs more than developing sport participation. Funding was perceived by elite athletes as being critical in their own development however the athletes had a more short term view on funding suggesting that the money be allocated directly to them. In contrast, some key personnel thought that if funding for elite athlete development was to increase, then the investment of those funds would have be in the long term continual development of athletes such as coach development, facilities and sports science and medicine.

The researcher has attempted to present an exploratory examination on the optimal sport structures for elite sport development. The researcher noted a distinct difference in the openness and approachability between New Zealand and Australian interviewees. The researcher felt that a number of the interviewees in New Zealand were guarded when discussing the topic of elite sport development. In contrast, the respondents in Australia were all open and frank when discussing their model of elite sport development. The comparison was noted in the researchers' note book.

In addition there was a difference in the level of assistance people gave in Australia and New Zealand. In New Zealand it was difficult to arrange interviews with a number of people and attempts to make contacts were often without success. Twice interviews were arranged, where the researcher had to travel 800 kilometres for the interview only to find that the interviewee was not available at the arranged time. In comparison the Human Resource Manager at the AIS, John Gilbert, organised

interviews with personnel from the AIS and ASC as well as the ACT Academy of Sport and the University of Canberra. He sent a brief personal history of each of the personnel to the resercher to check that these people were suitable. While in Canberra the researcher was personally introduced to each respondent by John Gilbert who was also on hand to answer any questions. The respondents were notably open about the topic, friendly and interested.

The researcher took this as an indication of the level of organisation and coordination within each country. In addition this contrast signalled to the researcher the levels of confidence the personnel in each country had for their elite sport development structures.

7.3 Summary

The research and the examination of the literature that exists on the structure of New Zealand elite sport development make it clear that the present model of athlete development has not been carefully planned for the optimal development of New Zealands elite athletes. It is essential that high performance programmes establish a productive approach to the development of athletes and this has not been done. Two of the key leaders in New Zealand sports organisation had distinctly opposing views on the development of the sports academies in New Zealand. One comment suggests that New Zealand sport development is ad hocery at its worst and the research reflects this on a number of levels.

Despite the fact that Australia is further along the developmental path in terms of the elite sport development structure than New Zealand we can still learn from them and adapt the best principles of their model.

The research established that sports academies and institutes are not one of the critical elements required for elite athlete development. However, academies and institutes encompass all the elements essential to elite athlete development, and arguably more.

CHAPTER EIGHT

CONCLUSIONS AND RECOMMENDATIONS

Chapter Outline

This chapter makes conclusions and practical recommendations from the research to key sports organisations in New Zealand sport such as the Hillary Commission, Coaching New Zealand and the New Zealand Olympic and Commonwealth Games Association which may assist with the development of sports academies. In addition the research will assist those sports who are in the process of establishing academies.

A model for the optimal development of elite sport in New Zealand, based on the literature and research, is presented in this chapter.

The conclusions presented in this chapter are followed by a practical recommendation or set of recommendations.

8.0 Conclusions and Recommendations

The research conducted was exploratory in nature and among the first of its kind in New Zealand. Given the prominence of sport in New Zealand and the national significance of sport, it is surprising how little research has been conducted on the optimal structures for its development.

Recommendation

- Further research be conducted on the structure of elite sport development.

The role of the government is important in the development of elite athletes. In Australia, Canada, Britain and Germany government assistance was essential in the initial stages and for the on going running of their respective sport delivery models. The research found that although possible developments in the structure of elite sport in New Zealand had been discussed for over fifteen years, until 1995 no models eventuated. In June 1995, the Hillary Commission announced funding for 17 individual sports academies. This news received varied reactions from respondents in the research.

The government's role in sport, due to its financial investment, essentially controls the direction of sport in each country. For example, the government in Germany is focused one hundred percent on elite sport development. In Australia the ASC has two objectives, elite sport development and participation for all. In addition each organisation within the elite sport structure in Australia has clearly defined roles to ensure that there is no duplication of work or resources. In 1989 in Australia the AIS was amalgamated into the ASC to form one statutory body to assist in this process.

Recommendations

- The government commit itself, philosophically and financially, to the development of elite sport in New Zealand.

- One body responsible for the development of sport in New Zealand be established which incorporates elite sport through to sport participation

- Clear roles are established for the departments within this central body one of which is solely responsible for elite sport development. For the purposes of this research this will be called Elite Sport Group.

- The Elite Sport Group develops an operational plan, based on effective management principles to provide a framework for the development of goals and objectives

The research elicited a number of factors which were critical for the development of elite athletes. The research found that for these critical elements to be delivered to athletes efficiently and effectively a structure for elite sport development was important. All parts of the structure such as the sports organisations, national sport associations and support services needed to be integrated, coordinated and networked. The countries examined in the research had varied structures for the development of elite athletes, and varied levels of centralisation and decentralisation. However the critical elements for the development of elite athletes remained. Figure 4 is the proposed Model for Elite Sport Development, devised as a result of the research.

Recommendation

- The Elite Sport Group develop a structure for elite sport development in New Zealand, incorporating the elements critical to the efficacy of sport structures outlined in this research.

The research emphasised the need for programme evaluation and accountability to be built into the elite sport delivery system. This was based on the fact that sport is primarily funded with public money and as such this needs to be accounted for in terms of efficiency and efficacy.

The need for evaluation procedures was based on sound management and business principles.

Recommendations

- The Elite Sport Group establish a set of standardised procedures to evaluate the effectiveness of the sports structure, and ensure continuing financial support.

- The Elite Sport Group establishes standardised accountability procedures for the state funding allocation.

Coaching and coach development were identified as two critical aspects of elite athlete development. This is clear from the level of professionalisation of coaching in Australia and Germany. In addition the process of coach education and continuous learning for coaches, through universities and other education institutions, was emphasised. Basically the research found that athletes, coaches and administrators perceived coaching as one of the most important elements in elite athlete development. Therefore a solid structure and infrastructure are needed to ensure that coaches can be developed to the highest level.

Recommendations

- Coaching is recognised as a profession by the governing organisation for sport in New Zealand.

- A network of paid and voluntary coaches be established throughout the country.

Information and innovation and its diffusion throughout the sport system is critical. Coaches, athletes, administrators, managers and sport service personnel require access to current advances in applied sport science, research developments and overseas research in order to continually improve. The research indicated that one way this could be done was with assistance from educational institutions. The research also indicated that these services can be centralised. Technology by way of the Internet allows fast access to information, despite geographical limitations, and allows efficient and effective communication to be developed.

Recommendations

- The Elite Sport Group establishes a centralised National Sports Research Centre in conjunction with tertiary institutions.

- In order to become fully integrated, New Zealand sport organisation and sport associations become 'on line' throughout New Zealand.

Sports science and medicine facilities were noted as an important part of athlete development. Each individual sport academy in New Zealand is required, by the Hillary Commission, to have a sports science component, however, given the expense and specificity of some facilities the research indicated that a more centralised approach to sport sscience and medicine was practicable.

Recommendation

- A National Sport Science and Medicine Centre be established.

8.1 Proposed Model of Elite Sport Development for New Zealand

From the present reserch it is proposed that one statutory body be established for the development of sport in New Zealand. Within this body there will be three departments with each department responsible for separate aspects of sport in New Zealand. The first will be responsible for elite sport development and an optimal delivery system for elite sport development is proposed (See Figure 4, p. 171, Model for Elite Sport Development in New Zealand.). The second will be responsible for general sport development and the third will be responsible for administration and management.

The proposed model assumes the total support from government in terms of goals for elite sport development and source of funding.

The optimal elite sport delivery system for New Zealand then would be a network of Regional Sport Centres. They would be called sport centres as opposed to academies or institutes to avoid the confusing connotations these words may conjure up.

Selection criteria, not unlike those set out by the Hillary Commission for the individual sport academies, would need to be developed to determine sports which are eligible to use the facilities. This eligibility would be evaluated on a regular basis. Sports therefore must continue to develop and maintain standards of excellence. A comprehensive set of evaluation procedures would be established for the centres.

Each regional sport centre would cater for a number of sports which had similar requirements. For example, team sports may be grouped together in one centre and aquatic sports in another centre. Special facilities and

personnel pertaining to types of sports would network and interact on a daily basis.

The proposed structure for elite sport development would have a National Sports Science and Medicine centre for the use of selected sports. This would provide one comprehensive sport science facility. This would incorporate the National Sports Research Centre where applied research for sport would be conducted and be used by those sports selected as part of the elite development plan.

In the model a National Sport Information Centre would be established. This centre would be available for use by anyone interested in sport. Essentially, this would be a national resource centre for sport. All the components of the proposed model would be linked through computers with the base at the Information Centre. This would be done by Internet, World Wide Web and through E mail. At each Regional Sports Centre computers would be available. Head coaches of the individual sports not selected for inclusion for the Regional Sports Centres would be able to access the information network.

Terry Ames (Personal Communication, November 24, 1995) suggested the most efficient and effective way of establishing a communications network would be by the World Wide Web and the Internet. The central body, the Hillary Commission, would establish the web site and a web address which could be published in all pamphlets, letters and mailed information. Each individual or organisation involved in New Zealand elite sport, and ideally at all levels eventually, would need a computer.

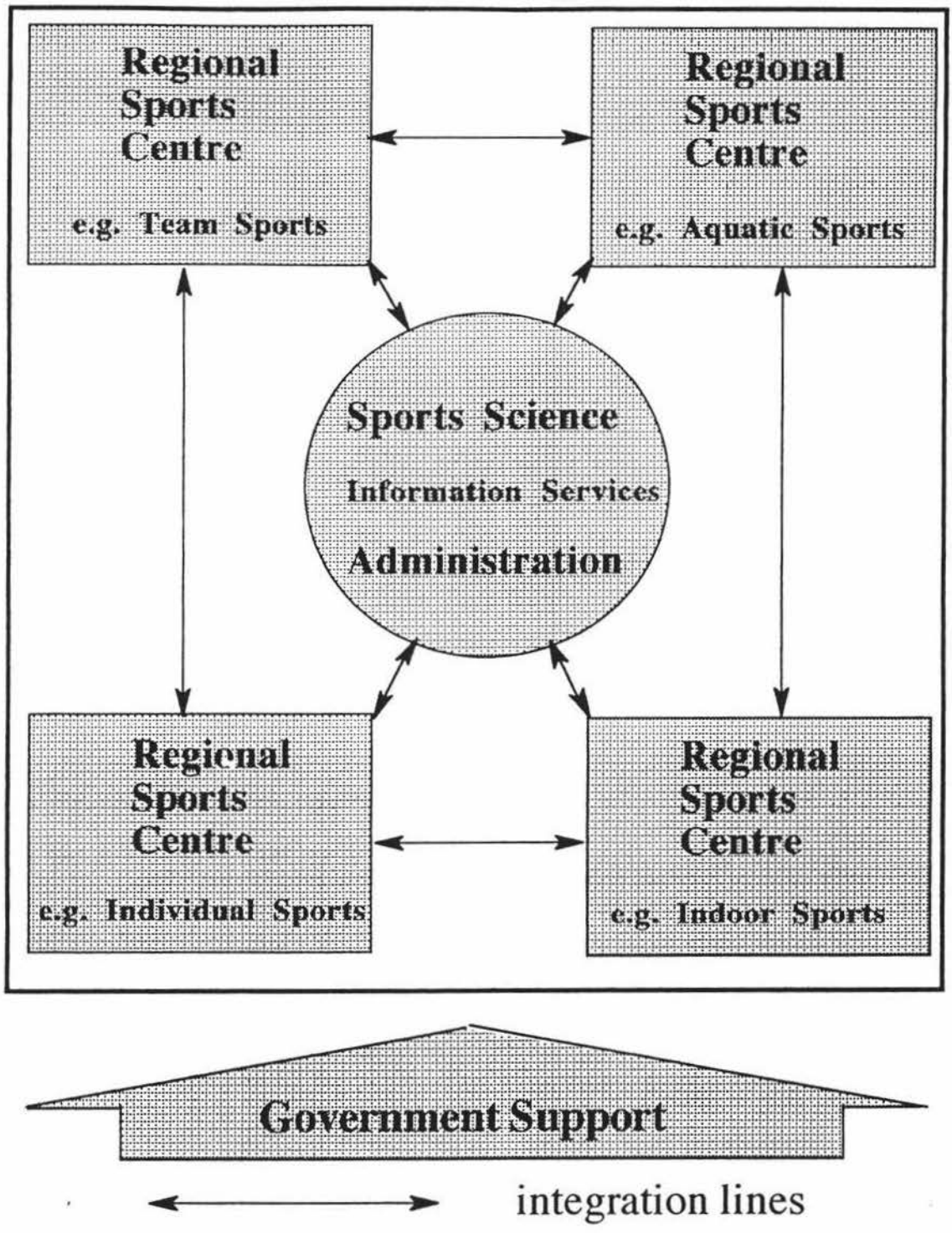


Figure 4. New Zealand Model of Elite Sport Development

Organisations and individuals involved with the organisation of New Zealand elite sport could then be 'on line'. This would create an interactive environment where information is accessible at any time. Electronic mail would mean instant contact with people all over New Zealand. Groups of people sharing the same interest in New Zealand, sport such as cycling coaches or sports nutritionists, could discuss problems or swap information via electronic means. This would solve one of New Zealand's inherent problems, the lack of interaction and sharing of ideas within sport and sports organisations.

8.2 Practical Implications of the Research

The present research has practical implications for the future development of elite sport in New Zealand. The researcher has developed a body of knowledge on sport structures in Australia, Canada and New Zealand.

After a critical examination of the sport structures in New Zealand, Australia and Canada an optimal structure for the development of elite sport in New Zealand, was devised. In addition, practical recommendations for the implementation of the optimal delivery system for New Zealand sport were outlined.

8.3 Recommendations for Further Research

This research on the structure of elite sport development was among the first of its kind in New Zealand. The nature of exploratory research implies that further research on the topic is important in order to gain a full understanding of the issues involved in this complex topic.

Given the importance of sport in New Zealand and the lack of research on elite sport development in New Zealand from a structural position, the researcher recommends that further study be undertaken on the structure of elite sport development to complement and add to the present research. For example a more detailed examination of the British and Canadian models would assist with the development of the New Zealand model of elite sport development. As this research was conducted on a macro scale by country, further research on the organisational structure of sports academies and institutes would be useful for the future development of elite sport in the New Zealand context.

8.4 Concluding Statement

A structure for elite sport development is essential in order to deliver the elements critical to such development. After a close examination of the Australian structure of elite sport development, benefits from that structure were mirrored in order to devise an optimal model for elite sport development in New Zealand.

The research indicated that the optimal structure of elite sport development should incorporate regionalised centres which are integrated, coordinated and networked so that the needs of elite athletes are met.

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Appendices

Appendix 1. New Zealand and Australian Post War Olympic and Commonwealth Games Medallists

Olympiad	Medal	New Zealand	Australia	Total medal NZ	Count Australia
1952	G#	1	6	3	11
Helsinki	S	-	2		
	B	2	3		
1956	G	2	13	2	33
Melbourne	S	-	8		
	B	-	12		
1960	G	2	8	3	22
Rome	S	-	8		
	B	1	6		
1964	G	3	6	5	18
Tokyo	S	-	2		
	B	2	10		
1968	G	2	5	4	17
Mexico	S	-	7		
	B	2	5		
1972	G	1	8	3	17
Munich	S	1	7		
	B	1	2		
1976	G	2	-	4	5
Montreal	S	1	1		
	B	1	4		
1980	G	-	2	-	9
Moscow	S	-	2		
• *	B	-	5		
1984	G	7	4	10	24
Los Angeles	S	1	8		
	B	2	12		
1988	G	2	3	12	13
Seoul	S	2	6		
	B	8	4		
1992	G	1	7	9	27
Barcelona	S	3	9		
	B	5	11		
Totals	G	23	62	55	196
	S	8	60		
	B	24	74		

G = Gold; S= Silver and B= Bronze

* AIS established in 1981

• New Zealand athletes boycott the Moscow games

Appendix 2. Sports Allocated Funds for Academy Establishment

Sport	Annual Funds Available #
Rugby	$ 250,000
Netball	* $ 250,000
Yachting	* $ 250,000
Swimming	* $ 250,000
Cricket	* $ 250,000
Equestrian	$ 250,000
Cycling	$ 250,000
Rowing	$ 250,000
Golf	* $ 250,000
Softball (Women)	♦
Athletics	$ 150,000
Hockey	◊ $ 150,000
Squash	* $ 150,000
Tennis	* $ 150,000
Triathlon	$ 150,000
Bowls	$ 150,000
Shooting	$ 150,000
Rugby League	$ 150,000
Gymnastics	◊
Annual Total for Sports Academies	**$ 3,450,000**

Note

Funds allocation will continue until 2000 at the earliest.

* Denotes sport with existing academies acknowledged by Hillary Commission

◊ Denotes sports with academies established independent of the Hillary Commission

♦ The softball academy (the 8th Hillary Commission academy) was not included on the list for funds in 1995 or in the total for funding, however John Boyd (Personal Communication November 21, 1995) clarified the situation stating that softball will be funded in 1996.

Appendix 3. Establishment Dates of Australian Sports Academies and Institutes.

Date Established	State Institute/Academy
1981	Australian Institute of Sport
1982	South Australian Sports Institute (SASI), Adelaide
1984	West Australian Institute of Sport (WAIS), Perth
1985	Tasmanian Institute of Sport (TAIS), Launceston
1985	NSW Academy of Sport, Sydney
1989	ACT Academy of Sport, Canberra
1990	Victorian Institute of Sport (VIS), Melbourne
1991	Queensland Academy of Sport
1995	NSW Institute of Sport (In progress)

From Spence CNZ Conference Proceedings 1995 p 156.

Appendix 4 New Zealand Sport Organisations Interviews

New Zealand Sport Organisation
Coaching New Zealand
New Zealand Sports Science and Technology Board
Hillary Commission for Sport, Fitness and Recreation
New Zealand Sports Foundation
New Zealand Olympic and Commonwealth Games Association
New Zealand Sports Assembly
New Zealand Badminton Federation Inc.
New Zealand Hockey Federation
Athletics New Zealand

Appendix 5 Names and Positions of Australian Sport Interviewees, September 27-29.

Name	Position held
Judy Flanagan	Manager, Athlete Career and Education Program
Ken Norris	Manager, ACT Academy of Sport
Patrick Hunt	Manager, National Coaching and Player development, Basketball Australia
Lawrie Woodman	Manager (Coaching) Australian Institute of Sport
Bob Hitchcock	Manager, Elite Sport, Australian Institute of Sport
Ross Smith	Director, Division of Sport Sciences, Australian Sports Commission
Sue Baker-Finch	Manager, Olympic Athlete Program, Division of Sports Management, Australian Sport Commission
Emery Holmik	National Sports Research Centre, Australian Sports Commission
Deborah Hoare	Talent Identification, National Sports Research Centre, Australian Sports Commission
Nerida Clarke	Director, Sports Information, Australian Sports Commission
John Gilbert	Manager Human Resources, Australian Sports Commission
Heather Reid	Lecturer, Sports Studies, University of Canberra

Appendix 6. Elite Athlete Questionnaire and Academy Director Questionnaire

Elite Athlete Questionnaire

1.Age.....

2.Gender (tick) M ☐ F ☐

3.Occupation.....

4.In which sport(s) have you achieved competition success?

.....

5. What is your current involvement in sport? (Please tick)

Competing	☐
Coaching	☐
Sport promotion and marketing	☐
Sport administration	☐
Other	☐
No involvement in sport	☐

6."Academies are not necessary in order to develop elite athletes." Please comment on this statement.

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7. What would you describe as the most outstanding features of a successful sports academy?

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8. Who do you perceive to be the key personnel in a sports academy?

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9. What support should be given to New Zealand athletes of an international level? (e.g. funding, support for overseas competition, coaching).

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10. In your opinion, how should the work of the academies be evaluated?

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11. Do you favour the establishment of academies for individual sports or the formation of a permanent Institute of New Zealand sport?

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12.Please comment on any other aspects of New Zealand elite athlete development which you believe are important.

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Thank you for completing this questionnaire.

Please indicate ☐ if you would like a copy of my final thesis conclusions and recommendations.

Academy Director Questionnaire

1.Sport.....

2.Age.....

3.What level of sport competition have you achieved as a player?

Sport	Level reached C=club L=local R=regional N=national
.....	
.....	
.....	
.....	

4.What academic or trade qualifications do you hold?

	Type	Major
Bachelor	☐	.....
Master	☐	.....
Doctorate	☐	.....
Trade certificates	☐	.....
Other (please specify)		.....

5.What was the process by which you were selected for the position of director of this academy?

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6.What was your previous position before directing this academy?

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7.What would describe as the prime purpose of this academy?

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8.How many permanent full time staff work for the academy?.....

b. What are their roles in the academy?

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9. How many part-time staff work for the academy? .....

b. What are their roles in the academy?

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10.In your opinion, how should the academy best meet the need of athletes?

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11.How are the needs of elite athletes met by this academy?

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12.What facilities are available for the athletes at this academy?

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13.Are the facilities permanent ☐ hired ☐
borrowed ☐ other ☐

14.Where does the funding come from for this academy?

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If the academy annual report and balance sheet are public documents would you provide a copy of the most recent of these.

15.How is the work of this academy evaluated?

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16.Do you have any suggestions on what my study should consider, or investigate, in researching the development of elite New Zealand sport?

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17.If you had the opportunity to fully develop a sports academy, including funding, could you describe the major features of this academy?

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Thank you for completing this questionnaire. I appreciate your time and information.

Please tick ☐ if you would like a copy of my final thesis conclusions and recommendations

Dear

I am post graduate student at Massey University , Albany, currently completing a Masters thesis on sport academies and institutes. The purpose of this research is to establish an understanding of sports academies and the way they operate. This thesis will conclude with a set of recommendations for the future development of sports academies.

Please find enclosed questionnaire seeking your views on sports academies.

No specific person will be identified in the final document.

If you are interested in a copy of the questionnaire findings, please indicate at the end of the questionnaire.

A self addressed envelope is provided for the return of the questionnaire. If possible could you reply by.....

Thank you for your assistance.

Catherine Martin.

Dear Athlete

I am a post graduate student at Massey University, Albany, in the Department of Management Systems. This year I am in my second year of a Master of Business Studies degree undertaking my masters thesis entitled "The Organisation of New Zealand Sport: A critical examination of Sports Institutes and Academies".

My research basically has a focus upon the systems or structures which enhance elite athlete development and the efficacy of a sports academy or institute which could enhance this.

As part of my research I am obtaining perceptions of the New Zealand sport system and the issue of academies and institutes from New Zealand's current and recent elite athletes.

I would very much appreciate receiving your views on this. I have enclosed a questionnaire which I hope you will answer for my study. Please feel free to include any other comments if you wish. Your name will not be identified in any way or disclosed in the main report of my thesis. I have enclosed a stamped addressed envelope for the return of this questionnaire.

I much appreciate you responding to this questionnaire.

Yours sincerely

Catherine Martin.

BASKETBALL AUSTRALIA

INTENSIVE TRAINING CENTRE PROGRAM

QUARTERLY TECHNICAL REPORT

SUPPORTED BY :

Australian Sports Commission

'ALIAN BASKETBALL FEDERATION INCORPORATED
(IN THE AUSTRALIAN CAPITAL TERRITORY)
03 New South Head Road Edgecliff NSW 2027 Australia Tel (02) 326 1144 Fax (02) 327 6583 Telex AA75945 ABFNBL
nal Tel + 612 326 1144 Fax + 612 327 6583 Telex + 7175945 ABFNBL

BASKETBALL AUSTRALIA

INTENSIVE TRAINING CENTRE PROGRAM

QUARTERLY REPORT - TECHNICAL

SEND TO: CHRIS WHITE
MANAGER TECHNICAL & DEVELOPMENT
BASKETBALL AUSTRALIA
1ST FLOOR
203 NEW SOUTH HEAD ROAD
EDGECLIFF NSW 2206
FAX: 02 327 6583

COPY TO: YOUR STATE'S MANAGEMENT COMMITTEE

DUE DATES: APRIL 15, JULY 15, OCTOBER 15, JANUARY 15.

Please complete the following information in respect of your I.T.C. program.

1. WHOLE SQUAD WORK

Minimum hours required per annum = 50
Hours completed to date = ☐

2. INDIVIDUAL ATHLETE TUITION

Minimum hours of individual tuition per annum = 50
Individual hours completed to date = ☐

3. PHYSICAL TESTING

Minimum testing per annum = 3
Testing completed to date = ☐

Please forward test results to Chris White
when each set of tests is completed.

4. STRENGTH TRAINING

How many athletes NOT on Strength Programs? ☐
How many athletes are on strength programs? ☐
Are each of these programs monitored YES/NO
Who is responsible for monitoring: _____
Have athletes been given strength/fitness education? YES/NO
Hours of fitness/strength education to date: ☐

5. ATHLETIC DEVELOPMENT

Minimum hours required per annum 8 hours
Hours completed to date:
Who has provided this instruction?_____ ☐

6. PSYCHOLOGY PROGRAM

Minimum hours required per annum 5 hours
Hours completed to date ☐
Who has provided this instruction?_____
What topics have been covered:
1._____
2._____
3._____
4._____
5._____

7.(a) SHOOTING PROGRAM

Tick if forwarded

Minimum of 3 national shooting charts to be forwarded to Chris White
Early year
Mid year
Late year

(b) Daily Home Program (includes shooting)
Has every athlete got a daily home program? YES/NO
How often is this program monitored and revised e.g. weekly, monthly other (specify) and signed by network coach. _____

8. VIDEOTAPING

Tick if Completed

Minimum required each athlete videod x 4 times
Shooting
One on One Offence
One on One Defence
Other Videotaping (specify)
_____
_____

9. NUTRITION

Minimim required 4 x 1/2 hour sessions
Hours completed to date ☐
Who provided this instruction?_____

10. MEDICALS

Each new athlete to program must be medically assessed prior to inclusion
Please forward completed medicals to Chris White for each new athlete to program.

11. ATHLETE'S AGREEMENT

As above

12. CONDUCT FORM

Does your state have an athlete/coach code of ethics? YES/NO
If so, please forward a copy of one to Chris White.

13. EDUCATIONAL REQUIREMENTS

Minimum requirement. Each athletes educational progress must be minitored on a term by term basis:
Do you monitor education programs on term by term basis?
Are athletes advised on time management? YES/NO
If so, who is responsible for instruction?_____

14. EQUIPMENT

Minimum required. Red/white/blue training attire.
Details of design to be forwarded to you shortly
All new uniform purchases to be in new design/colours.

15. NETWORK COACHING PROFESSIONAL DEVELOPMENT

Please detail what professional develoment has been offered to your network coaches.

1. Visit to A.I.S.
2. Level 2 NCAS Course
3. Specialist Clinics (how many/what's covered)
4. Written assessment of technique etc.
5. Other - please give details:

_____
_____
_____
_____
_____
_____

16. OTHER GOALS

Does your program:-

Tour overseas	YES/NO
Conduct specialised session camps e.g. tall players	YES/NO
Provide certificates e.g. best defernder, physical testing, etc. - please specify	YES/NO
Conduct end of year dinner	YES/NO
Have corporate sponsorship - please specify	YES/NO
Media exposure (News Releases to Media)	YES/NO

7. ATHLETES LOG BOOK/DIARY

Do your athletes keep diaries/log books including details of:	YES/NO
hours at practice	YES/NO
fitness test results	YES/NO
strength program	YES/NO
phychology education	YES/NO
nutrition education	YES/NO
home practice schedule (signed by network coach)	YES/NO
satisfactory school progress	YES/NO
athletic development program	YES/NO

). ATHLETE/COACH DETAILS

A list of all athletes and coaches in your program including addresses/phone nos. must be forwarded to CHRIS WHITE as soon as your squads are selected.

HAS THE LIST BEEN SENT? YES/NO

). COMMENTS - SUGGESTIONS

_____
_____
_____
_____
_____
_____

ıank you for taking the time to complete this form.

ɜgards,

Chris

ıris White
ANAGER TECHNICAL & DEVELOPMENT

.cw1577

Appendix 8. Selected Results from Elite Athlete Questionnaire Results

Question 5 What is your current involvement in sport?

Current involvement in sport	no. of respondents (n=32)
Competing	9
Coaching	14
Sport promotion and marketing	3
Sport administration	6
Other	3
No involvement in sport	0
Total	48 *

Note

* Some respondents were involved in one or more of the categories.

Question 6 "Academies are not necessary in order to develop elite athletes". Please comment on this statement.

Response	No. of respondents
Disagreed with this statement	21
Agreed with this statement	8
Did not answer the question	3
Total	32

Question 7 What would you describe as the most outstanding feature of a successful sports academy?

Feature	Ranking	Feature	Ranking
Coaching	1*	Organisational skills	11
Funding	2	Holistic approach	12
Athlete services	3	Enjoyment	13
Training camps	4	Challenge	14
Good programmes	5	Feedback	15
Facilities	6	Knowledge	16
Organisation	7	Commitment	17
Competition	8	Communication	18
Research facilities	9	Vision and Culture	19
Qualified people	10	Opportunities	20

Note

* Frequent order according to the number of times each feature was mentioned. e.g. Coaching was mentioned more than any other feature

Question 8. Who do you perceive as the key personnel in a sports academy?

Key Personnel	Ranking
Coach	1*
Manager and administrator	2
Director	3
Sports scientist	4
Athlete service providers (e.g. nutritionist)	5
Athlete	6
Financier and accountant	7

Note

* Frequency order according to the number of times each personnel was mentioned. e.g. The coach was mentioned more that any other personnel.

Question 9. What support should be given to New Zealand athletes of an international level?

Type of Support	Ranking
Funding	
- for overseas competition	1*
- government support generally	2
- for individual athletes and coaches	3
Coaching	4
Sports Science and Medical	5
Holistic approach	6

]Note

* Frequency order according to the number of times each type of support was mentioned. e.g. funding was mentioned more than any other type of support.

Question 10 In your opinion, how should the work of the academies be evaluated?

Method of evaluation	Ranking
International results	1*
Goal setting and achievement	2
Accountability, as with any business	3
Planning and management evaluation	4
Enjoyment	5

Note

* Frequency order according to the number of times the evaluation method was mentioned. e.g International results was mentioned mote than any other evaluation method.

Question 11 Do you favour the establishment of academies for individual sport or the formation of a permanent Institute of New Zealand sport?

Sport Structure	No. of respondents (n=32)
Individual sport academies	9
New Zealand Institute of Sport	16
Regional academies	3
Other	2
Did not answer the question	2

Appendix 9 Selected Results from the Academy Director Questionnaire responses

Sport	Age	Sport Achieved in	Level of Sport	Academic or Trade qualifications
Cricket	52	Cricket Golf Rugby	First Class Regional Club	Part of PE Diploma
Golf	34	Golf	National	None
Hockey	42	Hockey	National	BSc
Netball	45	Netball Basketball Softball	Regional Local Club	Teachers Certificate Netball NZ Theory Award
Squash	24	Athletics	National (current)	BBs in Finance Completing MBS in Sport Management
Swimming	36	Swimming	National	BCA in Economics and Accounting Diploma in Teaching Diploma of Sport Science
Tennis	*			
Yachting	*			

* Two academy directors, from the academies of tennis and yachting did not reply to the questionnaire.

2

Question	Answer	Frequency (n=6)
7. What would you describe as the main purpose of the academy?	Development of players and coaches	5
	Implementation of programmes	1
8a. How many permanent full time staff work for the academy?	0	1
	1	3
	2	2
8b. What are their roles?	Administration	2
	Executive Director	2
	Coach	1
	Secretary	1
	Programme coordinator	1
9. How many part time staff work for the academy?	1	2
	2	2
	6	1
	25	1
10. In your opinion how should the work of the academy best meet the needs of athletes?	To assist athletes to succeed internationally	5
	Performance Testing	3
	Vocational Skills	1
11. How are the needs of elite athletes met by this academy?	Coaching	3
	Administration	1
	Sports Science	3
	Training Evaluation	1
	Competition	3

Note

* figures do not total 6 in all cases.