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# DEVELOPMENT OF A PRESCRIPTIVE MODEL FOR THE EVALUATION OF HIGH PERFORMANCE SPORT CENTRES IN CANADA.

Presented to the Department of Physical Education
In partial fulfillment of the requirement for the degree of
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## ABSTRACT

As a recognized program for Canadian amateur sport development and excellence, High Performance Sport Centres (HPSCs) should not be exempt from the important managerial process of evaluation.

Evaluation is a decisionmaking tool; it provides information regarding the efficiency and effectiveness of a program to those responsible for decisions regarding the program's operation and existence. Current literature highlights the importance of evaluation from the outset of program planning, in order to reduce future problems. Evaluation in the HPSC program has been ineffective thus far, largely due to the lack of formal guidelines and expertise.

The purpose of this study was to develop a prescriptive, or guiding, model for the evaluation of HPSCs in Canada. The model was developed according to de Groot's (1969) four phase interpretative-theoretical methodology. The phases of Exploration, Analysis, Classification and Explanation guided the collection of current program evaluation literature and information regarding the nature of the HPSC program and its past evaluation practices. An Opinionnaire, distributed to parties directly involved with the HPSC program (athletes, coaches, HPSC Managers, National Sport Governing Bodies and Sport Canada consultants), elicited information regarding the lack of evaluation, and the desired practices for future evaluation. An exhaustive review facilitated the classification and integration of this evaluation and HPSC information, resulting in the emergence of a single model for HPSC evaluation.

The prescriptive model supports the practice of evaluation throughout the HPSC program's life cycle. From the incipient consideration of the establishment of a HPSC,

through the planning, operation and annual review of the program, evaluation, in an appropriate format, is essential to the optimum efficiency and effectiveness of the HPSC. The model is described with reference to the role of evaluation at each stage of the HPSC life cycle, the evaluators and decisionmakers, utilization of the evaluation information, and a general format for guiding the responsible National Sport Governing Bodies through important evaluation procedures.

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## INTRODUCTION

### High Performance Sport Centres

Canada, with Federal Government and private sector support, is continuing its serious effort to become a recognized part of international amateur sport excellence. This is evidenced in policy by the Ministry of Fitness and Amateur Sport 1981 statement paper, "A Challenge To The Nation", and in practice by Canada's felt presence at the 1984 Winter and Summer Olympic Games.

In this pursuit of excellence, Canada has been looking to what others have done; for example, training techniques and programs in the sport-successful European countries. A major observation has been the historical and current prevalence of Sports Institutes catering to athlete training, coaching development, sport research and sport medicine. (The basic premise is that successful preparation of elite athletes for international competition requires simultaneous and compatible attention to these major factors.) The highly-touted success of these single- and multi-sport centres has not been ignored by Canadian amateur sport experts concerned with maximizing the potential of Canada's elite athletes.

Canada's first National Training Centre was established independently in 1974 by the Canadian Volleyball Association and was followed by waterpolo and wrestling centres in 1975. These centres facilitated centralization of the respective teams for the purpose of preparing for the 1976 Montreal Olympics.

In the Fall of 1980 the Minister of Fitness and Amateur Sport, Gerald Regan, commissioned an in-depth study of the concept and feasibility of "Sport Development Centres" in Canada, requesting recommendations regarding their establishment (Hayes, 1981). Robert Hayes' resultant report was a major impetus for the development of sport centres as a viable and accepted national amateur sport program (Hoffman, 1985).

In 1983, Sport Canada released Policy and General Criteria manuals to help guide the establishment of High Performance Sport Centres (HPSCs). The centres became a recognized high performance sport program, managed within Sport Canada's High Performance Unit, for maximizing the preparation of Canadian athletes for international competition. With the introduction of formal guidelines came the establishment of thirty-six HPSCs by June, 1984. At the time of writing, the establishment of centres is being seriously considered by many National Sport Governing Bodies (NSGBs) in conjunction with their first-ever quadrennial planning (Hoffman, 1985).

A HPSC is essentially a partnership. The host facility, the NSGB, Provincial Sport Governing Body (PSGB), Federal Government (Sport Canada) and Provincial Government may all play a role in the initiation, establishment and operation of a HPSC. The varying contributions of these partners are matched by the commitment and contributions of the athletes, coaches and support services personnel attendant at the Centre.

As a recognized high performance sport program receiving Federal Government support, HPSCs are regulated by Sport Canada (HPSC Manager and/or the Association Management Unit Consultants to the NSGBs), as dictated by its Mandate,

> To provide leadership, policy direction and financial assistance for the development of Canadian sport at the national and international level (Sport Canada, 1983).

The responsibility for the direct, ongoing management of each centre belongs to the respective NSGBs. A centre may be managed by a resident HPSC Manager, who may or

may not also be the National Team Manager, by the Centre Coach, or by a NSGB staff member from the national office.

## Program Evaluation

Evaluation is a tool for decision-making in that it can provide valuable and required information to influential decisionmakers. Therefore, evaluation is critical throughout the planning and monitoring/review stages of a program's life cycle.

The scarcity of human and financial resources in public sector programs has heightened the need, and demand, for their effective and efficient use. From the outset of program planning, evaluation can affect the reduction and avoidance of costly errors. Further on in the program life cycle, evaluation can serve as an important management process calling for the comprehensive review and subsequent revision of the program, by accountable managers, thereby ensuring ongoing efforts to optimize program efficiency and effectiveness.

The ultimate success of an evaluation program depends on whether improvement actually occurs.

## The Study

A prescriptive model was the proposed outcome of a logical empirical study of the current and potential role of program evaluation, as planning and managerial tools, pertaining to:

1. the incipient consideration of the appropriateness of a HPSC for a particular sport, based on the nature of that sport's organization (ie. feasibility or ex-ante evaluation), and
2. the monitoring and annual review of the impact and effectiveness, and continued appropriateness, of an established HPSC(S).

A descriptive-analytical approach transcended past studies for the development of HPSCs by applying program evaluation theory to the full context of the HPSCs program. The prescriptive model serves to explain and guide the effective evaluation of HPSCs by the appropriately responsible parties.

## STATEMENT OF THE PROBLEM

There is currently inadequate and ineffective implementation of program evaluation in the establishment and operation of HPSCs; this is largely due to the lack of a comprehensive guideline, to be used by Sport Canada and/or NSGBs for the evaluation of the HPSCs program and individual centres.

The lack of formal, yet relevant and practical guidelines for evaluation of HPSCs provided the major impetus for this study. Sport Canada's guiding HPSC Policy and General Criteria manuals, for the benefit of (potential) partners, give token attention to the evaluation process in HPSC application, implementation and operation. Any HPSC evaluation undertaken thus far has been done independently by the respective NSGBs as they have deemed necessary and feasible. These few NSGBs are to be commended for their attempts, which have varied in effectiveness and value.

## STATEMENT OF PURPOSE

The intention of this study was to provide a comprehensive guideline that would facilitate regulation, by Sport Canada, for the assurance of effective evaluation of HPSCs, a program for which they are ultimately accountable. Such a guideline would also pro-

vide the necessary degree of direction to the NSGBs for the adoption and implementation of an evaluation program throughout the HPSC program life cycle.

## DEFINITIONS

High Performance Sport Centre (HPSC) - formally defined as,

> A facility at which Canada's high performance amateur athletes may receive:
>
> 1. concentrated and expert training, coaching and national team co-ordination; and/or,
> 2. that provides the sports facilities for such training; and/or,
> 3. access to professional advice and assistance in the fields of sport medicine and sport sciences; and/or,
> 4. coaching development in support of improved levels of athletic performance. (Shaw, 1982, p. 4)

Sports Institutes - European equivalent of sports training centres.

National Sport Governing Body (NSGB) - an association designated as responsible for the development of programs at the national and international level for a particular amateur sport.

Provincial Sport Governing Body (PSGB) - an association designated as responsible for the development of programs at the provincial level for a particular amateur sport.

Sport Canada - department within the Fitness and Amateur Sport Branch of the Department of National Health and Welfare, responsible for domestic and international amateur sport development and performance.

Sport Canada Association Management Unit Consultant - individual responsible for management liaison between the NSGBs and the Federal Government.

Sport Canada High Performance Unit - responsible for technical co-ordination of support services and programs for domestic and international amateur sport excellence.

prescriptive model - a representation of the components of an event or process which serves to guide/direct its user(s).

## METHODOLOGY

According to Lippitt (1973), "a model is a symbolic representation of the various aspects of a complex event or situation and their interrelationships" (p. 2). "Modelling...enables those involved to conceptualize the multiple factors through visualized thinking" (Lippitt, 1973, p. 9). The prescriptive model that this study proposed to put forth would further serve to provide guidance and direction for the evaluation of HPSCs.

The development of a model, based on evaluation theory and with respect to the nature of HPSCs, is supported by the notion that, "theory...when formulated into a model, becomes an instrument for explaining" (Beith, 1970, p. 90) A prescriptive model will represent the interpretation and amalgamation of a body of theoretical knowledge and a complex phenomenon that has a need for that knowledge.

Lippitt (1973) describes model building as the, "process of putting together symbols according to certain rules to form a structure which corresponds to a real-world system" (p. 30). The implication in this study is for the integration of evaluation processes with the HPSC system in order to develop a prescriptive model for evaluation.

Dubin (1976), using the terms theory and model interchangeably, expounds four steps in the effort of model building. First is the isolation of units, or variables, "whose interactions constitute the subject matter of attention" (p. 7), followed by the specification of the laws of interaction among these units. The third step involves setting

boundaries within which the theory is expected to hold. Finally, there must be a description of the system states in which, "the units interact differently with each other" (Dubin, 1978, p. 8).

de Groot (1969) also describes a four-phase model building process, which he refers to as interpretative-theoretical. Wright (1982) corresponded the de Groot phases to Dubin's steps for model building and found them comparable. de Groot's methodology is, however, more comprehensive, allows for greater freedom especially with, "original theory construction in a relatively unexplored area" (de Groot, 1969, p. 58), and is particularly appropriate to prescriptive model building, as compared to Dubin's methodology.

de Groot's interpretative-theoretical methodology, which was utilized in this study, is described according to its phases.

Phase I - Exploration

This phase corresponds to a descriptive methodology which serves to systematically record variables of the phenomenon under consideration and their interrelationships (de Groot, 1969). One method de Groot suggests for the exploratory investigations at this stage is the application of, "stringent advance decisions as to what variables are to be measured and what structural relationships are to be determined" (p. 52). This is analogous to what Selltiz (1959) describes as the first two steps in a descriptive study; "formulating objectives", which involves definition of the problem and research questions, and "designing data collection methods". Thus, Phase I involved the establishment of a research orientation and the delineation of parameters for investigation.

Three research questions emerged that appropriately guided a review of the literature and provided a framework for analysis:

1. Who, and what processes, are currently involved in the consideration of application for, and planning of, a HPSC?

2. Who, and what processes, are currently involved in the monitoring and review of HPSCs?

3. What is the potential role of evaluation in the initial consideration and ongoing review of a HPSC?

Primary data sources included literature and documentation pertinent to both HPSCs and program evaluation, as well as data generated from Opinionnaires completed by Athletes, Coaches, Managers, NSGBs and Sport Canada consultants directly involved with the HPSC program. This survey was conducted in order to derive information and opinions regarding past evaluation practices, desired evaluation practices and identification of the parties to be involved (see Appendix A for Presentation and Discussion of Opinionnaire). The secondary data sources were Sport Canada personnel and NSGB representatives who are/have been directly involved in the HPSCs program. Information, based on the research questions, was gathered from these secondary sources via unstructured interviews.

Phase II - Analysis

In this second phase de Groot advocates successive description, analysis and interpretation, including the identification of relationships, processes and practices of a phenomenon. An analytical methodology serves to dissect the phenomenon, "into its constituent parts...to understand both the whole and its parts by relating them one to another" (Galt and Smith, 1976, p. 92). The end result is intended to be an integrative view of the major data sources with the answers to the research questions (de Groot, 1969; Wright, 1982). Sellitz (1959) refers to this, the third stage in a descriptive study, as "collecting and checking the data".

In this study, a description of the life cycle of a HPSC and the past and present evaluation practices within the HPSC program emerged from the exploration phase. A separate analysis of the theoretical role of program evaluation furnished a data base for the purpose of classisfication and integration of appropriate evaluation approaches and processes with the corresponding HPSC program life cycle stages.

Phase III - Classification

According to de Groot (1969), it is at this stage that conceptualization of the phenomenon occurs. The main procedure is to categorize or classify identified variables in order to organize and clarify thoughts regarding the phenomenon (de Groot, 1969; Wright, 1982). This implies that one must, "incorporate what appears, from description, to be the major distinctions in or about the phenomenon" (Posner and Strike, 1976, p. 667).

A reiteration of the relationships, processes and practices of HPSCs facilitated the integration of appropriate classified evaluation processes.

Phase IV - Explanation

In the present study, the fourth phase of de Groot's methodology was utilized to introduce the resultant prescriptive evaluation model, and to review its role in the HPSC program based on support for certain evaluation functions as determined from the Opinionnaires data.

Procedure

In summary, the following steps were taken in this study:

1. A review of HPSC literature in order to understand the policy and nature of HPSCs in Canada.
2. A review of the past and present status of program evaluation within the HPSC program in Canada.
3. A review of current program evaluation literature in order to gain insight into the potential role of evaluation.

4. Selection of an appropriate model(s) for the evaluation of HPSCs in Canada; selection based on the nature of HPSCs and important characteristics of evaluation.

5. Integration of the selected evaluation model(s) and the life cycle of HPSCs to form a prescriptive model for their evaluation.

6. Recommendations for the implementation of the developed prescriptive model.

## Chapter II

## REVIEW OF LITERATURE

### HIGH PERFORMANCE SPORT CENTRES

#### European Sports Institutes

The extent of the European influence on the development of the sports training centre concept and their actual establishment in Canada warrants an examination of the original Sports Institutes.

West Germany was one of the first countries to establish sports training centres, with several in operation prior to the 1936 Olympic Games (Broom, 1979). The German centres were initially developed for specialized athlete training in particular sports; what is currently referred to as single-sport centres. In 1969, two of these centres, Rowing and Gymnastics, were designated as research and coaches-training centres, respectively. These additions to the original training centre postulate eventually led to the development of the German Sports University in Cologne, which includes the Teacher Training Institute, National Coaching Academy, Federal Institute of Sports Sciences, and the Insitute for Sports Facilities (Broom, 1979). This major centre for sports development and study serves the network of single-sport training centres.

England slanted towards national multi-sport centres, the first of which was established in 1946 (Broom, 1979). The famous Crystal Palace in London was one of six cen-

tres to be introduced by 1973. The facilities were specially constructed (converted) with the main objective of catering to several sports simultaneously in terms of training coaches, leaders and officials, hosting national and international competition, national team preparation, improvement of personal performance, and the introduction of beginners (Broom, 1979). Weaknesses inherent in these multi-sport centres include the lack of research and testing facilities, and the incurrence of extensive annual deficits due to the underuse of the centres' residential and sports facilities during the week (supporting revenue is generated through user fees). England is currently tending towards the establishment of smaller single sport training centres (Broom, 1979).

France established its first multi-sport training centre, the Institute National des Sports, in 1945 (Broom, 1979). This centre was conveniently located beside the specialist Physical Education College near Paris and was thus able to integrate sports research, athlete testing, athlete preparation for competition and training of coaches.

Switzerland established the multi-sport Swiss National Centre in 1944 (Broom, 1979). The exceptionally effective integration of the major functions of this sports training centre have earned it the reputation as the most successful and well-used centre of its type in Europe. It combines teacher and coach training, sports research, sports medicine, training for elite and club athletes, and community use (Broom, 1979).

The Communist Bloc countries are not without their sports training centres either. The U.S.S.R. has developed three Scientific Institutes of Physical Culture and Sport, combining teacher and coach training, sports research, sports medicine and national team preparation (Broom, 1979). A network of smaller regional sports institutes is connected with these major centres.

Poland limited itself to one multi-sport, or "central sports" training centre, which is located on the grounds of the Academy of Physical Training in Warsaw (Broom, 1979). Yugoslavia has combined the National Physical Education Academy, the Institute for Physical Fitness, the Sports Research Institute, and the National Sports Centre, on one campus (Broom, 1979).

In East Germany, the College of Physical Education at Leipzig works in close co-operation with the National Sports Institute (Broom, 1979). The combined functions of these organizations include teacher, coach and sports administrator training, athlete training, sports research and sports medicine.

In summary, the sports training centres in Europe can be classified as single- or multi-sport, and as serving, directly or indirectly, any number of the sport development functions perceived to be necessary for the effective preparation of athletes for elite competition. Countries have differing patterns of these centres, ranging from one to several multi-sport centres and/or several independent or connected single-sport centres. Each has met with varying degrees of success in achieving the underlying goal of integrating as many of the complementary functions as efficiently and effectively as possible.

Canadian High Performance Sport Centres - Policy Development

After token consideration in 1963, formal attention to sports training centres in Canada was not revived until 1980, when Robert Hayes was commissioned by the Assistant Deputy Minister of Fitness and Amateur Sport (FAS) to study sports development centres. At that point in time the formal recognition, discussion and development of the sports training concept in Canada received its major impetus to becoming the accepted high performance sport program it is today.

One objective of Robert Hayes' final report, which was presented in 1981, was to establish a firm direction for Fitness and Amateur Sport in the area of training centres (Shaw, 1982). Based on a contrast of the nature of European Sports Institutes and the nature of Canada's geography and amateur sports scene, Hayes espoused the need for a decentralized approach (provincial or regional institutes) in Canada (Hayes, 1981). Another observation was the excellent opportunity to bring together the athlete, coach, researcher, student coaches, teachers and administrators into comprehensive centres for sport development and study that could be provided by Canadian universities (Hayes, 1981). Most of these institutions have a Physical Education department, excellent facilities, equipment and staff for coaching and research, residential facilities, and they tend to be located in major population centres (Hayes, 1981). Hayes summarized that,

> The existing situation regarding sports institutes in Canada resembles a jigsaw. All the pieces are present. What is required is for them to be put together...We have sports institutes in embryo, but nowhere have we put it all together on a formal basis. (Hayes, 1981, p. 4)

Further support for a decentralized approach is based on the limiting factor of athlete mobility (Hayes, 1981). It is often impractical and undesirable to try to locate all of Canada's top performers at a single site for year-round training. In addition, an athlete's age, vocational, social and educational requirements dictate where he/she can locate (Hayes, 1981).

Critics of Hayes' report believe that he was unsuccessful in establishing a firm direction for Fitness and Amateur Sport in the area of training centres, but that he did provide, or perhaps forced, the impetus/need for further study to clarify definitions and concepts that were causing considerable confusion. The recommendations marked Hayes' departure and,

> Fitness and Amateur Sport was left with the task of completing the development of concepts, implementation of certain recommendations, reconciliation of provincial resistance, and ad-

> dressing demands of institutions and Sport Governing Bodies. (Shaw, 1982, p. 10)

The first Sport Canada Technical Consultant appointed to the sport development centres program recognized the need for a clearer understanding of the whole concept and its past and future ramifications for Canadian amateur sport (Shaw, 1985). In August, 1982 he presented a draft "High Performance Sport Centres Proposal" for perusal by fellow Sport Canada consultants and other sports experts. The proposal observed the lack of, "criteria to serve as a resource for planning" (p. 1) and the lack of, "a policy which would introduce leadership responsibility, co-ordination and evaluation on behalf of Sport Canada and the National Sport Governing Bodies" (p. 1).

The first step was to formally address the training centres program as High Performance Sport Centres, defined as,

> A facility at which Canada's high performance amateur athletes may receive:
>
> 1. concentrated and expert training, coaching and national team co-ordination; and/or,
> 2. that provides the sports facilities for such training; and/or,
> 3. access to professional advice and assistance in the fields of sport medicine and sport sciences; and/or,
> 4. coaching development in support of improved levels of athletic performance. (Shaw, 1982, p. 4)

This definition implies that HPSCs should be developed as an umbrella contract with many and varied component parts: primarily, training, research (knowledge creation and verification), athlete assessment (based on scientific, medical and paramedical knowledge), coaching and athlete services (Shaw, 1982). Shaw further espoused that centres should not be labelled specifically as science or training, but that the actual degree of activity be dictated by the resources and level of commitment available at

each centre. Thus, HPSCs will be, "contractual, multi-component system(s) (in which) clarification of the roles and responsibilities of each of the contributing partners must be clearly delineated " (Shaw, 1982, p. 6).

The emphasis on Shaw's HPSC proposal in this paper is due to its significant impact on the development of the first formal HPSC Policy by Sport Canada. The next stage was a workshop to discuss and construct a framework for HPSC development.

The Workshop (November 6-7, 1982) included representatives from Sport Canada, the Canadian Association of Sport Sciences, the Coaching Association of Canada, the Sports Medicine Council of Canada and several National Sport Governing Bodies. From the sessions there emerged HPSC criteria, a draft Policy Statement for Sport Canada, consolidation of minimum requirements concerning the four major components of HPSCs (athlete support; training, competition, and administrative support; coaching support; sport science/medical/paramedical support), and minimum roles and responsibilities (management/administration) for each of the contributing partners.

Canadian High Performance Sport Centres - Policy Description

Following the workshop, Shaw visited the established training centres to ascertain the actual degree of congruence with the newly developed criteria and guidelines (Shaw, 1985). The final outcome was the release of Sport Canada HPSC Policy and General Criteria documents, in July of 1983. The Policy outlines:

> Definition and Goals of HPSCs
>
> Eligibility Criteria - to assess the appropriateness of Sports/ Sport Organizations and Facilities (these criteria are expanded upon in the "General Criteria" document)
>
> Application Process - including the role of Sports Facilities, Provincial Governments and Sport Organizations
>
> Responsibilities (see Figure I, p. 20)
>
> Funding

Implementation Process

Program Evaluation

The stated HPSCs Goal is,

> To provide a comprehensive environment which will enhance the high performance athlete preparation program of selected National Sport Organizations (Sport Canada, 1983, p. 6)

This has since been updated to the most recent Program Mandate and Objectives which propose that,

> The purpose of the HPSC Program is to assist sports to consolidate high quality facilities, coaches and support services, in order to create quality training environments for high performance athletes on a cost-efficient basis. (Sport Canada, 1985, p. 1)

The General Criteria were developed as,

> a comprehensive and co-ordinated framework to serve as a resource for external organizations and agencies, Sport Canada and National Sport Organizations, for the development and operation of High Performance Sport Centres. (Sport Canada, 1983, p. 1)

The main utility of the General Criteria was intended to be as a broad evaluation instrument to assist in the implementation phase. The criteria represent the minimum requirements for the facility and for the NSGB in order to be eligible for the implementation of a HPSC. The facility and NSGB are subjected to criteria for one or both of the two major areas of emphasis for HPSCs: training facility (for ongoing preparation of high performance athletes and coaches) and sport science facility (athlete assessment, evaluation and sport specific research as part of the preparation). The areas of emphasis are subdivided into the components, elements and activities of high performance athlete development (see Table 1, p. 18, for example).

Thus the General Criteria ideally serve an ex-ante evaluation function in the assessment of the ability of potential facilities to clearly fulfill or provide the listed criteria, and as the basis for planning and implementation of a HPSC.

TABLE 1

Sample: General Criteria

| Area of Emphasis - Training Facility | | |
|---|---|---|
| Component | Element | Activity |
| eg. Athletes | Living | Housing must be close to training site, ground transportation and international airport. |
| | Employment | There must be a guarantee of a variety of employment opportunities. There must be empathy with sport demands and flexibility in working schedules (p. 5) |

The Application Process for HPSCs, outlined in the Policy manual, reflects Sport Canada's method for the ex-ante evaluation, or assessment of eligibility, of a particular sport and its NSGB, potential facility(s), and partnerships. The actual application process has deviated from what was intended in the 1983 HPSC Policy, for two reasons: the 1984 introduction of Sport Canada's Quadrennial Planning Program, and the increased responsibility of the NSGB for its own HPSC program development (the latter being due, in part, to the promotion of the HPSC Program from "additional Sport Canada funding programs" to a legitimate part of the major Sport Canada block funding) (Tibi, 1986).

The purpose of the Quadrennial Planning Program (QPP) is the development, by Sport Canada staff and NSGB representatives, of a detailed high performance plan for the respective sport, leading up to the 1988 Olympics (Sport Canada, 1985, p. 3). Based on the NSGB's resultant High Performance Model, Sport Canada and the NSGB then determine the appropriateness of a HPSC.

If the NSGB is identified as an eligible sport (based on 'fit', prioritization of major games sports and sport performance levels) then it will proceed with its detailed application. The Policy recommends that this include a statement of rationale, including implications and consequences for the sport, which delineates technical and national team needs, long-range high performance plan, and a cost-benefit analysis related to the National Team Program. Sport Canada then assesses the NSGB's technical program and reviews a standard document, based on the General Criteria, which has been completed by the NSGB. This document is to be accompanied by a complete listing of additional sport-specific criteria and a statement of commitment from athletes, coaches and PSGBs.

The potential host facilities are usually identified by the NSGB and, if interested, the administrative authority at a facility is required to submit a statement regarding its ability to fulfill the General Criteria for HPSC development. Assessment of eligibility, and final selection, of a facility rests with the NSGB.

Thus the bottom line for the ex-ante evaluation of a particular sport and facility(s) is the extent to which both can meet their respective criteria required for HPSC development. Furthermore, the sport/NSGB must display a sound technical program and long-range plan for high performance athlete development that is highly complementary (or even dependent on) the establishment of a HPSC.

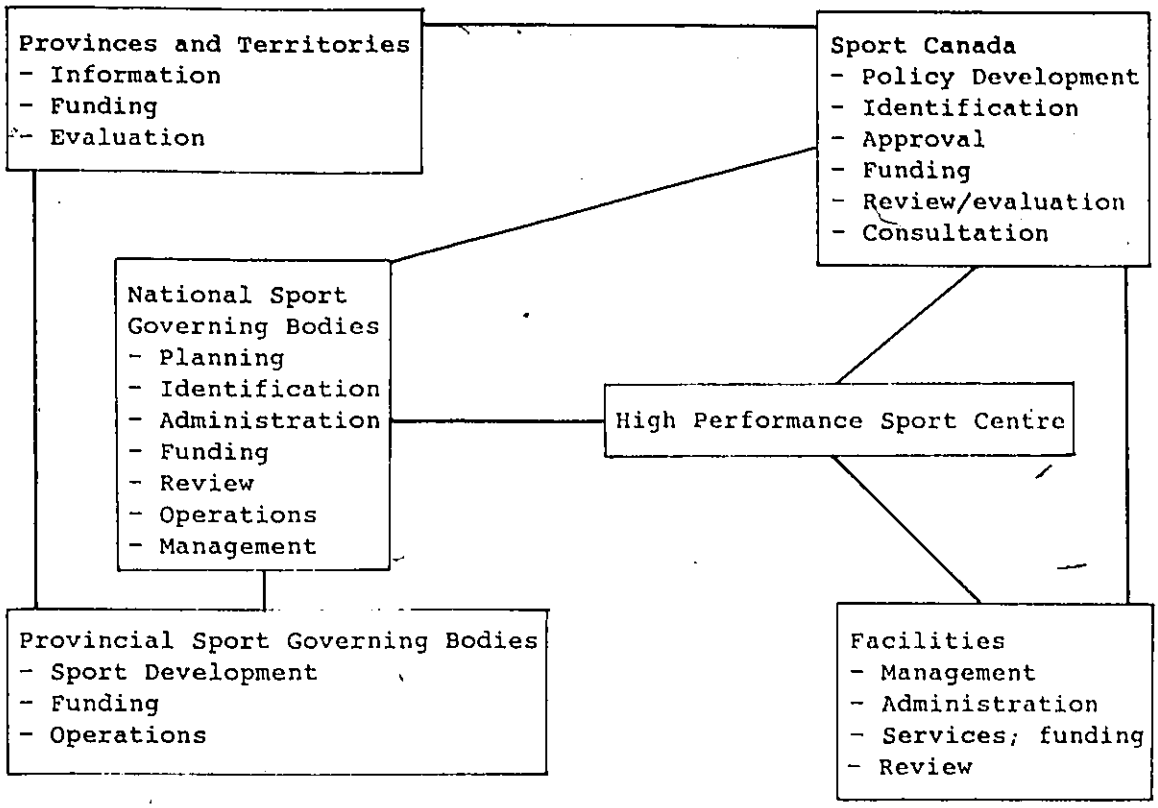


Figure 1: Responsibilities (Sport Canada, 1983, p. 11)

Funding for a HPSC is intended to come from Sport Canada, the NSGB, the Provincial Government, PSGB and the host facility; funding resources may include direct financial assistance, human resources and service-in-kind types. The contribution by each partner, whatever the extent, precipitates program accountability with useful feedback in order that they may personally assess the value of their respective role in the Centre.

Contributions may aid any or all of:

National and Assistant Coaches' salary and travel

National Team Co-ordinators' salary and travel

Professional development opportunities for National Team staff

Administrative/Management support

Fees for service of sport sciences and medical/paramedical personnel involved in assessment and monitoring

Facility and equipment maintenance and rental

(Sport Canada, 1983, p. 12)

According to the Sport Canada HPSC Policy, program evaluation should involve, "a two phase system for monitoring and evaluation" (p. 14). The monitoring phase is to be carried out by the Internal Management Committee of each Centre; the Committee is to include representatives from the NSGB staff, National Coach, host facility, Sport Canada, Provincial Government, and PSGB. The yearly review of each sport and facility is to be undertaken by Sport Canada with representation from the NSGB. This comprises the sole direction given by Sport Canada for the evaluation of HPSCs.

The Sport Canada Policy provides a general outline of the program life cycle of a HPSC, which can be summarized diagrammatically (see Figure 2, p. 22).

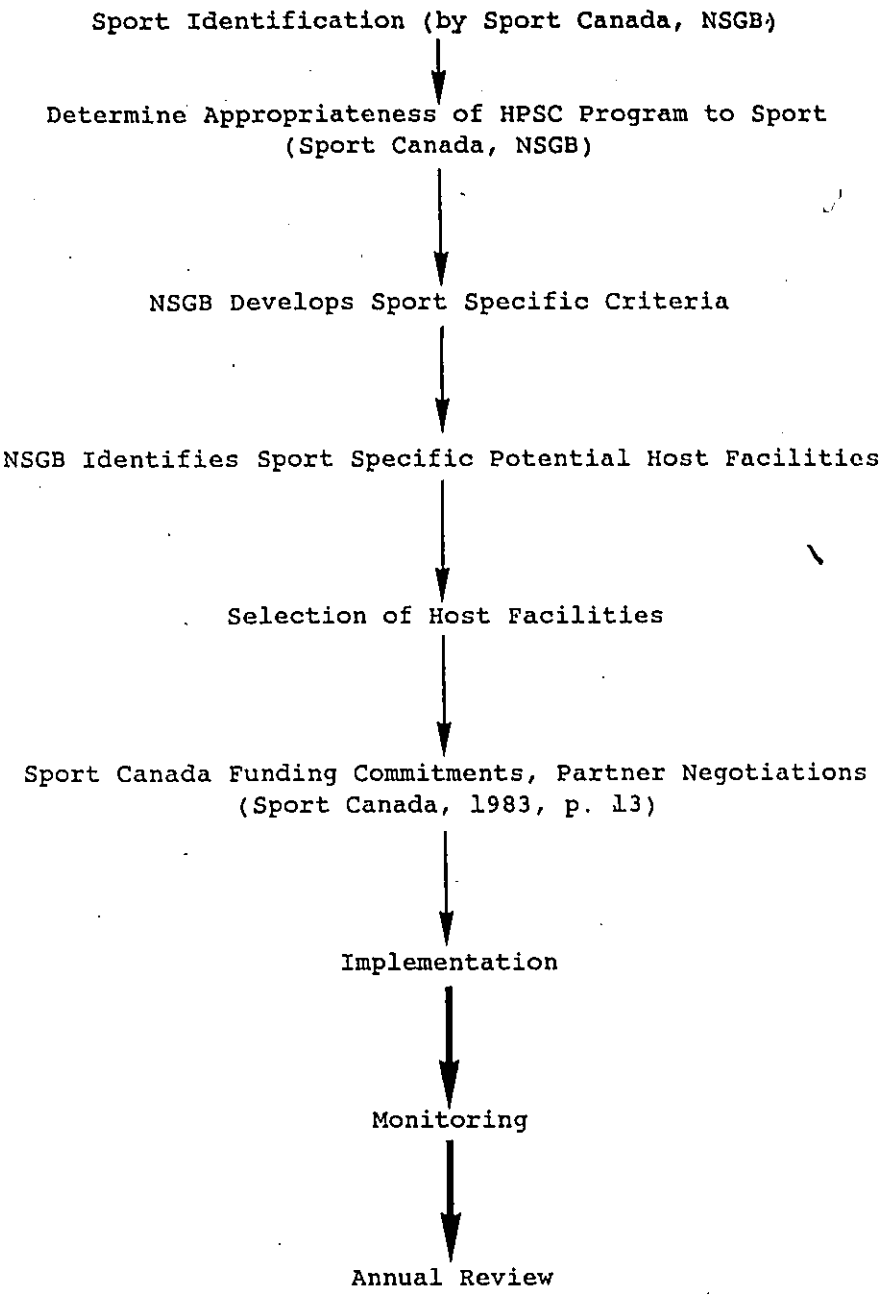


FIGURE 2: HPSC Program Life Cycle

This diagram (and the Sport Canada HPSC Policy) also illustrates the planning process for a HPSC.

HPSC Program Planning and Evaluation

The Government of Canada took significantly visible strides towards increasing public sector accountability through the Royal Commission on Financial Management and Accountability of 1979 (Lambert Commission). The ramifications of this Report called for an increase in the reality and formality of the evaluation of programs receiving public funds. Whether consequently or coincidentally, in 1980 Sport Canada called for a major technical evaluation of selected Olympic sports (FAS, 1979-80).

In 1981-82 a High Performance Sport Task Force was commissioned to investigate the need for effective national planning and evaluation in the pursuit of high performance sport objectives (FAS, 1981-82). Another positive step towards integrating amateur sport program evaluation was the Spring, 1982 introduction of Sport Canada's High Performance Unit (HPU) to address technical planning and evaluation (Sport Canada, 1983).

The HPSC program is under the jurisdiction of the HPU (Sport Canada), however, the HPU's evaluation-oriented responsibilities for the program have shifted in conjunction with the transfer of power to the NSGBs (Tibi, 1986). Although the HPU's mandate includes monitoring technical requirements and performance of the national team (Sport Canada, 1983), it is acknowledged that the responsibility for direct HPSC evaluation lies with the NSGBs (Tibi, 1986).

There has typically been one Sport Canada HPSC Manager in charge of the entire program. With the rapid growth in the number of centres in the past three years, the Association Management Unit (AMU) Consultants of Sport Canada have increasingly been called upon to share the burden of HPSC responsibility for their particular sports. The major role of the Sport Canada AMU Consultants is one of primary contact be-

tween Sport Canada and the NSGBs. Thus, sharing the responsibility for HPSC development would seem appropriate since the Consultants are supposed to be aware of a NSGB's entire program (Shaw, 1985), and it is the goal of Sport Canada to integrate all its high performance sport programs (FAS, 1983-84; Sport Canada, 1984).

One particular AMU Consultant who has had considerable experience with HPSCs (seven Centres in four sports) feels that the AMUs have had too many other responsibilities and tasks to be able to do a thorough job overseeing the evaluation processes outlined for the HPSC program in the Sport Canada HPSC Policy. Thus, most planning has been carried out by the NSGBs themselves, and the program has depended on "acts of faith", or assumptions that certain functions will be (have been) served (Heikkila, 1985).

Currently, "Sport Identification" is taking place through the recently established Quadrennial Planning Program (Hoffman, 1985). There is no formal method specifically for the identification and assessment of HPSC-appropriate NSGBs. The result is increasing abuse of the HPSC concept (Hoffman, 1985), by sports which view a 'centre' as anything more concentrated than what they currently have, and as another channel for receiving funds. The Director of Sport Canada believes there is a critical need, at the outset of planning, for the assessment of a sport's appropriateness, and need, for a HPSC (Hoffman, 1985). Similarly, Heikkila (1985) feels there has been a lack of sufficient and effective assessment of the applicability of facilities, including what they can offer and their willingness to co-operate.

The current Canadian Track and Field Association (CTFA) staff member in charge of their HPSC program and former President of the Ontario Track and Field Association (OTFA) at the time of the 1981 York HPSC Pilot Project, agrees that HPSC evaluation has been post facto (Landry, 1985). The OTFA quotes a Sport Canada official acknowledg-

ing that the introduction of national centres was not properly planned; there was little consultation, and in some cases the PSGB was left out of negotiations entirely (Olszewski, 1986). The Technical Director of the OTFA states that upon the release of the 1983 Sport Canada HPSC documents, "the criteria for the establishment of centres were fairly clear. Unfortunately, there were no sites in Ontario which could fully meet the criteria and in some cases a considerable amount of bending occurred in order to accomodate what was already in existence" (Olszewski, 1986, p. 57) Furthermore, "'pilot' projects quickly became permanent - with any dissent being viewed by representatives of the NSGB as negative, unco-operative acts not in line with the goals of high performance" (Olszewski, 1986, p. 57).

Pressure from Sport Canada (via Policy and direct encouragement) has led the CTFA in particular, to develop a sport-specific HPSC Policy Document based on Sport Canada's HPSC Policy (Landry, 1985). Their comprehensive Application Process breaks down the major steps in Sport Canada's document to a veritable checklist for each party involved in this process (CTFA, 1984). Thus far, the CTFA is the only NSGB to have expanded and formalized the Sport Canada HPSC Policy in their own "Terms of Reference". Such a document is necessary for other NSGBs with (future) HPSCs, and should be developed with the required degree of direction from Sport Canada. As the agency directly accountable for the expenditure of public funds on amateur sport programs, Sport Canada must ensure that accountability and evaluation occur (Hoffman, 1985).

The Sport Canada HPSC Policy states that the Internal Management Committee of a centre is responsible for monitoring ongoing operations. Such an evaluation process has yet to happen consistently in any of the HPSCs (see Table 2, p. 28). Thus far, evaluation of HPSCs has taken the form of an annual review - by each sport and by Sport Canada.

In 1984 Sport Canada undertook an evaluation of the HPSCs across Canada. The accumulated information resulted in a High Performance Sport Centres Status Report for the purpose of:

1. providing data on the current status of the established centres, and
2. evaluating and making recommendations for the improvement and ongoing operations for each of these centres, and
3. providing recommendations to Sport Canada for the future development of the High Performance Sport Centres concept, and
4. learning from what others have done and sharing ideas and concepts in order to maximize all centres in Canada. (Sport Canada, 1984, p. i)

In carrying out this task, the HPU (Sport Canada) did fulfill its responsibility to, "develop an evaluation document on each facility" (Sport Canada, 1983, p. 5). However, based on Sport Canada's differentiation between monitoring and a yearly review (Sport Canada HPSC Policy), this evaluation cannot be construed as the recommended "regular evaluation" (Sport Canada, 1983, p. 5) nor as monitoring. An update of this status report document has yet to be attempted, primarily because of the extent of the program (and its rapid growth rate) and the lack of a formal evaluation reporting format (Tibi, 1986).

The concept of summative evaluation (Mead, 1980; Morris and Fitz-Gibbon, 1978; Peterson and Gunn, 1984), is analogous to Sport Canada's notion of, "a yearly review to assess the technical operations and performance impact of the centre" (Sport Canada, 1983, p. 14). Some of the characteristic purposes of a summative evaluation have been met by Sport Canada's 1984 HPSCs Status Report:

> To document for the funding agency that services promised by the program's planners have indeed been delivered.
>
> To assure that a lasting record of the program remains on file.
>
> To serve as a planning document for people who want to duplicate the program or adapt it to another setting. (Morris and Fitz-Gibbon, 1978, p. 69)

Although the nature of the HPSC program does not correspond to the absolute finality of summative evaluation, the frequency (or lack of) with which actual HPSC evaluation has occurred in the past likens it more to summative than formative evaluation or monitoring.

This study shows that, according to the athletes, coaches and HPSC Managers, evaluation has not been significantly prominent for any frequency level (see Table 2, p. 28); in other words, HPSC evaluation has been intermittent, inconsistent or not at all. This data suggests there is much room for improvement in the consistency of evaluation format and frequency.

In summary, Sport Canada's good intentions for the adoption of public sector program evaluation by the HPSC program have been limited by factors such as lack of time, skill, understanding and dedication (Heikkila 1985; Hoffman, 1985; Neill, 1985; Shaw, 1985) to undertake the currently espoused evaluation process, which, because of its limited description, challenges comprehension and, therefore, commitment. It thereby follows that with the shift of responsibility for the HPSCs to the respective NSGBs, there has been a negligible transfer of knowledge or expertise in the area of program evaluation.

TABLE 2

Reported Frequency of HPSC Evaluation

a)i Frequency of HPSC Monitoring

| | Monthly | Quarterly | Semi-Annually | Annually | Bi-Annually | Never | Do Not Know |
|---|---|---|---|---|---|---|---|
| Athletes | 15.5% | 10.7% | 8.7% | 3.9% | 2.9% | 10.7% | 47.5% |
| Coaches | 14.3 | 35.7 | 21.4 | 14.3 | 0 | 14.3 | 0 |
| HPSC Manager | 15.4 | 38.5 | 38.5 | 7.7 | 0 | 0 | 0 |

a)ii Frequency of HPSC Monitoring Conducted by the Internal Management Committee

| | Monthly | Quarterly | Semi-Annually | Annually | Bi-Annually | Never | Do Not Know |
|---|---|---|---|---|---|---|---|
| Coaches | 12.5% | 25.0% | 25.0% | 0 | 12.5% | 0 | 25.3% |
| HPSC Manager | 14.3 | 14.3 | 14.3 | 42.9 | 0 | 0 | 14.3 |

b)i Frequency of HPSC Formal Evaluation

| | Monthly | Quarterly | Semi-Annually | Annually | Bi-Annually | Never | Do Not Know |
|---|---|---|---|---|---|---|---|
| Athletes | 1.0% | 7.8% | 7.8% | 13.7% | 0 | 4.9% | 64.7% |
| Coaches | 0 | 15.4 | 7.7 | 48.2 | 0 | 23.1 | 7.7 |
| HPSC Managers | 7.7 | 15.4 | 15.4 | 38.5 | 0 | 15.4 | 7.7 |

b)ii Frequency of HPSC Formal Evaluation Conducted by the Internal Management Committee

| | Monthly | Quarterly | Semi-Annually | Annually | Bi-Annually | Never | Do Not Know |
|---|---|---|---|---|---|---|---|
| Coaches | 0 | 33.3% | 22.2% | 33.3% | 0 | 11.1% | 0 |
| HPSC Managers | 0 | 22.2 | 33.3 | 33.3 | 0 | 11.1 | 11.1 |

Summary

The concept of sports training centres in Canada had received token consideration since 1963. Finally in 1980, the Federal Government commissioned a study of sports development centres. The concept was predisposed to success because of the preceding attention and financial commitment, by the Federal Government, to adequate sports facilities, coaching development, technical planning, and improved national and international athletic performance.

The resultant report by Robert Hayes summarized that, in contrast to the European situation, Canada must have a decentralized approach to sports development centres due to the geography and amateur sport characteristics of this country. He strongly recommended the siting of these centres at existing Canadian university facilities.

Critics believe that Hayes' incomplete report compelled Fitness and Amateur Sport to pick up where he had left off; to clarify definitions and concepts that were confusing to the parties that he had tied into his study, and to define an action plan(s), model(s) and path for future progress with sports training centres.

In 1982 Sport Canada drafted a High Performance Sports Centres Proposal. The intention was to develop criteria for planning, and a policy to initiate leadership, co-ordination and evaluation responsibility for the training centres.

Four major components were identified as representative of the intention of a HPSC: athlete support; training, competition and administrative support; coaching support; and sport science/medical/paramedical support. With these components emerged a definition and mandate for HPSCs, as part of the 1983 Sport Canada HPSC Policy and General Criteria documents. The General Criteria reflect the four major components and were intended to be used as a resource for the development and operation of a HPSC.

The policy also outlines an application process, responsibilities, funding opportunities, the implementation process, and program evaluation procedures.

There are currently seventy-three recognized HPSCs throughout Canada (Tibl, 1986). There are four basic models for the centres: a national training centre (13 in operation), housing a national team only; a national-regional centre (37), catering to national and developmental athletes; a regional centre (19), with developmental athletes only; and a base centre (4), for seasonal training.

In essence, a HPSC is a partnership with typically several funding members, including any or all of: Federal Government, Provincial Government, NSGB, PSGB, facility host, and the municipality. Athletes, coach(es), science and medical support staff, and the centre manager can also be considered as partners since they have made personal commitments to the success of a centre.

The main control of the centres has shifted from direct Sport Canada responsibility to the respective NSGBs, in conjunction with the Quadrennial Planning Program: the QPP has incorporated the HPSC application process, and its focus on transferring program planning responsibility to the NSGBs has meant a shift in the control of the HPSCs.

Sport Canada ⟶ NSGB ⟶ HPSC(s)

Furthermore, the control which Sport Canada still retains, as the sponsor of the program and via the QPP, is tenuous at best, due to the rapid increase in the number of centres. There was a limited time to test the new policy before the program had exceeded its capacity.

Program evaluation is one management practice that is notably deficient in the HPSCs. The policy introduced insufficient evaluation guidelines and Sport Canada was unable to transfer suitable assistance along with the responsibility for the centres. Thus the lack of evaluation practices has been self-perpetuating in the HPSCs program. The task ahead is to educate those involved in, and directly responsible for, the HPSCs and to provide prescriptive guidelines for adaptive program evaluation practices.

The context of HPSCs in Canada, as summarized in the preceding discourse, will serve as part of the basis for identifying and selecting an appropriate evaluation model, or combination of models, for the development of a prescriptive model for the evaluation of HPSCs.

## PROGRAM EVALUATION

### The Role of Evaluation

The Office of the Comptroller General of Canada (1981) defines program evaluation as:

> assessment of the continued relevance and of the effectiveness of existing programs, involves systematic gathering of verifiable information on a program and demonstrable evidence on its results. (p. 2)

The resultant benefits of a program evaluation include increased capability to plan ahead and thus devise better programs to meet policy goals, clarification of the program's contribution to policy initiatives and improved management and administration of the program(s) (Comptroller General, 1981). In its Branch Discussion Paper on program evaluation, the Comptroller General also cites the fringe benefits of regularly in-

volving program staff in the evaluation of their program(s): it will encourage them to examine critically their own assumptions and behaviour which may lead them to experiment and find ways to perform better (Comptroller General, 1981).

Carter and Wharf (1973) discuss explicit and implicit benefits of program evaluation. The former relates to organization-oriented evaluation, which serves to justify the program, determine whether the program is headed in the right direction, determine if the program's needs are satisfied, justify past and future expenditures, determine the program's financial and human costs, and compare programs in relative/absolute terms (Carter and Wharf, 1973). A personally-oriented evaluation has the implicit benefits of job interest, motivation, proving a point, and many others including those associated with an organization-oriented evaluation (Carter and Wharf, 1973).

An evaluation may look at any or all of the program's effort, effectiveness and efficiency (Carter and Wharf, 1973). Effort pertains to the kind and quantity of activities provided by a program. Effectiveness evaluation implies assessment of goal fulfillment (Carter and Wharf, 1973).

> Evaluation of program effectiveness is concerned with whether or not intended outcomes, and beneficial unintended outcomes, have been attained as a result of program efforts... (Tripodi, Fellin and Epstein, 1971, p. 47)

Efficiency evaluation pertains to the determination and assessment of the relative costs of achieving program objectives, or ascertaining the degree of economy (Carter and Wharf, 1973).

Paterson (1980) looks exclusively at the future benefits of program evaluation. She feels the general purpose of evaluation is to find ways to improve future performance and to promote the most efficient and effective allocation of resources. Furthermore, performance evaluation provides information that, with a certain degree of knowledge

of the future, forms the basis for decisionmaking (Paterson, 1980). Evaluation provides additional information in, "the difficult puzzle of program action, permitting some reduction in the uncertainty within which any...decisionmaker inevitably operates" (Patton, 1978, p. 28).

"Evaluation is a tool for decisionmaking" (Neill, 1983, p. 1). Decisions must be made, by administrators and program managers, that will improve the efficiency and effectiveness of their programs (Neill, 1983). Accountable administrators require information to make good program decisions, and the purpose of evaluation is to provide that information (Neill, 1983).

Connolly (1982) criticizes that, "the ideal of evaluation is being worshipped at the expense of putting its techniques to practical use" (p. 24). Carter and Wharf (1973) add that a lack of provision for evaluation programs is a serious liability for those responsible for program planning, policy decisions and funding.

The nature of an evaluation plan will differ according to the context of different programs, thus the level of program being evaluated must be clearly specified (Connolly, 1982). The level of an evaluation may comprise the total organization, part of the structure, a geographical area, a program, an individual, or a group (Paterson, 1980). If the evaluation is of a program it must be specified whether it is concerned with the program's goals, the program as described in the program plan, and/or the program as implemented (Alkin, 1973).

Regardless of the nature of the evaluation plan, it should be built right into the program design so that it is a recognized requirement and an accepted aspect of the program operation, rather than superimposed and conflicting with other operations (Johnson, 1970). An evaluation operation should be efficient, requiring as little time as

possible since it is not the primary focus of the organization or program, it should be feasible with regards to staff expertise and/or willingness, and it should be appropriate and useful within the context of the setting (Peterson and Gunn, 1984).

There is an opportunity cost of conducting an evaluation, and it may be measured by the degree to which the evaluation is comprehensive and the results are utilized (Carter and Wharf, 1973). Consistent with Paterson's focus on program improvement for the future is her belief that the success of the evaluation of a program depends on whether improvement occurs (Paterson, 1980).

The literature is rich with models, examples and various kinds of support for the operative relationship between program planning and program evaluation (Aikin, 1976; Dampler, 1979; Fu, 1981; Morris and Fitz-Gibbon, 1978; Nachmias and Felbinger, 1982; Paterson, 1980; Stufflebeam, 1983; Suchman, 1976; Woo and Farley, 1982). Dampler (1979) views program planning as a developmental process that operates concurrent to the analytical process of program evaluation. He describes a universal program life cycle with seven readily identifiable stages (see Figure 3, p. 35).

Source refers to the introduction of the idea into the organization as a result of a perceived need. Elaboration represents an informal checking out of the potential program, and serves as a building stage. During the Planning phase the idea is formalized, and Priorizing represents the decisionmaking regarding the plan as it has been proposed. The plan will receive a 'Go' or 'No Go' signal (Dampler, 1979).

The next stage in Dampler's (1979) model is implementation wherein the, "plan is given life and expression" (p. 10). This is superseded by what he refers to as the Closure and Reconciliation stages. These latter stages represent a summing up of the program as it closes, and a de-briefing, or reconciliation of the program with its established objectives.

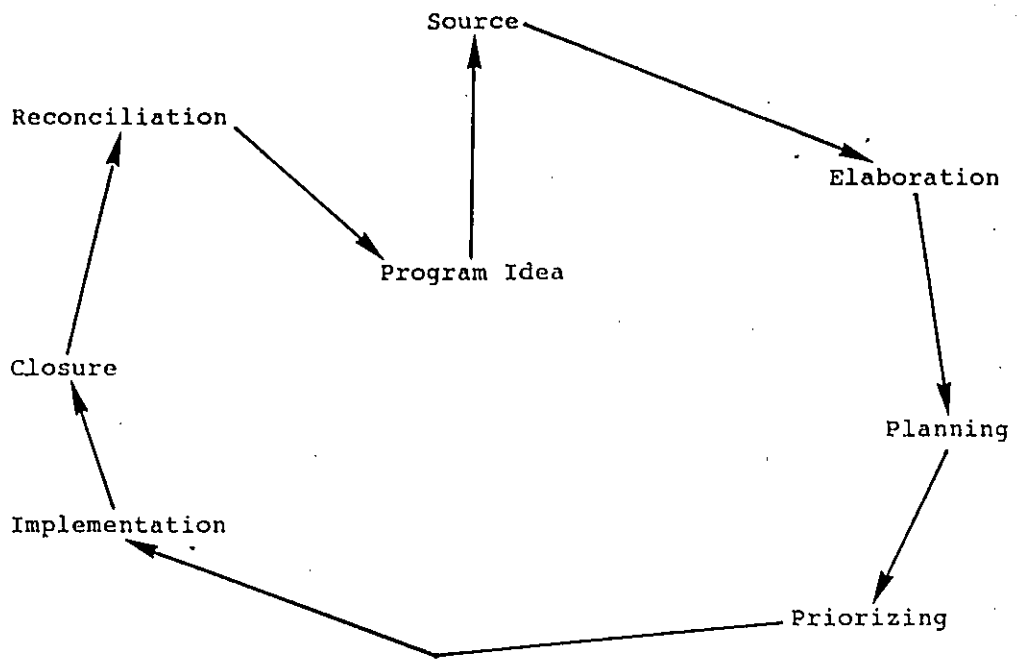


FIGURE 3: Universal Program Life Cycle (Dampier, 1979, p. 9)

Dampier has superimposed three types of evaluation onto his program planning model (see Figure 4, p. 36).

Screening infers that in the planning stages an idea passes through several screens in order to gain acceptance and authorization, thus permitting its procedure to implementation. Dampier calls this, "insightful evaluation" (p. 11). Monitoring implies that during its operative phase a program must continue to be responsive to ongoing feedback, especially regarding critical aspects. Finally, Reconciliation corresponds to a final evaluation wherein the ultimate destiny of a program is decided; the actual program is reconciled with its objectives and various indices (Dampier, 1979).

Alkin (1976) delineates what he considers to be the role of evaluation at each stage of the program life cycle (see Figure 5, p. 37). First is a "systems assessment", which is the means by which the range and specificity of objectives are determined to be appro-

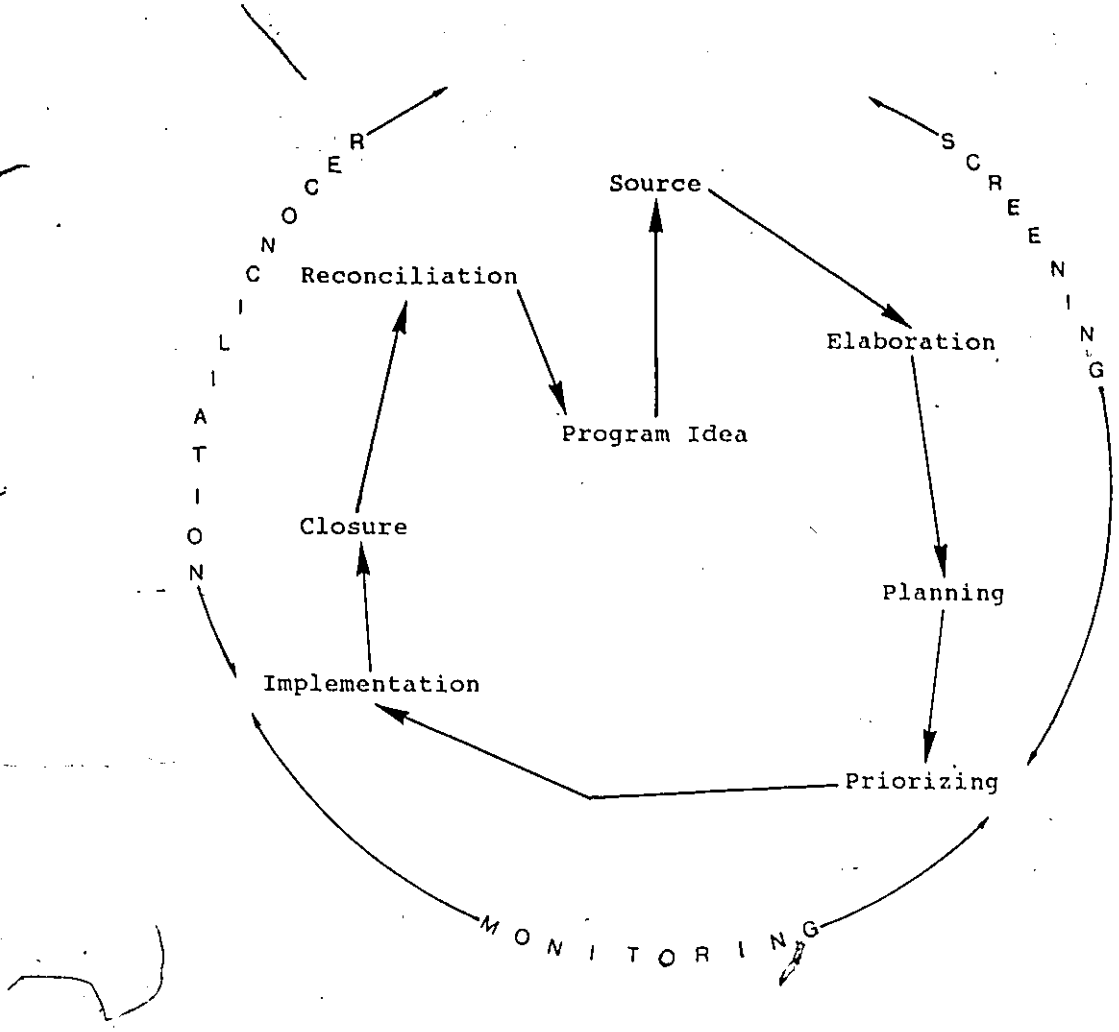


FIGURE 4: Program Planning and Evaluation Model (Dampier, 1979, p. 11)

priate for a particular situation. Identified needs may represent a gap between the ideal and present state and thus needs must be assessed relative to the existing situation. The result of this initial assessment should be a statement of status and, consequently, of objectives in terms of outputs of the program.

The "program planning" stage is complemented by information for decisionmaking, derived from internal and external evaluations (Alkin, 1976). An internal evaluation looks at the extent to which the program being planned purports to achieve the stated objectives. An external evaluation provides feedback information from, for example, the examination of the results of the implementation of (similar) programs in (similar) situations. The third stage of the program life cycle is "program implementation" and eval-

uation at this point, "determines the extent to which the implemented program meets the description formulated in the program planning decision" (p. III). Information from these evaluations forms the basis for decisionmaking regarding program design or implementation alterations, or for continuation as planned.

"Program Improvement" reflects the typical monitoring stage in planning models (Peterson and Gunn, 1984). Much information is required here about the relative success of all parts of the program. The purpose of program improvement is to identify problems and consider solutions leading to the immediate modification and improvement of the program. The fifth and last stage is "program certification", which corresponds to the typical 'evaluation' process described in planning models. Information from evaluation at this stage enables the decisionmaker to make decisions about the program as a whole, after examining the extent to which objectives have been achieved

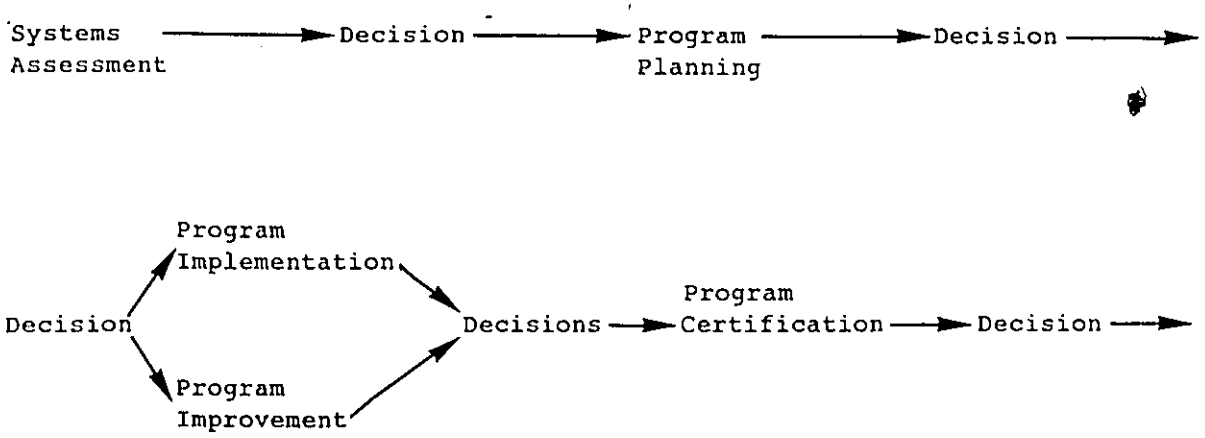


FIGURE 5: Evaluation in a Program's Life Cycle (Alkin, 1976, p. 114)

and the impact of program outcomes.

In applying this model to educational evaluation, Alkin divides it into evaluation of the system and evaluation of the instructional programs. He believes that the evaluation of an actual program assumes the prior assessment and decision about the objectives and selection of programs considered appropriate to meet these objectives. Thus, the evaluation of instructional programs focusses primarily on the last three stages of the program's life cycle.

In summary, evaluation is recognized as an integral part of a program's life cycle, due to its inherent value at every stage where decisions are made.

The Evaluator and Decisionmaker

The decisionmaker may be the program manager or his superior, depending on the degree of importance of the decision(s) (Fu, 1981). Regardless, the decisionmaker is usually internal to the organization, if not directly involved with the program. According to Vail (1983), the decisionmakers are, "the individuals or groups that influence the direction of the program" (p. 3). This could include any, or all, of the program manager, director of the organization, or policy-makers.

The program evaluator may or may not be the ultimate decisionmaker (Comptroller General, 1981), and he may or may not be internal to the organization. An "outsider" is, supposedly, skilled and objective in carrying out an evaluation, although he may be limited by a lack of knowledge of the organization and its program (Paterson, 1980). A professional evaluator is a professional in his field, but not usually in the field being evaluated; thus, he is handicapped by a lack of familiarity (Worthen and Sanders, 1973). Furthermore, a professional (external) evaluator may exude a sceptical disposition that can subdue the creativity of a productive group; thus, he is handicapped by a lack of sympathy with the aims of a creative group (Worthen and Sanders, 1973). However, as familiarity increases, objectivity decreases, and so there is a definite tradeoff.

An "insider" has an organizational and, probably, a program awareness and presumably some skills in program evaluation if he has been chosen to carry out the operation. However, he is limited by an inherent bias, or subjectivity, as well as a time restriction to avoid jeopardizing his full-time tasks (Paterson, 1980). The selection of an internal or external evaluator depends on the skills required, as well as the information needed and its availability (Paterson, 1980).

Regardless of who assumes what role(s), the responsibility of the evaluator is to provide information to the decisionmaker so that the latter may make better-informed decisions regarding the program. The evaluator and evaluation should be responsible to the organizational level where the decision(s) is made (Alkin, 1976).

The degree to which their roles overlap - the evaluator analyzes the generated information and/or the decisionmaker aids data collection - varies from model to model. Paterson (1980) cites some examples: the "comply model" involves problem identification and solution by the evaluator, who then commands the organization to adopt the results (success is dependent on respect for the evaluator); the "diagnosis and solution model" stems from a request by management for the identification of the problem and suggestion of solutions by the evaluator; the "service model" involves identification of the problem by management, who then requests provision of information by the evaluator in order to identify a solution (success is dependent on the initial problem identification); finally, the "enabler model" calls for the evaluator to help the managment identify the problem and choose a solution (the success of this more complex problem-solving method, with many participants, depends on their interrelationships). It is very important to clearly delineate the responsibilities of both the evaluator and decisionmaker prior to the evaluation.

Utilization

The ultimate value in an evaluation is dependent on the utilization of the information generated and the decisions subsequently made. Nachmias and Felbinger (1982) define utilization as, "the immediate, direct and instrumental application of evaluation findings to particular... decisions" (p. 300). These authors suggest that utilization be viewed as a feedback process that occurs at various stages of a program life cycle. This is consistent with the proponents of evaluation for decisionmaking at all the life cycle stages (Alkin, 1976; Dampier, 1979; Fu, 1981; Stufflebeam, 1983).

Nachmias and Felbinger (1982) state that the extent to which utilization occurs depends on the participants in, and the various stages of, the program's life cycle. The extent to which participants get involved in the utilization process depends on their self-interest and efficacy. The status quo is a contentedly feasible state (Weiss, 1972), and, "evaluation is necessarily a force which leads to disequilibrium" (Gurel, 1975, p. 13). Therefore, the organization, especially staff, must be educated regarding the value of decisionmaking and subsequent alteration of a program (Weiss, 1972); the self-interest of all participants should be clearly identified (Nachmias and Felbinger, 1982). As an example, Weiss (1976) and Neill (1983) describe the differing information interests and needs of various participants in the program life cycle: the programmer and/or program manager basically want information regarding improvements. They are concerned with program monitoring, especially those elements over which they have direct control. They want to monitor the program processes and direct impacts and, thus, they require mostly non-quantitative, descriptive information. The higher-level policymakers are more concerned with information to address broad policy issues, such as allocation of funds, program continuation and overall value of the program.

The second factor of efficacy concerns the perceived and actual effectiveness of the participants in the utilization process. Nachmias and Felbinger (1982) believe that

one's efficacy is relative to certain personal characteristics, skills and capacities, such as "commitment, self-confidence, sociability and leadership" (p. 302). Thus, utilization of evaluation information may be promoted by catering to the needs of the information user (decisionmaker), with consideration of his skills and capacities. Emphasis should be on the usefulness of the evaluation information (Peterson and Gunn, 1984).

If evaluation information is effectively utilized there may be many fringe benefits, or legitimate by-products, as well as misuses of the information. The desirable secondary benefits include re-examination and clarification of program objectives, a more careful analysis of the content and operation of the program, development of a more critical attitude among staff, and an increase in staff morale and commitment due to a sincere attempt to improve the program (Suchman, 1976).

The possible misuses of evaluation have been classified as: "eye-wash" - an attempt to justify a weak program by deliberately evaluating only those program aspects which look good on the surface; "white-wash" - an attempt to coverup a program failure by avoiding objective appraisal; "submarine" - an attempt to destroy a program regardless of its effectiveness; "posture" - an attempt to use evaluation as a gesture of objectivity or professionalism; and "postponement" - an attempt to delay needed action by pretending to seek the facts (Suchman, 1976).

Summative Evaluation

Summative evaluation is that to which one has typically referred when considering the evaluation of a program or person(s). It implies end evaluation, wherein the summation of all the facets of a particular program, at its conclusion, are judged on their effectiveness (Peterson and Gunn, 1984).

Upon completion, a program is reconciled according to various, predetermined indices (Dampier, 1979). This evaluation tries to determine why the effort failed or succeeded via a critical appraisal of the effectiveness of the program plan (Austin, 1979). In other words, an examination of the extent to which the program's objectives were achieved, and its impact (Alkin, 1976).

Summative evaluation has been likened to "program certification" (Alkin, 1976). At a program's conclusion, collected data may be reduced to a summary statement (Olson, 1980), thus providing information to the decisionmaker(s) that will allow him to make decisions regarding the program as a whole (Alkin, 1976). These decisions usually pertain to the continuation, expansion, modification or termination of the program (Carter and Wharf, 1973; Fu, 1981; Neill, 1983; Weiss, 1972).

As well as being a requirement for accountability by many funding agencies, information from a summative evaluation is also very valuable for planning future programs (Mead, 1980).

Formative Evaluation

The complement to summative evaluation is formative evaluation, which has been likened to monitoring in that it involves ongoing evaluation of a program during its life cycle. Evaluative information regarding the implementation and operation of a program assists in its modification for the purpose of improvement, while it is in operation (Alkin, 1976; Mead, 1980; Morris and Fitz-Gibbon, 1978).

Olson (1980) defines formative evaluation as being, "responsive to the everchanging dynamics that define a given program" (p. 41). Thus, formative evaluation is an ongoing dynamic process wherein, "information is added continuously, organized systematically and analyzed periodically" (Jenkins, 1971, p. 3). According to Dampier (1979), effective

monitoring requires that the program be responsive to the ongoing feedback it receives during its operative phase, and that various critical aspects should be monitored. Due to the immediacy of program modification as much information as possible, regarding the relative success of various parts of the program, must be provided as soon as possible to the decisionmaker(s) (Alkin, 1976).

Thus formative evaluation permits a direct review of program operations (Carter and Wharf, 1973). Fu (1981) espouses that formative evaluation, or monitoring should also occur during program development and implementation. With the intent of making improvements and modifications, monitoring should be inherent in the planning and development stages of a program.

This type of monitoring may be referred to as ex-ante ("before the fact") evaluation; that is, review of the program before it is put in place, or a "pre-investment feasibility study".(Mehmet, 1984). The complement is ex-post ("after the fact") evaluation, which corresponds to monitoring of program operations and summative "impact evaluation" (Mehmet, 1984) at the conclusion of the program.

In summary, both monitoring (ex-ante and ex-post) and summative (ex-post) evaluation are important to the life of a program. Monitoring ensures pre-program attention to relevancy and practicality of objectives and plans, and within-program modification of plans to promote effectiveness. Summative evaluation provides a summary statement regarding the program's overall effectiveness and final impact, and these results can be used for future planning.

## Evaluation Models

The following review will examine several evaluation models taken from the current evaluation literature. A review of HPSCs, preceding the program evaluation literature

review, facilitated the selection of evaluation models for their relevance to the study and their further screening to identify an appropriate program evaluation model(s). It was attempted to consider all types of evaluation models: goals-oriented and standards-oriented evaluation, and qualitative and quantitative evaluation types. The program evaluation literature review was, however, delimited to evaluation models from similar or related fields, such as education, recreation and public service.

Farrell and Lundgren (1978) contrast two approaches to evaluation. Evaluation by objectives arose from a demand for accountability; an evaluation of the program's outcome is based on the satisfaction of identified, weighted and priority-ranked objectives of the program (Farrell and Lundgren, 1978). The basic premise is that good evaluation will lead to objectives revision, better policy decisions and a stronger operational base (Farrell and Lundgren, 1978). The priority setting of the specific objectives is based on their relative importance and tangibility, or measurability (Farrell and Lundgren, 1978). During the program planning phase, evaluation pertains to the intrinsic worth of the program's objectives.

At the other end of the continuum is evaluation by standards; evaluation of program outcomes is based on a set level of acceptable performance (Farrell and Lundgren, 1978).

> A standard is a statement of desirable practice, a level of performance for a given situation. Standards are indirect measurements of effectiveness using the cause and effect approach so that if stated desirable practices are followed, the program should be effective. (vanderSmissen, 1972, p. 4)

Standards are usually developed in response to a felt need from those responsible for the operation of any given program. Standards aid the establishment of uniformity in meeting objectives, maintenance of a given performance level, assurance of a certain quality of the program for participants, and assesment of the effectiveness of system-wide methods (Farrell and Lundgren, 1978).

Criteria are developed for the measurement of each standard and a measurement tool, usually as a checklist, is the final product (Farrell and Lundgren, 1978). Farrell and Lundgren cite an example of an authority group developing the standards followed by the emergence of representative criteria from discussions and consensus. Weiss (1972) advocates that evaluative criteria should reflect situational, managerial and technical factors described by the program, as well as impact.

Criticisms of the evaluation by standards approach imply that the resultant criteria measurement tool may be too global. As well, weighting the items for the purpose of priority setting is construed as difficult and subsequently all criteria are taken to be equal. In other words, the given standards do not account for equally acceptable but different performances; there is a tendency to view standards as absolute (Farrell and Lundgren, 1978). Furthermore, Howe (1980) criticizes that "minimum standards" tend to become maximum. The most distinct criticism, however, is,

> the implied linkage between the criteria (standards) and effectiveness. There is little evidence to support the notion that adherence to program standards predicts some ultimate criterion of program success. (Bannon, 1976, p. 269)

Sichel (1982) discussess "in-house evaluation", a formative evaluation-oriented concept. Informative answers are provided by the program staff to questions about program operations. The in-house research consists of simple, short-term data collection and analysis; Sichel espouses that the program staff are in the best position to recommend refinements based on this information. The process for synthesizing useful evaluation information involves three crucial steps:

1. communication by personnel
2. data analysis through systematization
3. data interpretation

The usefulness of generated data is dependent on relevant questions, planned information-gathering, ensured communication, and usable data reports. Data collection should not jeopardize or result in a destructive compromise within the program's functioning. This type of formative evaluation can provide a data/information base for eventual summative evaluation (Carter and Wharf, 1973).

Olson (1980) presents a similar evaluation model, for recreation programs, which he refers to as in-house program portrayal. It is based on the collection of non-numerical "data bits" (p. 41) by all levels of program staff. Collection methods are by first-hand observation, informal dialogue and professional intuitive judgement (Olson, 1980). The data bits contain evidence regarding program transactions and evidence to support and/or refute the program.

The program portrayal approach can have a formative orientation, in that it is current, ongoing and therefore responsive to the program's dynamics. Program portrayal can also reflect a summative evaluation in that collected data bits can be reduced to a summary statement at the conclusion of the program (Olson, 1980).

The obvious limitations of subjectivity, bias and lack of exposure to all phenomenon which require judgement can be minimized by ensuring data collection from a variety of sources, as well as a more formal structure and format to guide that collection (Olson, 1980).

Gardner (1977), Haggerty (1983) and Worthen and Sanders (1973) discuss judgemental models for the assessment of effectiveness. This simplest and least time-consuming model relies on professional judgement, either internal or external, to evaluate a program. A qualified professional is asked to examine the program and give his expert opinion regarding its quality, effectiveness and/or efficiency (Gardner, 1977); "the result-

ing statement of relative worth is the evaluation" (p. 574). Thus, the design of the evaluation calls for personal contact methods, and the objectivity of the evaluation is directly related to the evaluator's personal interest in the results (Gardner, 1977). The inherent problems with this evaluation approach include disagreement as to who is "expert" and what should constitute the criteria (Howe, 1980), as well as the risk of subjectivity, bias and political abuse Gardner, 1977).

The evaluation can be based on intrinsic and/or extrinsic criteria (Haggerty, 1983), although they may not be identified explicitly (Gardner, 1977). Internal characteristics of a program pertain to such things as facilities and management competence; evaluation by extrinsic criteria includes the effects or pay-off of the program (Haggerty, 1983). The former can be formative- and summative-oriented, and the latter has a summative evaluation connotation.

Among Stufflebeam and Webster's (1983) "Analysis of Alternative Approaches to Evaluation" is a review of the management information system, a questions-oriented approach to evaluation. There is a continuous supply of information, based on predetermined questions, to the program manager in order to better plan, direct and control the program. While this formative approach is directly related to program improvement, it has been criticized for its limitation to program monitoring. Typical management information systems methods include system analysis, critical path method (CPM), program evaluation review technique (PERT) and management by objectives (MBO).

Stake (1983) updated his theory of "countenance evaluation" (1976) to responsive evaluation. He claims that description and judgement are the two basic essential acts of evaluation. An evaluation report includes description data and judgement data about the program antecedents (a priori conditions), transactions and outcomes (impact, effect). Stake's more formal countenance model has a Description Matrix, in

which the Intents are contrasted to the Observations for each of the antecedents, transactions and outcomes of the program. It also has a Judgement Matrix, in which Judgements are made based on Standards (Stake, 1983).

Stake's updated responsive evaluation model is less formal and relies on "natural communication", which he describes as observation and reaction. The intent of a critical examination of a program irrespective of it goals, is to discover and judge the actual effects without regard to intended effects (Gardner, 1977). Thus, responsive evaluation facilitates the discovery and evaluation of side effects as well, "unencumbered by preordained linkages to goals or standards" (Gardner, 1977, p. 584). In this manner, Stake's model is parallel to the in-house program portrayal models, except that the former specifies the observation (and data collection) of designated program antecedents, transactions and outcomes.

Responsive evaluation has a stronger summative evaluation orientation than formative, however early outcomes can be observed during the transactions stage and used as monitoring feedback (Stake, 1983).

The "Context, Input, Process, Product" (CIPP) model of evaluation was developed by the Phi Delta Kappa National Study Committee on Evaluation, and is very formative evaluation-oriented. According to Stufflebeam (1983), one of the model's main proponents, "the most important purpose of program evaluation is not to prove but to improve" (p.117).

The CIPP model is a decisionmaking approach to program evaluation. Decision-oriented evaluation requires the provision of evaluation information for making predetermined decisions relevant to the life and improvement of a program. Thus, the evaluation is directly related to the information required for these decisions. The

decisionmaking approach can include both proactive (improvement) and retroactive (judgement) evaluation (Stufflebeam, 1983), corresponding to monitoring and summative evaluation, respectively. The objective outcome of decision-oriented evaluation is effectiveness and quality control (Stufflebeam and Webster, 1983).

Context evaluation (formative) is for the purpose of program planning decisions. It is analagous to a needs assessment in that its objective is to,

> identify the target population and assess their needs, to identify opportunities for addressing the needs, to diagnose problems underlying the needs and to judge whether proposed objectives are sufficiently responsive to the assessed needs. (Stufflebeam, 1983, p. 129)

The summative nature of context evaluation relates to judgement decisions regarding the actual objectives and rationale for their choice (Stufflebeam, 1983).

Input evaluation is for the purpose of program structuring decisions. Information provides guidance for the choice of program strategy and, "input for the specification of procedural design" (Stufflebeam, 1983, p. 125). This formative evaluation corresponds to an ex-ante feasibility study, to determine the appropriateness of potential program plans. The summative evaluation counterpart judges the chosen strategy and design (Stufflebeam, 1983).

Process evaluation is for the purpose of program implementation decisions. The objective of this formative evaluation is,

> to identify or predict, in process, defects in the procedural design or its implementation, to provide information for the preprogrammed decisions, and to record and judge procedural events and activities. (Stufflebeam, 1983, p. 129)

The outcome of the decisionmaking process should be the implementation and refinement of program design and procedure; in other words, "effecting process control" (Stufflebeam, 1983, p. 129).

Summative evaluation has its unique counterpart in the CIPP evaluation model in the form of Product evaluation, which is for the purpose of program recycling decisions. These include decisions regarding program termination, continuation, modification or refocussing. The objective of product evaluation is,

> to collect descriptions and judgements of outcomes and to relate them to objectives and to context, input and process information; and to interpret their worth and merit. (Stufflebeam, 1983, p. 129)

The essence of CIPP is an,

> institutionalized feedback mechanism which provides for a continuous assessment of decision-information needs and the obtaining and providing of information to meet those needs. (Gardner, 1977, p. 580)

Thus, CIPP provides the impetus for self-study and analysis, and assures the collection of relevant data (Gardner, 1977; Howe, 1980; Stufflebeam, 1983). However, there is an underlying assumption of rationality in decisionmaking, and that the information provided will be used (Gardner, 1977).

The CIPP model of program evaluation potentially includes formative and summative evaluation processes. According to Stufflebeam (1983), any or all of the four procedures may be used in the evaluation of a program, however they should only be applied if the need exists.

Rossman (1980) categorizes and compares process and preordinate evaluation models, for the evaluation of leisure service programs. He describes process models as being very flexible because they do not prespecify the criteria to be used in determining the worth of a program. Only the steps and procedures are outlined a priori. Proponents of this type of model varyingly suggest that the judgement criteria be negotiated by staff and clients (Bannon, 1976), or developed by the evaluator following the prelimi-

nary assessment (Olson, 1978), or, alternatively, derived from the results of an assessment of the program's impact on its clients (Peterson and Gunn, 1984). Rossman (1980) states that the usefulness of the evaluation depends on the validity of the selected criteria as indicative of a successful program.

On the other hand, preordinate models specify the evaluation process and the judgement criteria to be used in determining the worth of a program (Rossman, 1980). Supporters of the preordinate models assume that evaluation is based on a "model of the situation" (Rossman, 1980, p. 44), which includes a set of presumptions regarding what is important and relevant. Rossman (1980) likens this to evaluation by standards, and the critics question the implied linkage between the criteria (standards) and program effectiveness.

Steinmetz (1983) puts forth the "discrepancy evaluation model" (DEM) for program evaluation. The basic tenets of his model include,

| | |
|---|---|
| Standard (S) | - a list, description or representation of the qualities and characteristics an object should possess. |
| Performance (P) | - the actual characteristics of that object. |
| Discrepancy (D) | - information from a comparison of S and D. |
| Evaluation (E) | - a judgement regarding the worth or adequacy of the object based on D information between S and P. |

Creating the standard (S) involves component analysis (Steinmetz, 1983) or division of the program's parts into sub-components with an appropriate level of detail. Steinmetz sees this level as being at least equal to an analysis of the input, process, and output for each sub-component. Conceptualizing input, process and output helps determine what program variables to evaluate (Alkin, 1976).

Performance information is gathered via priorized questions that determine, "whether what <u>should</u> be actually <u>is</u> ; whether inputs are available as specified; whether

processes are carried out as planned; and whether outcomes are being achieved as intended" (Steinmetz, 1983, p. 95).

This type of evaluation can be formative or summative. In this model, the purpose of formative evaluation is to identify and clarify the objectives, and continually assess their worth (Gardner, 1977). It also implies the provision of feedback for improvement during an ongoing program (Gardner, 1977). Steinmetz (1983) also discusses program design evaluation in the planning stage. Consistent with the nature of DEM, such an evaluation would focus on design adequacy, comprehensiveness, relationship to need and appropriateness.

Thus, DEM promotes the development of standards (a detailed program design with input-process-output descriptions for all sub-components), a data collection plan for each evaluation question (developed relative to the set standards), and an internal feedback cycle such that the program can be continually monitored and managed on discrepancy information, which is generated by systematically comparing S and P (Steinmetz, 1983).

Steinmetz (1983) suggests that P data be collected by an external evaluator, although the client of the evaluation ultimately sets S and decides on the significance of identified D. While this method certainly enhances objectivity, and hopefully credibility, it is only practical for the more formal summative evaluation. However, the nature of the DEM puts an emphasis on self-evaluation and systematic program improvement (Steinmetz, 1983), which is very relevant to formative evaluation.

Soucie (1974) proposed an adapted discrepancy evaluation model, for identifying and evaluating administrative problems in physical education. His model reflects a systems analysis via designative-appraisive inquiry, or alternatively, a descriptive-appraisal model of a systems approach (Soucie, 1974).

A systems analysis model represents how a program functions, and thus conceptualizes program aspects that merit attention (Soucie, 1974). Read (1974) differentiates between systems and system analysis, espousing that the former infers analysis and evaluation of alternative systems (also Peterson, 1976). He defines system analysis as a planning and problem solving technique, thus analogous to Soucie's systems analysis. The actual analysis involves determining how well each subsystem of a diversified operation operates individually and how each functions as a complementary unit of an integrated whole (Mead, 1980). From this one can identify and define a problem(s) that is impeding the proper function of the system (Soucie, 1974). The proposed objective is to determine and rate problem areas, based on the comparison between what is and what should be, and then to evaluate any discrepancies according to set criterion or decision-rule (Soucie, 1974).

Soucie (1974) lists the following steps in a designative-appraisive model:

1. Identify major systems in a program's operation; eg. finance, personnel, facilities.
2. List the processes inherent in each system; eg. personnel - hiring, training, evaluation.
3. Assign a designative score (point value) for each process according to the criterion rating; eg. 4 - excellent, 3 - good, 2 - average, 1 - poor.
4. Assign an appraisive score (point value) representing the identified need or predetermined objective of each process; N.B. may not require "excellent" performance in some processes (Soucie, 1974).

This quantitative approach permits easy contrast, discrepancy evaluation and identification of major problem areas (Soucie, 1974).

Soucie's proposed model has a strong summative orientation to evaluation, due to its complex nature. The complexity is especially inherent in the need to set a point value (appraisive score) for each process, considering that the priority of the processes may alter over time as the program progresses. Furthermore, it is difficult to objectively

rate each process, as well as being a timely process to set up and administer. Lastly, it is not conducive to the less formal formative evaluation, in its current form.

Bookwalter and Dollgener (1962) developed a scorecard, particularly for the formative evaluation of undergraduate physical education programs. The premise of the scorecard is that it can provide a single source for essential program standards, a valid and objective means for evaluating program status, a guide for the priority aspects in need of improvement, and it provides the basis for immediate program improvement (Bookwalter and Dollgener, 1962).

The steps listed by the authors include:

1. Identify the major components and criteria of the program (including major and secondary aspects).
2. Determine criteria suitable for assessing the completeness and effectiveness of these aspects.
3. Assign a weighted value to each criteria, that comprise the identified components, according to actual performance (Bookwalter and Dollgener, 1962).

This model also takes on the aura of a discrepancy model in that "points earned" (assigned) are contrasted to the pre-set "points possible" for each criteria. Since the points are not assigned according to a ranking scale, the relative values are assigned a discrepancy value in terms of "percentage of points attained" (Bookwalter and Dollgener, 1962). This identifies the major problem areas.

The American Alliance for Health, Physical Education and Recreation (AAHPER) designed an Assessment Guide, specifically for secondary school physical education programs (1977). This functional, comprehensive tool can be easily administered and is proposed for self-study and self-evaluation. The basic tenet of the Assessment Guide is identification of problem areas, leading to program improvement (AAHPER, 1977).

This evaluation model utilizes a checklist for evaluative criteria specific to the program's stated philosophy. Each criteria statement reflects the minimum requirements for effectiveness and should be interpreted according to the program's pre-stated philosophy (AAHPER, 1977). In carrying out an evaluation, a Yes or No response to the criteria statements, with or without comments, is required. A negative response indicates that additional self-study is needed in a specific area (AAHPER, 1977).

The authors espouse that the results of this type of evaluation can be utilized to develop a self-study report including a detailed analysis of strengths, weaknesses and future directions. Thus, program evaluation by the AAHPER Assessment Guide can demonstrate program quality and/or assess progress (AAHPER, 1977); thereby likening it to both monitoring and summative evaluation.

Vogel (1979) developed a similar "systematic program design" evaluative checklist. His checklist of criteria statements for each evaluative item [program (sub)components] also requires Yes, No and Comment responses. Vogel further states that a No response indicates that "appropriate modifications are required" (p. 7); a Yes response indicates that "there is no need for modifications" (p. 7).

The effectiveness of both AAHPER's and Vogel's models depends on the relevance and practicality of the criteria statements. The more specific the evaluative criteria the more useful the results, be it either a single Yes or No, ideally with comments to justify and explain the response. Useful results promote program improvement and/or facilitate decisionmaking.

Systems evaluation is a broad term that has included many variations of evaluation models. Durkin and Durkin (1975) specifically discuss microsystem evaluation, with the implication that a program is a social microsystem. Their proposed systems model at-

tempts, "to evaluate programs qua organizations instead of trying to assess them in terms of their impact on people" (p. 320). In other words, evaluation of a program in terms of the way it is organized and allocates its resources to achieve its goals (Durkin and Durkin, 1975). Via this model the evaluator seeks to assess the extent to which the program achieves its goals, and its functional efficiency vis-a-vis these goals.

Durkin and Durkin (1975) differentiate between proximal and distal goals, and their evaluation. The description of distal, or long-term goals tends to be elusive and lacking in clarity, and is confounded with the problem of developing operational measures to determine the extent to which they are achieved. Proximal, or short-term goals, "tend to be specific and concrete and are consequently more accessible to evaluation" (Durkin and Durkin, 1975, p. 322).

Specifically, microsystem evaluation involves an examination of the functional and dysfunctional aspects of a program, as well as the extent to which it meets the requirements of the larger suprasystem (Durkin and Durkin, 1975). In promoting the clarification of the functioning of the program, the model surves to, "enhance the program's self-awareness so that it can monitor its own functioning" (Durkin and Durkin, 1975, p. 321).

The basic tenets of the microsystem evaluation model can be construed to represent monitoring, with the assumption that examination of aspects of a program leads to its improvement, and summative evaluation, in the form of a summary of the aspects and their ultimate relationship (accountability) to the larger system (funding agency).

Etzioni's (in Schulberg and Baker, 1968) system model for evaluation is one of the original evaluation models. It is based on the establishment of a working model of a social unit capable of achieving a goal. Evaluation comprises the assessment of a mul-

tifunctional unit (an organization) based on four critical functions for survival: goal achievement, effective co-ordination of organizational sub-units, resource acquisition and maintenance, and adaptability to the environment (Schulberg and Baker, 1968).

Etzioni's model parallels other discrepancy models in that it requires the determination of the optimum level of attainment and co-ordination of each function, followed by the determination of the actual degree of realization. The system model provides links and feedback mechanisms to bridge the gap between generated data and program modification (Schulberg and Baker 1968). This is a result of the assessment of data within the context of the functions, which allows for immediate supposition and explanation of the successes and failures of the organization and/or program. Schulberg and Baker (1968) thus imply that the system model is most effective as a formative evaluation tool, for program improvement. However, the adaptability to summative evaluation is apparent.

Suchman (1976) proposes a process model of evaluation. It is basically evaluation for the improvement of operational, or ongoing, programs; in other words, monitoring. Although Suchman believes evaluation is an integral part of the administrative cycle of any operating system (decisionmaking programming communicating controlling reappraising), he does not feel that formal evaluation should be undertaken until the program has had enough time to prove its possible effectiveness (also Cronbach, 1963).

The process model of evaluation is analogous to operations research (or system analysis). This implies, "the study of relations rather than 'entities' with an emphasis on process and transition..." (Suchman, 1976, p. 58). Process is continually in operation and constantly changing in response to internal and external pressures, therefore, "evaluation is most productive when it can become a continuous process of program assessment and improvement" (Suchman, 1976, p. 56). Mehmet (1984) views process

evaluation as an assessment of the extent to which ongoing policy is being carried out with regard to its stated objectives.

Suchman (1976) describes evaluative criteria as the basis for decisionmaking regarding the program's means towards the ends. Criteria have an Information Component which serves as the model for selecting, collecting and evaluating information. An Interpretation Component represents the value position regarding appropriate and acceptable means for decisionmaking (weighting and priority setting). Finally, the Action Component represents the limits of acceptable error (Suchman, 1976).

The process model can be adapted to summative evaluation as a means to an end evaluation; that is, generated information can be used in a summative assessment of program worth.

Reicken (1976) discusses a variation of the operations analysis approach. He refers to evaluation of the program's means or operations, without specific regard to the outcome. Evaluation comprises an examination of the program according to standards of effectiveness. This formative approach is aided by even more informal periodic progress reports of activities, without reference to predetermined standards (Reicken, 1976). The information generated by an operations analysis is intended for immediate and ongoing program improvement, but can also be valuable to a summative evaluation of the program's operations.

Helt, Roszell, Stanley and vanDuyvenbode (1980) propose a "management operation review" model for recreation program evaluation. This model is a combination of the goals- and criterion-oriented approaches in that measurement factors include program policies, objectives, operational performance standards and senior management judgement.

As an operations review the model reflects program monitoring. The manager appraises operations on a continuous and systematic basis, thus ensuring that objectives are met efficiently and effectively and that daily operations are run efficiently, according to program policy and objectives (Helt et al., 1980).

A summative orientation can be developed from the generated information, although there is the inherent problem of subjectivity and expertise with this type of in-house evaluation. Helt et al. (1980) offer an alternative that addresses summative evaluation - operational performance measurement. It is a management and operational information system to assess performance according to how well program outputs help goal achievement (Helt et al., 1980); that is, measuring operations performance via performance indicators. This summative evaluation approach can also be adapted for monitoring via input and analysis of relevant data on a continuing basis, and subsequent immediate decisionmaking and action to improve by management (Helt et al., 1980).

Management by objectives (MBO) is described by Price (1978) as participative program planning, management and evaluation which promotes the collective striving for common goals. As an evaluation model it does not differ significantly in terms of philosophy; that is, program evaluation consists of measurement of the degree of success in objectives achievement, leading to modification, revision and change where necessary (Price, 1978). MBO suggests that the participative goal setting process is followed by the formulation and priority setting of measurable operational objectives (statements). This is commensurate with the goal-oriented approach to program evaluation.

Goal-oriented, or objectives-based, evaluation is categorized by Stufflebeam and Webster (1983) as a "questions-oriented evaluation". In other words, the measurement of program objectives achievement predetermines what questions should be asked (in

order to generate useful information), and thus, what methodology should be utilized. What does the evaluator need to know to assess objectives achievement, and therefore, what does he do to find that information? In order to comply with the need for formative and summative program evaluation, there must be short term and long term objectives, and they must be logically sequenced.

Steers (1975) discusses an evaluation model comparable to MBO - the operative goals aproach. It reflects the MBO method in that flexible operative goals are weighted and priority-ranked, and program effectiveness is based on their realization, as opposed to general criteria.

Steers (1975) criticizes criteria-oriented evaluation because current models tend to have very generalized criteria that can be applied universally, without accounting for contingency. Furthermore, she presents the problem of criterion stability over time; that is, a criterion may not continue to represent a stable indicator of effectiveness (if it ever did). Steers also points out that multiple criteria may conflict with regard to achievement of organizational effectiveness. Another criticism is with the precision of measurement, implying that quantifying criterion measures of effectiveness is a very difficult task (Steers, 1975).

Thus, Steers' response to these weaknesses inherent in criterion-oriented evaluation is the operative goals approach, in which effectiveness is viewed in terms of operative goal attainment. Goodman and Pennings (1982) contrast official goals, operative goals and operational goals. The former is a formal statement of organizational purpose (mission); it tends to be abstract and aspirational in nature and is basically for support and legitimacy. Operative goals reflect the true intentions of an organization, and they mirror the actual tasks and activities. Operational goals are defined as approved criteria and evaluation procedures that clearly delineate how various levels of accomplishment will be measured (Goodman and Pennings, 1982).

The operative goals approach is summative in nature, although specific short term goals could be assessed during operation of the program. The inherent problems with this model include the potential for conflict of goals and the inconsistency portrayed by dynamic goals in a relatively static model (Goodman and Pennings, 1982).

Another objectives-based evaluation approach was developed by Worthen and Sanders (1973). Their "hybrid evaluation" is an amalgamation of intrinsic evaluation and pay-off evaluation. The former is an appraisal of the program itself and is analagous to goal achievement evaluation; the latter is an operationally-oriented examination of the effects of the program (Worthen and Sanders, 1973).

The authors espouse that the one functional goal of the evaluation process is determining the worth or merit of a program; a judgement must be made. Furthermore, evaluation of program objectives is a prerequisite to program evaluation since they must be worthwhile for the program to exist (Worthen and Sanders, 1973). This outlook reflects the significance of ex-ante evaluation and summative evaluation. Worthen and Sanders (1973) ensure the inclusion of formative evaluation as well, however, with the judgement of the integrity of the program's content (intrinsic) and the judgement of the interim effects for feedback to program managers (payoff).

The characteristics of this objectives-based hybrid evaluation are based on:

1. Goal formulation.
2. Regular re-examination and modification of goals.
3. Construction of a question pool (operational version of goals).
4. Comparison of goals and program content, goals and questions, and program content and questions for validity. (Worthen and Sanders, 1973).

A review of current evaluation models would not be complete without a discussion of cost-effectiveness assessment. Levin (1975) describes it as a form of ex-ante evalua-

tion, for comparing alternatives. That is, to determine a strategy that maximizes the desired result for any given resource or budget constraint. Cost-effectiveness analysis, "attempts to integrate cost considerations into standard evaluation research designs" (Levin, 1975, p. 90). It is basically an econometric approach to evaluation (Mead, 1980; Mehmet, 1984).

Haggerty (1983) describes an ex-post cost-effectiveness assessment using ratios to determine the degree to which a program attained its objectives (as applied to an intercollegiate athletics program). For example, actual dollars spent:planned use of dollars, and actual activities:planned activities. Effectiveness variables are generated by any one of a number of methods for assessing program effectiveness; variables are then priority-ranked and weighted. The evaluator(s) then rates the program based on each variable; this produces a weighted effectiveness score. Cost data is broken down from direct costs of the program. The final data may be presented on a graph (X axis - cost, Y axis - effectiveness), with each variable plotted (Haggerty, 1983).

According to Haggerty (1983) the benefits of such an analysis depend on the probability that it will yield a different decision that will be more appropriate and useful than the decision that would have otherwise been made. The principle of diminishing returns must be taken into account when considering the time and effort involved in a cost-effectiveness analysis. An inherent criticism is the ability, and need, to quantify, and the resultant use of less than adequate proxies (Haggerty, 1983).

Summary

Program evaluation can serve many valuable functions. By providing information on a program's operations and/or outcome, evaluation contributes to the overall management of a program, particularly decisionmaking, improved program planning and

subsequently improved future performance of a program, and justification of a program's existence. Evaluation information may describe any or all of a program's effort, efficiency and effectiveness.

There is an operative relationship between program planning and evaluation, such that evaluation is inherent at every stage of a program's life cycle. Due to the importance and frequency of program evaluation, a plan for its administration must be built into the program design. The nature of the evaluation plan should correspond to the need and resources available for an evaluation; the opportunity cost of conducting an evaluation ought to be considered in the development of a plan.

The decisionmaker, utilizing the generated evaluation information, is typically internal to the organization and has influence over the direction of the program. The delegation of this responsibility depends on the importance of the decisions to be made. The evaluator may be the final decisionmaker, and may be internal or external to the organization. These factors depend on the need, cost and time for a full-fledged, formal evaluation. The roles of decisionmaker and evaluator may overlap, either intentionally or with potentially destructive results.

The ultimate goal of evaluation is utilization of the results. This will be enhanced by the generation of useful, timely information that is addressed to the decisionmaker(s).

Summative and formative evaluation imply the time and formality of an evaluation. Summative refers to end evaluation, which occurs at the completion of a program. It typically includes a study of objectives achievement, program impact and overall effectiveness of a program. Formative evaluation corresponds to monitoring, or ongoing evaluation throughout a program's life cycle. Formative evaluation is ideally responsive to the continuous needs of a program.

Such is the basis of effective evaluation, however the means by which the actual evaluation is carried out varies widely. There are numerous complementary and contrasting evaluation models. The most effective will be one, or a combination, that is appropriate to the context of the program and considers the basic, yet critical elements of program evaluation: the role of evaluation in a program, the evaluator and decision-maker, the utilization of evaluation information, and the application of formative and summative evaluation.

## Chapter III

## ANALYSIS AND INTERPRETATION

In developing a prescriptive model for the evaluation of HPSCs in Canada it is essential to explain why an evaluation should be done, what should be involved in the evaluation plan, when and how it should be carried out, and finally how the program should be evaluated (that is, on what basis). This categorization of identified variables facilitates the organization of thoughts regarding the phenomenon under study. A reiteration of the corresponding HPSC concepts will further facilitate the integration of the classified evaluation processes into a prescriptive evaluation model.

The twenty-three models reviewed were screened according to the context of the HPSC program which, as one option in the high performance program of NSGBs, is characterized by a, "contractual, multi-component system" (Shaw, 1982, p. 6). This refers to the partnerships involved in the establishment and operation of a HPSC and the combination of components, considered important for high performance athlete development, to which a particular HPSC caters. Furthermore, a HPSC is characterized by General and sport-specific criteria, which serve as a broad evaluation instrument to ascertain eligibility for implementation. An awareness of the characteristics of a HPSC, the role and requisites of each partner, and basically the environment in which a centre operates facilitates the identification of applicable program evaluation theory.

Also considered in the screening of the twenty-three models reviewed was their concordance with certain characteristics and important considerations of program evaluation, which have been identified throughout the literature as the main components to be considered in an effective evaluation plan. They include:

1. the role of evaluation throughout the life cycle of a program;
2. the evaluator and decisionmaker, and their roles and responsibilities;
3. utilization of evaluation results;
4. and formative and summative evaluation procedures. (Alkin, 1976); (Austin, 1979); (Carter and Wharf, 1973); (Dampier, 1979); (Fu, 1981); (Johnson, 1970); (Mead, 1980); (Morris and Fitz-Gibbon, 1978); (Nachmias and Felbinger, 1982); (Neill, 1983); (Olson, 1980); (Paterson, 1980); (Peterson and Gunn, 1984); (Price, 1978); (Reicken, 1976); (Sichel, 1982); (Soucie, 1974); (Steinmetz, 1983); (Stufflebeam, 1983); (Stufflebeam and Webster, 1983); (Suchman, 1976); (Vall, 1983); (Weiss, 1972); (Weiss, 1976); (Woo and Farley, 1982); (Worthen and Sanders, 1973).

These characteristics, with reference to the selected model(s), will be explained in the description of the resultant prescriptive model (Chapter IV).

With specific regard to the important consideration of the role of evaluation throughout a program's life cycle, Dampier's (1979) universal life cycle model of program planning and evaluation is particularly relevant to this study. As revealed in Chapter II (pp. 34-36), Dampier describes a cycle of planning stages in the life of a program and then superimposes a corresponding cycle of evaluation phases for each planning stage. This useful model is highly complementary to the identified life cycle for the HPSC program (Chapter II, p. 22): the planning stages correspond, and consequently the evaluation phases can be utilized to indicate when evaluation should take place and basically what it should involve.

Alkin's (1976) description of the role of evaluation at the various stages of a program's life cycle (see Chapter II, p. 35-37) is also very applicable and valuable to this study; it strongly corresponds to, and thus supports, Dampier's model.

Of the twenty-three models reviewed no one is exclusively appropriate to the nature of HPSCs. However, four approaches to program evaluation and eight related models have been identified as having certain attributes that, in combination, would most adequately address the evaluation needs of the HPSC program. These models varyingly describe types, processes and methodologies of program evaluation that would be particularly suitable to this study.

The following is a review of the integration of the selected evaluation approaches and models in a format which precipitates the evolution of a prescriptive model for the evaluation of HPSCs in Canada.

## MICROSYSTEM EVALUATION

This approach to evaluation is based on the presumption that a program is a unique social microsystem, operating within a larger suprasystem. Microsystem evaluation proposes to assess the net efficiency and effectiveness (outputs), and relative contribution of each integral part (throughputs), of the program. The HPSC program typifies a microsystem, operating both within the larger high performance program of the NSGB and within the even broader high performance program of Sport Canada.

An important aspect of Durkin and Durkin's (1975) microsystem evaluation is the description, for evaluation purposes, of the various parts of a systems model. These include essential inputs (fincancial, material and human resources), roles (statuses and role-related activities), components (including subsystems which are intended to contribute to the goals of the program), and intramural processes (functional prerequisites, such as communication, accountability, decisionmaking and monitoring). Evaluation of a program involves the delineation of these parts followed by examination of the pro-

gram's practices vis-a-vis each. Examination should consider both the functional and dysfunctional aspects of the program, as well as the extent to which it meets the requirements of the larger suprasystem.

A delineation of the parts of the HPSC system would include the following:

Inputs
- funding from various partners including Sport Canada, PSGB, Provincial Government, host facility, host city
- any direct revenue (eg. clinics, demonstrations, tournaments, competitions)
- equipment provided by facility or other partners
- coach(es), athletes, facility host(s), medical/paramedical services, sport science services

A record of the allocation of these resources facilitates their monitoring, as part of the system (Durkin and Durkin, 1975).

Roles
- head coach, assistant coach(es), apprentice coach(es)
- HPSC Manager, team manager, facility manager
- carded athletes, elite athletes, development athletes
- medical/paramedical and sport science services, counsellors

All statuses within the program should be specified and the roles must be delineated with regard to expected behaviour and responsibilities (Durkin and Durkin, 1975).

Components
- athlete support
- training, competition and administrative support
- coaching support
- sport science/medical/paramedical support

Intramural Processes
- prerequisite administrative processes which are essential to the planning and operation of a HPSC and, according to the General Criteria, include: office support, recordkeeping, public relations, communication, staffing (including competency, credibility and commitment), management (accountability, monitoring, decisionmaking)

The evaluation of the HPSC microsystem comprises an inventory of inputs, assessment of relative functionning of the throughputs and the resultant net efficiency and effectiveness, or outputs, of the program. Significantly, it indicates what should be evaluated.

Operations Analysis

Reicken's (1976) description of a variation of an operation's analysis model is reflective of the microsystem evaluation approach. This particular model is delimited to the evaluation (or monitoring) of a program's means or operations (throughputs), without specific regard to the outcome. It is an informal, formative evaluation approach to aid the program manager with daily operations via immediate information generation for program improvement. It enables the manager to keep informed about the functional and dysfunctional aspects of the program, so that they may be dealt with immediately.

## DECISION-ORIENTED EVALUATION

Following the delineation of the parts of the HPSC program that should be evaluated, a prescriptive model must consider the intent and the timing of the evaluation.

A main purpose of evaluation is to improve the management and administration of a program, and its future performance. This is made possible by decisionmaking related to such improvements. The evaluation process facilitates decisionmaking by providing information regarding the program's effort (what it has accomplished), effectiveness (how well it has been accomplished), and/or efficiency (relative cost).

Evaluation is for eventual decisionmaking regarding the program. The decision-oriented evaluation approach implies that the decisions to be made from the evaluation

information guide the collection of that information. Further attributes of this approach, as outlined by Stufflebeam and Webster (1983), include its commitment to problem identification, and value assessment of the program in order to elicit improvement. This attention to program improvement encourages continuous and systematic use of evaluation.

Stufflebeam and Webster (1983) contrast this approach to questions-oriented evaluation, a "quasi-evaluation" (p. 38), in which the questions to be asked determine the methodology of information collection. The answers to the questions will ideally be useful in assessing a program's worth. However, the preset questions may not be contingent to each evaluation and thus may not actually be related to assessing the program's worth.

The decision-oriented approach consists of adapting the evaluation questions to the specific decisions to be made; whether they pertain to short-term program improvement and/or long-term program continuation, termination, maintenance or modification. Thus, decision-oriented evaluation fosters adaptive evaluation in a dynamic program.

The relevance of the decision-oriented approach to the HPSC program is in its indicating why to evaluate and when. This is further demonstrable in a review of the following selected evaluation model.

Context, Input, Process, Product Evaluation Model

The CIPP model proposes that any or all of the phases in the life cycle of a system/program may be evaluated as required. Each aspect of CIPP denotes the type of decisions to be made in its evaluation, and has been corresponded to the stages in the HPSC life cycle:

Context Evaluation: program planning decisions, including

- sport identification and appropriateness of HPSC program
- development of sport-specific criteria

Input Evaluation: program structuring decisions, including

- review and selection of facilities
- confirmation of conformity to criteria
- funding, partnerships

Process Evaluation: program implementation decisions, including

- ongoing decisions regarding short term operation and monitoring of the HPSC

Product Evaluation: program recycling decisions, including

- long term HPSC program evaluation decisions regarding continuation, termination, expansion, maintenance or modification of the HPSC program.

This decision-oriented model helps to clarify the primary focus of the evaluation information to be collected. Furthermore, CIPP provides a useful framework for structuring tasks that should then be assigned in order for systematic decision-oriented evaluation to occur (Gardner, 1977).

Thus, in accord with the decision-oriented approach, the CIPP model proposes that, in large part, the stage of a program's life cycle determines the decisions to be made, which in turn determine the questions to be asked. The resultant information is required for making the timely decisions that affect the life and improvement of a program.

## EVALUATION BY STANDARDS

Progressing logically from the delineation of what should be evaluated, and for what specific purpose, there emerges the evaluation by standards approach which proposes the basis for evaluation of the delineated components.

There are several authors who espouse the attributes of evaluation by standards, as opposed to evaluation by objectives, however this study focussed primarily on the review by Farrell and Lundgren (1978).

Evaluation by objectives infers evaluation of a program's outcome based on the satisfaction of weighted and priority-ranked objectives of the program. A criticism of this basic approach is that effective evaluation depends on the tangibility and measurability of program objectives. With particular reference to HPSCs, because the objectives of this program (basically, attention to training, coaching, facilities and support services) are tended to be treated equally, they are not conducive to priority-ranking; as a general description of the purpose of a HPSC, they are neither conducive to measurement. Most of the objective components of a HPSC are interdependent; for example, there is no need for a coach without the athletes, and there can be no high quality athlete training without the facilities.

The HPSC program has, through Workshop consensus, identified General Criteria which indirectly reflect the objectives of the program; they provide a more specific description. These criteria are akin to the standards characteristic of the alternate evaluation appproach described by Farrell and Lundgren (1978).

Evaluation by standards involves evaluation of a program's outcome based on the achievement of a set level of acceptable performance. A standard has been defined as a statement of desirable practice. The HPSC General and sport-specific criteria reflect these standards and serve as a measurement tool. The criteria are not a substitute for the objectives of the HPSC program since the program will not even be in place if these criteria are not initially met.

Critics of the evaluation by standards approach point out the tendency to view standards as absolute; the minimum acceptable level becomes the maximum (Farrell and Lundgren, 1978). This is definitely a weakness of which to be alert. It can be reduced by the comprehension and acceptance of the potential for program improvement via evaluation on the part of those significantly involved in the program. Further criticism concerns the implied cause and effect linkage; that is, if the standards are met then the program will be effective. It may be helpful to adopt the attitude that if the HPSC criteria are met effectively, then there will be a greater probability that the HPSC will be successful.

Based on Peterson and Gunn's (1984) model of program development, it appears that the evaluation by standards approach can actually be construed as an extrapolation of the evaluation by objectives approach, and an example is found in the HPSCs program:

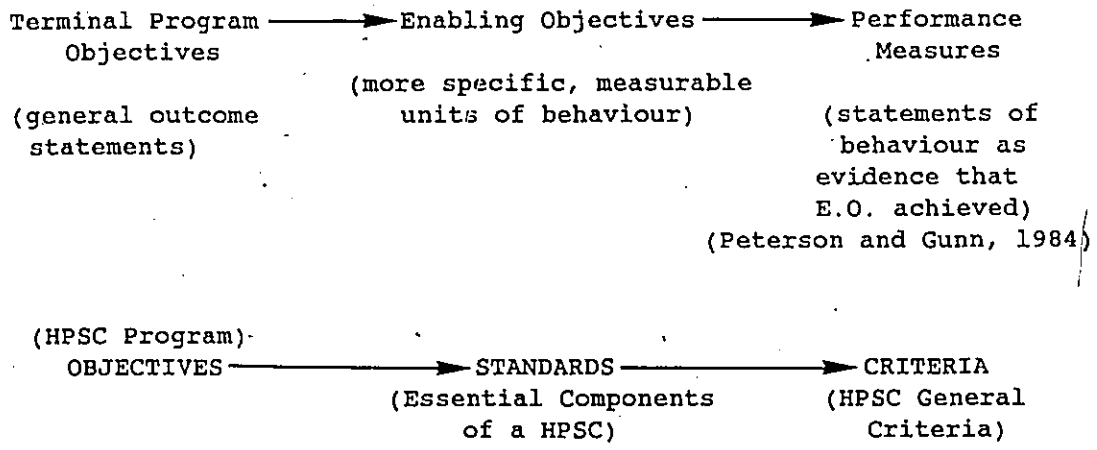


FIGURE 6: A Model of Program Development as an example of the extrapolation of Criteria from Objectives

In a goals-oriented organization/program, objectives serve as a planning tool by setting the program's framework, and as a management tool in terms of performance measures (Farley, 1984). The HPSC components and General Criteria reflect the program's goals and thus serve these planning and evaluation functions.

This analysis identifies the potential for adaptation of typical evaluation by objectives models to fit the HPSCs program, and to be useful in other evaluation by standards-oriented programs.

Discrepancy Evaluation Model

Steinmetz's (1983) DEM is very representative of the evaluation by standards approach. He espouses the creation of standards, by component analysis (including input, process and output), for comparison to actual performance characteristics. Discrepancy information resulting from this comparison highlights problem areas and forms the basis for an evaluation judgement.

As a decisionmaking model, discrepancy evaluation assumes that the most important decisions to be made regarding the program under evaluation are contingent on the criteria established for judging that program's relative success or failure (Gardner, 1977). The HPSC Program Policy and General Criteria documents outline these criteria, or standards, to be used for judging. They are identified through the microsystem evaluation approach, and have been mentioned briefly above.

This evaluation by standards model may be summarized diagrammatically:

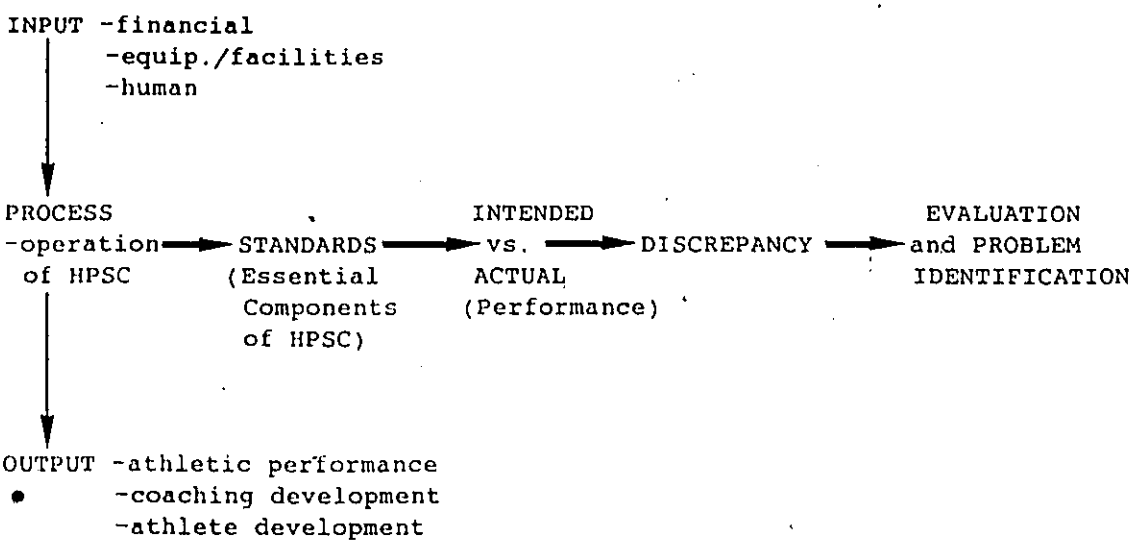


FIGURE 7: Representation of the Discrepancy Evaluation Model

Systems Analysis by Designative-Appraisive Inquiry

Soucie's (1974) adapted discrepancy evaluation model reflects the evaluation by standards approach and the microsystem evaluation approach. As a systems analysis model it includes consideration of the absolute and relative functionning of each aspect (process, component) of a system/program. These processes are defined as, "a combination of unified elementary processes that carry out some specific objectives" (Kelly, 1969, p. 4). The processes, and their derivation, resemble the HPSC components (standards) and criteria, which also were delineated as essential aspects of the HPSC microsystem.

Evaluation of these aspects is based on dicsrepancy information resulting from a comparison of the intended processes and those actually carried out. Soucie's model is not suitable for HPSC evaluation due to the complexity of rating intended versus actual performance. However, his work does have a place in the identification of problems, based on the generation of discrepancy information.

In summary, evaluation by standards represents how the evaluation takes place, that is, on what basis the program is to be evaluated.

## PREORDINATE EVALUATION

Finally, a prescriptive model must advise on the methodology of a program evaluation.

Rossman (1980) contrasts and compares process and preordinate evaluation approaches. From his review it appears that the latter is particularly suitable to HPSCs. The process evaluation approach to which he refers suggests that criteria should not be prespecified in determining the worth of a program; only the steps and procedure (process) are outlined a priori. The argument for this type of evaluation is in favour of its flexibility.

In contrast, preordinate evaluation involves the specification of the evaluation process and judgement criteria to be used in determining the worth of a program. This approach presupposses that evaluation is based on a model of the situation, in this case as defined by the criteria (standards) of the HPSC. Thus the relevance of this approach to the nature of HPSCs is evident. Furthermore, the newness of program evaluation in the HPSC program predisposes it to the need for the guidance provided by set criteria. Otherwise there is an increased risk of evaluation bias, incompleteness and misuse.

### Management by Objectives

Although MBO is reflective of the evaluation by objectives approach, it has many characteristics which are valuable to any type of evaluation, and of course it can be extrapolated to reflect evaluation by standards.

A major attribute of MBO is its emphasis on participative program planning, management and evaluation (Price, 1978). This concept is particularly appropriate to the many partners involved in a HPSC, and to the need for participative identification of sport-specific criteria. This approach promotes collective striving for common goals, including understanding and acceptance of the need for evaluation for program improvement.

Management Information System

This evaluation model also suggests a valuable orientation to the evaluation of a HPSC. As its name implies, the management information system depends on a continuous supply of information from the participants and interested parties to the program manager in order to better plan, direct and control the program. The ultimate intention of the information, based on predetermined questions, is for decisionmaking regarding program improvement. The primary relevance of this model, for the purpose of this study, is its emphasis on monitoring and continuous feedback to the program manager for program improvement.

In-house Program Portrayal

One of the least formal of program evaluation models and techniques is program portrayal for in-house evaluation. Both Sichel (1982) and Olson (1980) discuss this formative evaluation-oriented model, which is based on data collection regarding the program's operations.

Sichel (1982) proposes that the short-term data collection is based on preset questions answered by program staff. Olson (1980) proposes collection of "data bits" from program staff via systematic observation, dialogue and intuitive judgement. These models can be adapted to include input from centre athletes and interested parties.

The obvious limitations of subjectivity, bias and incompleteness can be minimized, and the usefulness of generated data maximized, by ensuring relevant questions and guidelines, planned information-gathering, a variety of information sources, and a more formal format to guide data collection (Olson, 1980; Sichel, 1982).

The informal, participative nature of program portrayal fosters useful short-term program monitoring, and ideally improvement, and is the basis for long-term judgements and decisionmaking.

Evaluative Checklists

A potential equally informal method for program evaluation is an evaluation checklist. Such a checklist may be as formal as the scorecard developed by Bookwalter and Dollegener (1962), which includes rating the achievement of program criteria, or as simple as checking Yes or No, with or without comment, regarding the achievement of program criteria (AAHPER, 1977). The effectiveness of an evaluative checklist for program evaluation depends on the relevance and practicality of the criteria statements.

Thus, the final aspect of a prescriptive evaluation model is the method by which it is carried out. To summarize, a preordinate evaluation plan should attend to the process of information collection:

- participative
- continuous information to the manager for ongoing monitoring
- short-term data collection (systematic, source variety, relevant)
- discrepancy evaluation via standardized checklist

and the evaluative criteria to be used:

Standards (microsystem processes) ⟶ Criteria

## SUMMARY

A prescriptive model for the evaluation of HPSCs evolves from the logical and all-encompassing progression of selected evaluation approaches and models. To summarize diagramatically:

MICROSYSTEM EVALUATION - what is to be evaluated

↓

DECISION-ORIENTED EVALUATION - why do we evaluate, and when

↓

EVALUATION BY STANDARDS - what is the basis for the evaluation

↓

PREORDINATE EVALUATION - what is the procedure for the evaluation

The outcome will be a model that considers the integral parts of the HPSC to be evaluated, what that evaluation would mean to the program, how the particular parts are to be judged, and how the actual evaluation should proceed.

None of the selected approaches and models will individually dictate an evaluation plan for the HPSC program. Rather, the concepts inherent in these particular models will guide the formulation of the resulting prescriptive model for the evaluation of HPSCs.

## Chapter IV

## THE MODEL - DESCRIPTION AND DISCUSSION

### THE MODEL

The previously-described HPSC life cycle stages (Chapter II, p. 22), correspond to the stages of program planning and evaluation delineated in Dampier's (1979) model. Thus, a graphic representation of the prescriptive evaluation model will have its basis in Dampier. Adaptations have been made to the original model in order to accomodate the unique characteristics of the HPSC program; for example, HPSCs are ongoing programs with multiple year commitments, thus not requiring annual "closure" of the program.

A survey of parties directly involved with the current HPSCs in Canada (athletes, coaches, HPSC Managers, NSGB HPSC representatives and Sport Canada consultants) was conducted in order to derive information and opinions regarding past evaluation practices, desired evaluation practices and identification of the parties to be involved. Respondents completed an Opinionnaire (see Appendix A) which included identifying who, when and what has been involved in past HPSC evaluation, and identifying and rating who, when and what they would like to see happen in future HPSC evaluation. This information, as frequency responses in terms of percentages, is intended to aid the development of the prescriptive model for the evaluation of HPSCs in Canada.

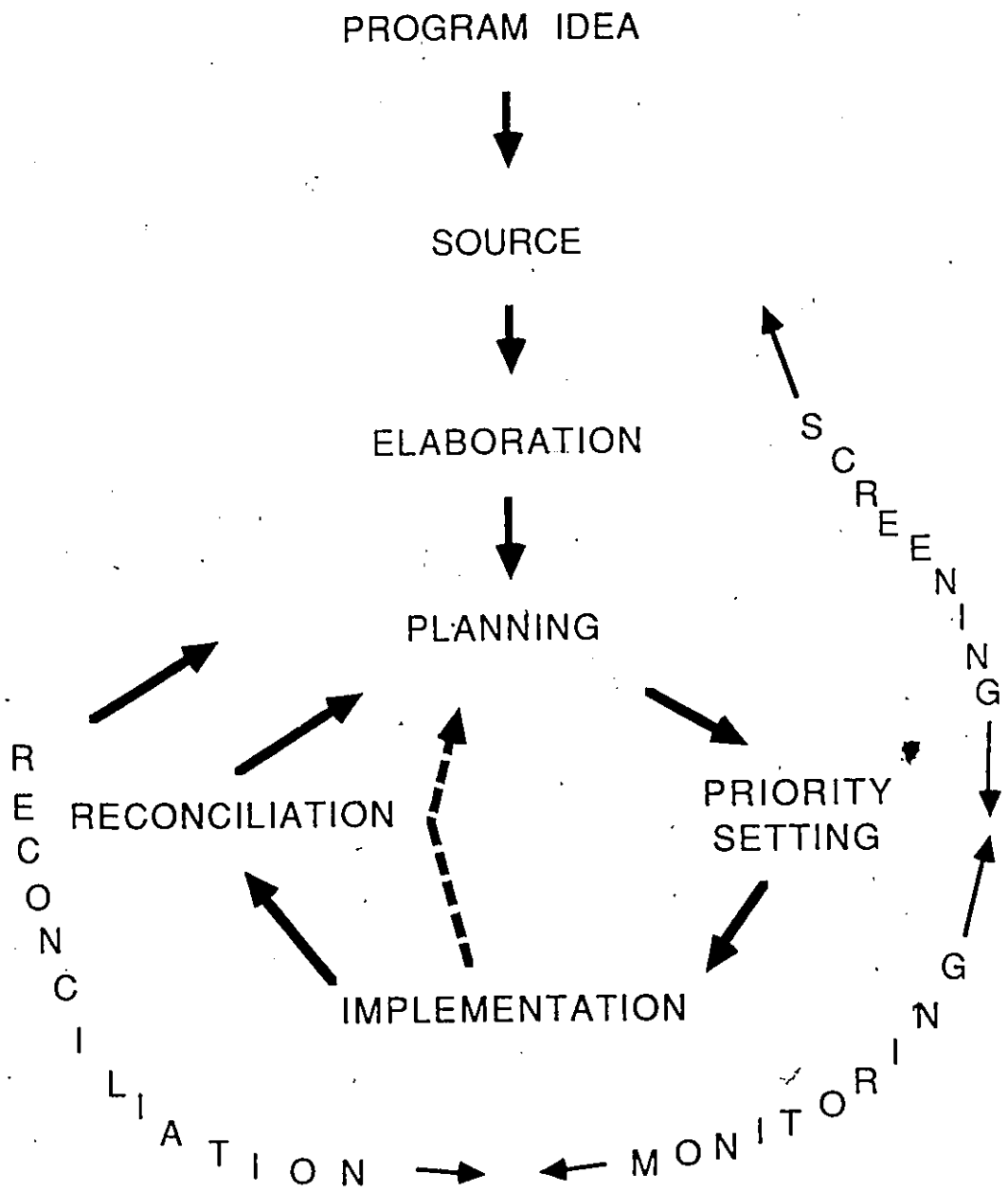


**FIGURE 8: A Prescriptive Model for the Evaluation of HPSCs in Canada**

TABLE 3

Description of the Model

| Stages of Model | Corresponding Evaluation | Relation to HPSCs Life Cycle |
|---|---|---|
| I PROGRAM IDEA/ SOURCE<br>-introduction of the idea into the organization as a result of a perceived need | SCREENING<br>-idea passes through several evaluations to gain acceptance and authorization | SPORT IDENTIFICATION<br>-notice of intent of an NSGB to develop a HPSC(s), via Quadrennial Planning Program |
| II ELABORATION<br>-informal checking out of the potential program | SCREENING | DETERMINE APPROPRIATENESS OF THE SPORT<br>-via QPP, includes NSGB rationale, long range plan assessment of technical program and ability to meet HPSC planning criteria |
| III PLANNING | SCREENING | DEVELOPMENT OF SPORT-SPECIFIC CRITERIA<br>-serve as basis for evaluation of concept and facilities<br><br>REVIEW OF POTENTIAL FACILITIES<br>-based on ability to fulfill criteria |
| IV PRIORITY SETTING<br>-decisionmaking with regard to the further development of the program or its rejection | SCREENING | SELECTION OF FACILITY/SITE FUNDING COMMITMENTS |
| V IMPLEMENTATION<br>-of the program plan | MONITORING<br>-ongoing evaluation to provide feedback to a responsive program during its operative phase | IMPLEMENTATION |

TABLE 3 cont'd.

| | | |
|---|---|---|
| VI RECONCILIATION<br>-corresponds to completion of the program | RECONCILIATION<br>-(final) evaluation wherein the ultimate destiny of a program is decided; program is reconciled with its objectives | ANNUAL REVIEW<br>-typically a review of the technical operations and performance impact of a HPSC |

N.B. After the initial planning cycle, the program continues in a smaller cycle of Planning, Priority Setting, Implementation and Reconciliation. Evaluation in this smaller cycle comprises Monitoring, with ongoing feedback for Planning and Priority Setting, and Reconciliation.

## DISCUSSION

The following discussion of each successive phase of the model will be based on the Role of Evaluation at that stage in the HPSC life cycle, the Evaluator(s) and Decisionmaker(s) who should be involved, Utilization of the evaluation information, and a prescribed Format for the evaluation at each stage.

### I PROGRAM IDEA/SOURCE - HPSC PROGRAM CONCEPT/SPORT IDENTIFICATION

#### (I) Role of Evaluation

The basic essential element at the outset of the planning of a potential HPSC program is ensuring adequate comprehension of the program concept by the NSGB. Thus, there must be a preliminary assessment, by the NSGB, of the HPSC concept and of the needs and nature of the sport with particular reference to this concept. This is akin to Alkin's (1976) System Assessment, in which an identified need represents a gap between the actual and ideal situation. This assessment takes place within the QPP. Hoffman (1985) suggests that the preliminary assessment process involve a situational anaylsis, considering:

1. the sport's current situational base, ie. club format;
2. quality of current coaching, facilities and other technical services;
3. current degree of centralization of athletes.

If the situation is adequate then it should not be tampered with; if it is less than optimal then improvement must be considered (Hoffman, 1985).

The role of evaluation at the outset of program planning is also directly related to Context evaluation (Stufflebeam, 1983), which comprises formative evaluation for program planning decisions. As applied to this model, assessment of the needs of the target population and identifying the means of addressing those needs would be the outcome for program planning decisions.

(ii) Evaluator and Decisionmaker

In line with the QPP, through which this initial planning and evaluation take place, evaluating and decisionmaking is carried out by the NSGB and Sport Canada. Their respective responsibilities are dictated by the QPP guidelines (Sport Canada, 1984).

(iii) Utilization

The value of the information generated from an assessment/evaluation will be significantly increased if as many parties as possible are involved in that generation. The extent of this involvement will be dependent on the time available and the interest of the people. However, at the very least, making concerned parties aware of the intentions of the NSGB and the concept of a HPSC will enhance acceptance of the decision to proceed or reject the idea. All parties currently directly involved with the HPSCs in Canada (athletes, coaches, HPSC managers, NSGBs and Sport Canada) strongly support the additional consultation of athletes and coaches before a HPSC is established (see Table 7, Appendix B).

(iv) Format

The QPP guidelines dictate processes for evaluation during planning (Sport Canada, 1984) that are applicable to the prescribed evaluation at this stage. In order to involve parties, that are external to the QPP, in the preliminary HPSC planning evaluation techniques such as survey, document review, hearing and interviews should augment the QPP process.

II ELABORATION - DETERMINE APPROPRIATENESS OF THE SPORT

Evaluation at this phase of the HPSC program life cycle requires formal ex-ante evaluation. Increased formalization, which will demand more paperwork and preparation, will ideally enhance the status and/or credibility of the HPSC concept, reduce future problems and uncertainties, and reduce fincancial waste. In short, one wants to have all means available and all relevant parties involved so as to ensure appropriate planning from the outset of the program.

(i) Role of Evaluation

Directly related to this stage is Alkin's (1976) Program Planning, in which internal and external evaluation of the organization and the program take place; that is, evaluation of the organization with respect to its objectives and with respect to the HPSC program, and evaluation of the program vis-a-vis other high performance programs. This is done via the QPP (general assessment) and on the basis of fulfillment of HPSC General Criteria by the NSGB. For example, do the NSGB's objectives and current situation call for a new high performance program and is the HPSC program the ideal alternative, and to what degree can the sport organization meet the General Criteria which represent the objectives and standards of the HPSC program.

(ii) Evaluator and Decisionmaker

The NSGB is responsible for generating the information at this stage and presenting it to Sport Canada (QPP). The NSGB should play a self-evaluator role during information collection including reassessing the appropriateness of the HPSC concept. Sport Canada plays the role of evaluator as part of its QPP responsibilities and is the final decisionmaker regarding the appropriateness of the sport for establishing a HPSC.

(iii) Utilization

Formal ex-ante evaluation, utilizing a given format, will greatly enhance the usefulness of generated information and the effectiveness of its utilization in the planning decisions at this stage.

(iv) Format

The prescribed format for a formal ex-ante evaluation includes the following tasks to be completed by the interested NSGB and submitted as information for the evaluation of the appropriateness of the sport to the HPSC program:

> A Statement of Rationale for the establishment of a HPSC, including the consequences of a HPSC on the sport's international and domestic program. (This prescribed task is fully supported by the coaches, HPSC Managers, NSGBs and Sport Canada consultants directly involved with the HPSC program; see Table 9, Appendix B).
>
> Outline the Long Range Plan of the NSGB, identifying in particular the need for, and inclusion and consequences of, a HPSC.
>
> Present the results of a Cost Benefit Analysis comparing the alternatives for a high performance sport program, for example, HPSCs, training camps, travelling National Coach.
>
> Identify the particular needs of the sport's technical program and national team, and illustrate how these needs can best be met through a HPSC environment.
>
> Complete the Survey of HPSC General Criteria, indicating which criteria the NSGB can and cannot meet (see Table 1, Chapter II, p. 18, for example of General Criteria). (The Coaches, HPSC Managers, NSGBs and

Sport Canada consultants fully support this task; see Table 10b, Appendix B).

The recently decreased role of Sport Canada in the planning and establishment of HPSCs (Tibi, 1986) should not detract from the importance and value of the information generated through these tasks. This information is equally essential to the evaluation through the QPP and the self-evaluation by the NSGB. Also, the Survey of HPSC General Criteria fulfillment will serve as a self-contract for future evaluation of the HPSC.

## III PLANNING - DEVELOPMENT OF SPORT-SPECIFIC CRITERIA/ IDENTIFICATION OF POTENTIAL FACILITIES

The main task of this phase of the HPSC life cycle is the development of sport-specific criteria. The criteria will be used for planning the program, assessing potential facilities and, ultimately, for evaluating the operation of the centre. The validity and acceptance of the sport-specific criteria will be enhanced by the involvement of HPSC parties in their development.

### (i) Role of Evaluation

The prescribed evaluation is akin to Alkin's (1976) Program Planning in which information is generated for planning decisions. It is also directly related to Input evaluation (Stufflebeam, 1983), which pertains to program structuring decisions: evaluation information guides the choice of program strategy and input related to the program design. In this case, the basic design is set and the NSGB, and involved parties, plan the specific inputs and processes desired. For example, funding, equipment, human resources and technical inputs, and the administrative processes which are essential to the planning and operation of a HPSC.

### (ii) Evaluator and Decisionmaker

As the program planner, the NSGB is the main evaluator and ongoing decision-maker in this phase. The role, if any, of Sport Canada is dependent on the autonomy of the NSGB in its planning phase; having approved of the proposed establishment of a HPSC by the end of the QPP, Sport Canada assumes an increasingly reduced role in the planning and operation of the HPSC.

The NSGB is primarily responsible for identifying potential HPSC sites - either through direct searching or by the approach of interested sites indicating their interest in being considered. As of yet there is no index of what facilities offer and their willingness to cooperate in the HPSC program (Heikkila, 1985; Tibl, 1986).

(iii) Utilization

Participative planning throughout will encourage utilization of all the evaluation information generated and provided at this stage. With regard to the sport-specific criteria development, participative planning will especially foster their ultimate acceptance and use as planning and evaluation tools. The sport-specific cirteria will augment the General Criteria in the HPSC's self-contract for future evaluation.

In agreeing that the sport-specific criteria should be developed and incorporated, the parties surveyed prescribe the involvement of the athletes, coaches, HPSC Manager, NSGB, Sport Canada, and to a lesser degree the PSGB and the Provincial Government (see Table II, Appendix B). Furthermore, the Managers, the NSGBs and Sport Canada consultants varyingly supported the involvement of other parties, including: facility host, any funding partner, local club(s), sport science and sportsmedicine representatives, volunteers and sport officials. In short, it would appear that all HPSC partners and participants should be involved to a varying degree to ensure that the concept and criteria address the needs/desires of these parties and receive their full support.

(iv) Format

Suggested evaluation techniques for the involvement of all parties in the development of sport-specific criteria include survey, hearing and interviews. The means of collecting information should suit the desired ends, including degree of involvement of the respective parties.

## IV PRIORITY SETTING - SELECTION OF FACILITIES/FUNDING COMMITMENTS

### (i) Role of Evaluation

The setting of priorities may be seen as the progression from Screening to Monitoring in the evaluation model and is directly related to input evaluation (Stufflebeam, 1983). At this point decisions are made with regard to program structure, strategy and input. The HPSC facility site is selected and funding commitments by involved partners are finalized. If the input is judged to be acceptable then implementation of the program occurs.

### (ii) Evaluator and Decisionmaker

Again, the role of Sport Canada in this stage depends on the autonomy of the NSGB and its HPSC program. By the conclusion of the QPP, and the evaluation of the potential HPSC program within it (end of Elaboration stage), Sport Canada will have declared its intention of a grant allocation for the proposed HPSC(s). Thus, at this time commitments will be received from Sport Canada and the other funding partners; this can be construed as decisionmaking by these parties regarding the HPSC program.

The decision on facility selection has been varied in the past. Sixty percent of NSGBs predetermine the site they want for their HPSC, that is, the selection is basically made prior to the planning of the program (Tibi, 1986). Sites are usually predetermined based on climate, facilities and athlete concentration. Forty percent of the NSGBs have

open bidding for site selection. In this process, provinces usually set an agreement that if the centre is put in their province then they will provide a given level of financial resources. Regardless of whether a HPSC site is predetermined, and this 'cart before the horse' practice may warrant review, any such site should still be evaluated according to the General and sport-specific criteria to ensure appropriateness and to set a contract for future evaluation.

The final selection of the site will be made by the NSGB, with information for the evaluation coming from provincial bids, the degree of fulfillment of sport-specific criteria by each potential facility, and feedback from the athletes and coaches who would be involved in the centre. (Involved parties strongly agree that athletes and coaches also should be consulted prior to the selection of a site for their HPSC; see Table 8, Appendix B).

(iii) Utilization

According to MBO theory, if program participants are involved in the planning of the program then they will be more likely to accept the decisions regarding the final program plan (Price, 1978). If parties directly involved in the proposed HPSC have been involved in the generation of evaluation information for the Priority Setting (decision-making) then there is a higher probability that they will approve and comply with the ultimate decisions. Furthermore, a program will basically be more effective if it reflects the needs and desires of its participants.

(iv) Format

Again, athletes and coaches may be consulted regarding site selection via survey, hearings and interviews.

# V IMPLEMENTATION

## (i) Role of Evaluation

This stage of the model and the HPSC life cycle correspond to Alkin's (1976) Program Implementation. It comprises an evaluation of the extent to which the actual program reflects the plan. Evaluation decisions concern alterations or continuation. This stage also corresponds to Alkin's evaluation concept of Program Improvement, which implies monitoring. Information is required regarding the relative successes of all parts of the program, and to identify problems and consider solutions for the immediate modification and improvement of the program.

Furthermore, this stage of the evaluation model is directly related to Process evaluation. Its purpose is to identify problems in the program design after it has been implemented, and to provide information for the refinement of the design and its implementation; in other words, evaluation at this point serves as "process control".

## (ii) Evaluator and Decisionmaker

The evaluator for the prescribed evaluation should be the HPSC Manager (or related position), and this responsibility should be described in his/her contract. The advantages of having an internal evaluator include minimizing time and expense, knowledge of the program and the organization, and a liaison between the program and policy levels. A specific format for monitoring will enable the HPSC Manager to carry out effective evaluation.

Parties polled overwhelmingly support the existence of an Internal Management Committee for HPSC evaluation (see Table I2, Appendix B). They further agree that such a committee should include the NSGB, Centre Coach, Facility Host, Sport Canada,

and varyingly, the HPSC Manager and an athletes' representative. However, such a committee cannot realistically be expected to be responsible for, nor significantly involved in, the daily monitoring of the HPSC program. Ongoing generation of useful information for immediate program improvement would be jeopardized if it had to cater to, and wait for, every committee member.

All parties support the full involvement of the HPSC Manager in the evaluation of a centre. They also support the full involvement of the Centre Coach, an athletes' representative and to a lesser degree the NSGB (see Table 5, p. 95). However, these latter groups will be mainly involved as information generators and as decisionmakers (coach, NSGB) for broad decisions.

Regarding short term decisions for immediate program improvement, the HPSC Manager, with or without the Centre Coach (if relevant) will be the decisionmaker. Olson (1980) encourages the program manager to modify the program in accordance with the direction suggested by the generated information, and to not necessarily wait for decisions regarding change. This further diminishes the role of the Internal Management Committee in the monitoring of a HPSC because of the further time involved in a committee decision.

More broad decisions, including policy and financial concerns, should include the NSGB and perhaps the Sport Canada consultant as decisionmakers, depending on the urgency of the decision. The HPSC Manager should be organized enough to inform these other parties in advance of the decision, likewise they should be keeping up to date with the major HPSC concerns. All decisions, spontaneous and planned, should be recorded for summative evaluation input.

(iii) Utilization

Recall that, according to definition, "utilization occurs when there is an immediate, concrete, and observable effect on specific decisions and program activities..." (Patton, 1978, p. 24). Furthermore, the value of evaluation information affects utilization and is affected by the variety of sources, the validity, reliability (of collection) and presentation of the information. These factors are controlled by having set guidelines for collection, analysis and presentation.

The involvement of all concerned parties will foster acceptance of any decisions made. This study has found that (Table 4) up to this point, athletes and coaches at the HPSCs have been inconsistently involved in the evaluation of their respective centres and varyingly satisfied with that level of involvement.

TABLE 4

Reported Level of Involvement and Satisfaction With HPSC Evaluation

a) Level of Involvement in HPSC Evaluation

| | None | Some | Full |
|---|---|---|---|
| Athletes | 44.7% | 45.6 | 9.7 |
| Coaches | 6.1% | 28.6 | 64.3 |

b) Level of Satisfaction With this Involvement

| | None 1 | 2 | 3 | 4 | Alot 5 |
|---|---|---|---|---|---|
| Athletes | 20.2% | 20.2 | 27.3 | 26.3 | 6.0 |
| Coaches | 6.7% | 20.0 | 40.0 | 13.3 | 20.0 |

Table 5 presents data regarding the degree to which all the polled parties (athletes, coaches, HPSC Managers, NSGBs and Sport Canada consultants) support the involvement of the various HPSC partners in HPSC evaluation.

TABLE 5

Desired Level of Involvement of Certain Parties in HPSC Evaluation

| | None | Some | Full |
|---|---|---|---|
| a) NSGB | | | |
| Athletes | 3.9% | 48.0% | 48.0% |
| Coaches | 0 | 62.5 | 37.5 |
| HPSC Managers | 0 | 23.1 | 76.9 |
| NSGBs | 0 | 15.4 | 84.6 |
| Sport Canada | 0 | 14.3 | 85.7 |
| b) Coach | | | |
| Athletes | 0 | 22.5% | 77.6% |
| Coaches | 0 | 25.0 | 75.0 |
| HPSC Managers | 0 | 30.8 | 69.2 |
| NSGBs | 0 | 7.7 | 92.3 |
| Sport Canada | 0 | 14.3 | 85.7 |
| c) HPSC Manager | | | |
| Athletes | 0 | 25.4% | 69.6% |
| Coaches | 0 | 18.8 | 81.2 |
| HPSC Managers | 0 | 7.7 | 92.3 |
| NSGBs | 0 | 7.7 | 92.3 |
| Sport Canada | 0 | 0 | 100.0 |
| d) Sport Canada | | | |
| Athletes | 9.9% | 61.4% | 28.7% |
| Coaches | 0 | 73.3 | 26.7 |
| HPSC Managers | 7.7 | 61.5 | 30.8 |
| NSGBs | 0 | 69.2 | 30.8 |
| Sport Canada | 0 | 57.1 | 42.9 |
| e) Facility Host | | | |
| Athletes | 19.9% | 55.4% | 35.7% |
| Coaches | 0 | 43.8 | 56.2 |
| HPSC Managers | 8.3 | 16.7 | 75.0 |
| NSGBs | 0 | 76.9 | 23.1 |
| Sport Canada | 0 | 28.6 | 71.4 |
| f) Athletes | | | |
| Athletes | 1.0% | 35.9% | 63.1% |
| Coaches | 6.7 | 46.7 | 46.7 |
| HPSC Managers | 8.3 | 25.0 | 66.7 |
| NSGBs | 7.7 | 38.5 | 53.8 |
| Sport Canada | 0 | 57.1 | 53.8 |

Table 5 cont'd.

| | None | Some | Full |
|---|---|---|---|
| g) PSGB | | | |
| Athletes | 10.7% | 55.3% | 34.0 |
| Coaches | 13.3 | 46.7 | 40.0 |
| HPSC Managers | 0 | 61.5 | 38.5 |
| NSGBs | 15.4 | 69.2 | 15.4 |
| Sport Canada | 0 | 57.1 | 42.9 |
| h) Provincial Government | | | |
| Athletes | 22.5% | 55.9% | 21.7% |
| Coaches | 33.3 | 46.7 | 20.0 |
| HPSC Managers | 15.4 | 53.8 | 30.8 |
| NSGBs | 7.7 | 92.3 | 0 |
| Sport Canada | 0 | 71.4 | 28.6 |

The results pertain to HPSC evaluation in general, with no breakdown by monitoring and formal evaluation. Therefore the results are open to interpretation. With regard to monitoring during the implementation phase of the model, the role of the HPSC Manager has been described and supported; the Centre Coach may be involved in the most immediate decisions/modifications as deemed necessary by the Manager; the athletes/representative should be fully involved providing information and feedback to aid the decisionmaking; the facility host should be involved in relevant decisions; the NSGB's role has been described but it should be available regardless. Sport Canada, the PSGB and the Provincial Government should also be available as consultants and to provide required information.

(iv) Format

All parties agree with the notion that formal monitoring should occur quarterly, with 'formal' implying the use of set guidelines for the collection, analysis and presentation of evaluation information. The proposed format is presented below, followed by a description of each component:

| WHAT SHOULD BE | WHAT IS | DISCREPANCY INFORMATION | ACTION |
|---|---|---|---|
| General Criteria<br><br>Sport-Specific Criteria | Summary of Portfolios, which are based on Criteria | Identify Problem<br>- What<br>- Severity | Solution(s)<br>- What<br>- Who<br>- When |

FIGURE 9: Format for Formal Monitoring of HPSCs in Canada

Criteria: As utilized in the ex-ante evaluation of the appropriateness of the NSGB and the selected facility.

Sport-Specific Criteria: As developed in the process of establishing the HPSC, and added to during the operation of the program.

Criteria describe the ideal state and intended activities, including what and who is involved; thereby denoting what and who should be considered in the evaluation of each criteria. Recall that Standards reflect the HPSC program's objectives, that is, what should be (see Table I3, Appendix B):

Concentrated and expert training

Concentrated and expert coaching

Provision of sport-specific equipment and facilities

Access to professional advice and assistance in sportsmedicine

Access to professional advice and assistance in sport science

Coaching development in support of improved levels of athletic performance

Support services

These are provided via the attainment of the general/sport-specific criteria (ideal state, activities)

Portfolios: Basically files for the ongoing collection of information for eventual evaluation of the HPSC. The portfolios are based on the main components of a HPSC: athletes, coaches, facility, administration, sport science and sport-smedicine, and they serve as a primary reference for subsequent evaluation reports.

For the systematic collection of data bits regarding any of these components, related information must be separated and entered into the appropriate portfolio in an evaluation-useful format. Duplicated information, that is, aplicable to more than one portfolio, must be copied and entered into the appropriate portfolios.

The HPSC Manager must be constantly aware of potentially evaluation-useful information that can be entered directly, or by extrapolation, into the portfolios. The Manager must inform all program parties that the portfolios are available for entering comments regarding any aspect of the program.

The portfolios should include positive and negative data bits; examples of collection methods include oral testimonies, observations, transactions, media reports.

Actual evaluation occurs when the HPSC Manager summarizes the collected data bits with regard to each criteria; any lack of information should be noted and explained.

There is considerable support for the creation and maintenance of these portfolios by the HPSC Manager (see Tables I0d and e, Appendix B).

Discrepancy Information: A positive discrepancy between the intended and actual program operation(s) denotes a problem(s), which should be described and judged with regards to severity. A negative discrepancy denotes the lack of a, or a very minor, problem; this information is equally valuable.

--Action: Potential action statements include: a description of the immediate solution; the potential solutions to be decided on later (including when and by whom); a decision to delay consideration of the problem until the annual review; a decision to carry on as before. The depth of the description, including the language, what and who are involved and when the action is to be carried out, will affect the utilization of these decisions and this information.

Formal monitoring, utilizing the above chart, should be conducted quarterly with a variable review of all the criteria. That is, not all criteria need be evaluated every three months; it should be dependent on the information available (collected in the portfol-

los), immediate problems, and critical criteria which particularly require ongoing evaluation, for example, athlete employment, training, testing and financial concerns. However, every criterion should be evaluated at least semi-annually.

The HPSC Manager should proceed through the above steps, basically checking what criteria have and have not been met as intended (based on information from the respective portfolios). This formal monitoring task should also include the identification of potential problems that are not formally outlined in the criteria; one must consider intended and unintended results. If a problem is detected then the Manager must first objectively determine the ideal situation, then objectively relate the actual situation and this will, ideally, identify the real, if any, problem. Quarterly evaluation reports will, furthermore, be prepared by the HPSC Manager based on the above format (see Tables 10f and g, Appendix B). If a problem(s) is detected and acted upon prior to the quarterly monitoring reports then a full account of the procedures should be included in the quarterly report. These reports will be further utilized to update HPSC partners and as a basis for summative evaluation.

## VI RECONCILIATION - HPSC ANNUAL REVIEW

There is an observable discrepancy between the need for comprehensive summative program evaluation, which the literature supports (Alkin, 1976; Mead, 1980; Olson, 1982; Peterson and Gunn, 1984), and the past level and frequency of summative HPSC evaluation (see Table 2, Chapter II, p. 28). This highlights the critical need for more formal and consistent summative HPSC evluation than in the past, to foster more effective decisionmaking and value judgements.

### (i) Role of Evaluation

Reconciliation, or HPSC Annual Review, is directly related to Alkin's (1976) Program Certification in which information regarding objectives achievement and program impact facilitate decisions regarding the program as a whole. The corresponding CIPP component is Product evaluation, which is for the purpose of recycling decisions regarding the program's termination, continuation, modification or refocussing. It is basically discrepancy evaluation between the program outcomes (descriptions and judgements regarding impact) and the original objectives and intents (as defined through C, I and P evaluation).

(ii) Evaluator and Decisionmaker

It is strongly supported that the evaluator, or co-ordinator of the evaluation, should be the HPSC Manager (see Tables 10h, Appendix B). He/she will be responsible for compiling the annual report since he/she is most directly involved with the continuous generation of most of the evaluation information through program monitoring. Summaries of the quarterly formative evaluaton reports should be directly useful to the summative evaluation.

It should be noted at this point that, in fact, athletes at the HPSCs in Canada are equally divided in their support for formal summative evaluation at quarterly, semi-annual or annual intervals (26.7%, 28.7% and 23.7%, respectively). The Coaches are slightly more in favour of semi-annual formal reviews (42.9%), while the majority of HPSC Managers, NSGBs and Sport Canada consultants favour annual HPSC review (46.2%, 76.9% and 57.1%, respectively). Regardless of why the athletes and coaches support anything more frequent than an annual review, the evaluation literature indicates that summative evaluation, supported by ongoing program monitoring, need not occur more than ~~once a year~~ (a typical cycle for most programs). Since the developed prescriptive evaluation model proposes formal monitoring at quarterly intervals, the

summmative review of a centre is proposed to occur annually. In fact, the time frame for program review partly depends on the various partners' needs for a major review, especially that of Sport Canada as the ultimately accountable agent (Tibi, 1986). Monitoring may be effective enough to control the HPSC program until a review at the end of a longer period, for example, bi-annually.

The parties polled further support the distribution of this annual report to all partners involved in the HPSC, for the purpose of feedback regarding problems, solutions and decisions (see Table 101, Appendix B). It is at this point that the, so-called, Internal Management Committee is directly involved. The parties polled strongly favour the existence of an Internal Management Committee, with the NSO, Centre Coach, Facility Host, Sport Canada, HPSC Manager and and athletes' representative as members. They further propose that this committee monitor quarterly and review the HPSC program annually. However, the disadvantages of having an Internal Management Committee involved in monitoring have been discussed; and the expense and effort to coordinate a multi-party annual review has been censured by several parties (Heikkila, 1985; Landry, 1985; Tibi, 1986). The expense can be minimized by the proposed distribution of detailed summative evaluation reports. The possible distribution of the quarterly evaluation reports, for reference only, would facilitate the partners' comprehension of the summative evaluation report.

The actual decisionmaker(s) depends on the decisions to be made. Since the HPSC is not generally an annual program, its continuation versus termination is rarely an annual decision to be made. Rather, decisions regarding modification and refocussing are more common and thus, should include the influence of the program manager. However, the nature of the decisions, as they are accountable to many parties, must be recognized as program/policy decisions and therefore should include repre-

sentatives from the major partners (NSGB, Sport Canada, Provincial Government, facility; the HPSC Manager can represent the program itself, the athletes and/or the facility).

(iii) Utilization

To reiterate, acceptance, understanding and utilization of evaluation information depends on its being catered to its audience. Summaries of formative evaluation may have to be expanded for better informing parties external to the HPSC (better information for better comprehension).

Utilization of the final evaluation decisions will be fostered by the preliminary involvement of all parties, and their effective representation during the decisionmaking. This ultimate representation must be stressed throughout the program's monitoring.

(iv) Format

Although the HPSC Manager compiles and distributes the Annual Review report to obtain feedback regarding problems, solutions and decisions, the Manager (72.7%), Sport Canada (100%), NSGB (84.7%) and to a lesser extent the coaches (46.6%) support the gathering and analysis of the feedback by Sport Canada, for the purpose of final evaluation. This transfers the responsibility and effort from the HPSC Manager to an, ideally, objective body with evaluation expertise.

## VII EXTENDED EVALUATION CYCLE: PLANNING/PRIORITY SETTING/IMPLEMENTATION/ RECONCILIATION - HPSC PROGRAM ACTION PLANS (RESULTING FROM MONITORING AND ANNUAL REVIEW)

There is a continuation of the evaluation cycle that has not been previously identified in the HPSC life cycle. As an ongoing program, there must be continuous planning, evaluation and further planning in order for the program to continue effectively.

Decisionmaking is planning, and accepted plans are implemented for program improvement. This implementation is accompanied by formative and summative evaluation and further decisionmaking/planning.

# Chapter V

## SUMMARY AND RECOMMENDATIONS

A prescriptive model was developed to address the critical need for a formal guideline for the evaluation of HPSCs in Canada. As a legitimate high performance sport program within Sport Canada, the HPSC program must include the essential process of evaluation throughout its life cycle.

The purpose of the prescriptive model is to provide a comprehensive guideline by which NSGBs, with varying assistance from Sport Canada, may develop and implement an evaluation plan into their current and future HPSCs. Furthermore, such a guideline will facilitate the regulation, by Sport Canada, of evaluation throughout the HPSC program, including all sizes of NSGBs and types of HPSCs. The prescriptive model developed herein serves this guideline function, that is, being generally applicable and adaptable to various NSGBs and HPSCs.

The development of a model in this study was based on de Groot's (1969) four phase interpretative-theoretical methodology: Exploration, Analysis, Classification and Explanation. Information was collected regarding the past role of evaluation in HPSCs in Canada, and the potential role of program evaluation. The nature of the HPSC program was corresponded to appropriate evaluation models and a single prescriptive model emerged from the synthesis of the situation and the literature.

This integration highlighted four evaluation approaches that were particularly relevant in the development of an evaluation model for HPSCs in Canada. They include: microsystem evaluation, refering to what is to be evaluated; decision-oriented evaluation, concerning why evaluation occurs and when; evaluation by standards, which refers to the basis for the evaluation; and preordinate evaluation, implying the need for formal procedure in evaluation. These approaches to program evaluation, and the corresponding evaluation models, are intrinsic in the resultant prescriptive model, which is graphically represented by an adapted version of Dampier's (1979) Universal Program Planning and Evaluation Lifecycle.

Evaluation literature recommends that evaluation occur throughout the entire program life cycle, from the introduction of the idea through its planning and implementation to the reconciliation of the program objectives with the outcome. The prescriptive model describes the role of evaluation at each stage, as well as the proposed evaluators and decisionmakers; who assumes these roles depends on the decisions to be made and the extent of the evaluation required. The model prescribes the frequent involvement of all or many of the parties directly involved in the HPSCs (athletes, coaches, HPSC Manager, NSGB and Sport Canada consultant), in order to promote utilization and acceptance of the evaluation results and final decisions. The evaluation format for the respective evaluation stages is described, however only to the extent that it will generally guide the NSGBs through important evaluation procedures; the model as a comprehensive guideline is paramount to its being a definitive evaluation plan.

Recommendations

As a guideline, the prescriptive evaluation model developed in this study must be further adapted to the unique nature of each HPSC. There are many blanks to be completed in terms of the application of a definitive evaluation plan. The current model provides the framework for the development of evaluation plans.

Although the study has found that concerned parties support the use of the HPSC General Criteria in the planning and evaluation of a centre, the heretofore deficient utilization of these criteria may warrant their review. They were developed during the initial planning of the HPSC program concept and thus any or all of the criteria may now be obsolete or irrelevant. The Criteria must continue to reflect the Standards, which in turn reflect the Objectives of the HPSC program.

The evaluation processes within the HPSC program, especially Reconciliation, should be increasingly tied to the QPP (Hoffman, 1985). As a QPP program (that is, planned through the NSGB's QPP), the HPSCs will automatically be reviewed every four years (Tibi, 1986). Yet, ideally more frequent reviews can also fall within the QPP jurisdiction, thereby integrating an NSGB's high performance program evaluation. In the author's view, program evaluation must first become an established and accepted part of the independent HPSC program.

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# Appendix A

## PRESENTATION AND DISCUSSION OF OPINIONNAIRE

The intention of the Opinionnaire was to gather information from parties directly involved in the High Performance Sport Centres program in Canada regarding the actual and desired role of program evaluation in the Centres. Consequently the opinions of the parties polled would help to support or refute the identified problem (inadequate program evaluation to this point), and to influence and verify the development of a prescriptive evaluation model.

The self-constructed questionnaire (Van Dalen, 1979), was developed according to the type of information sought. Closed-form questions were intended to garner information regarding past and present evaluation practices (based on what the HPSC Policy outlines and what the evaluation literature recommends). Questions were also developed to elicit opinions regarding desired evaluation practices within the HPSC program (based on the evaluation literature and the components of a pilot prescriptive model); in essence, to determine the relative weight (opinion) of the actuality and importance of aspects derived from the literature. Three- and five-point semantic differential scales were incorporated to measure perception and opinions (Van Dalen, 1979).

The attached Opinionnaire is a copy of that which was distributed to the HPSC Managers. The other subjects - Athletes, Coaches, NSGB Respresentatives and Sport Canada Consultants - received variations of this Opinionnaire depending on the appropriateness and relevance of the questions to each party.

The intention of the author was to study the largest sample possible of the total population of parties directly involved in the HPSCs program. These parties were identified as the Athletes training at the centres, the Head Coach at each centre, the Manager at each centre, the NSGB Representative for the respective centres, and the Sport Canda Consultants responsible for NSGBs with HPSCs. The size of the sample depended on the co-operation of the NSGBs with HPSCs. Thirteen of a possible seventeen NSGBs provided the information required to contact and study the HPSCs (forty-two HPSCs in total).

The content validity of the Opinionnaire was introduced in the construction of the questions. The author first developed the questions according to the information sought, then in turn analyzed each question to determine if it was likely to elicit the information intended (Van Dalen, 1979). The validity was further tested via a pilot study of fifteen graduate students in Physical Education at the University of Ottawa (Oppenheim, 1966; Van Dalen, 1979). Adjustments were made to the respective Opinionnaires based on the feedback from this pilot study. The unique content of the Opinionnaires and the fact that they were being administered to the majority of the particular population, under study, which has a vested interest in the subject, supported the reliability component of the Opinionnaire.

It was known that there were varying numbers of athletes at each centre, and potentially a coach who doubled as the centre manager. Thus, the optimum of ten Opinionnaires were sent for the athletes at each centre with instructions for as many to complete it as possible. One Opinionnaire each was sent to the Coach and the Manager at each centre, and to the NSGB Representatives and the Sport Canada Consultants. The uncoded Opinionnaires were accompanied by a covering letter explaining the purpose of the study and the importance of the information being sought. The packages of ten

athletes Opinionnaires, one Coach's Opinionnaire and one Manager's Opinionnaire were sent to each centre to be distributed and collected by the Manager/Coach. Individual envelopes were provided to ensure confidentiality and one large pre-paid envelope per centre was provided for the return of the completed Opinionnaires.

Table I shows the number of Opinionnaires distributed and returned, and the frequency response rate. The particularly low response rate for the Athletes is due in part to the small number of athletes at the Centres (average 4.7 respondents per centre). This factor also affects the Total rate of response.

TABLE 6

Response Rate for HPSC Opinionnaires

| Respondent | N | % of Total N |
|---|---|---|
| Athletes | 420 | 24.5% |
| Coaches | 42 | 38.0 |
| HPSC Managers | 42 | 31.0 |
| NSGB Representatives | 13 | 100.0 |
| Sport Canada Consultants | 7 | 100.0 |
| Total | 524 | 29.0 |
| HPSCs | 42 | 52.4 |

November 7, 1986

Dear HPSC Manager

As a major requirement for the completion of my Masters of Physical Education (Admin.) program at the University of Ottawa, I have chosen for my thesis to study the evaluation of High Performance Sport Centres (HPSCs) in Canada. My research has revealed that, throughout their short life span to date, there has been relatively little attention paid to the evaluation of HPSCs. The purpose of my thesis is to develop a model and guideline by which HPSCs can be efficiently and effectively evaluated.

The intended outcome of my study is to have an evaluation guideline which National Sport Organizations (NSOs) may adopt and/or adapt for their use in consideration of their HPSCs.

As part of my study I would like to administer an opinionnaire to various parties involved in HPSCs. I have obtained consent to contact you from your NSO.

The purpose of the opinionnaire is to obtain verification, and a measure of relative importance, of the main aspects of my evaluation model guidelines, as well as to obtain feedback regarding porposed evaluation methods.

The questions have been designed and addressed specifically to you - the athlete, coach, HPSC manager or NSO representative. For each question I am interested in your opinion in particular because of your unique situation and experience.

There are no wrong answers and the information will not jeopardize your situation at the HPSC. Your confidentiality, and that of the HPSC, will be ensured. This is a study of the overall HPSC program in Canada, and is not particularly concerned with individual centres.

Please read each question carefully. The opinionnaire will not take long to complete, but your sincere opinion will be most valuable to my study and the future of HPSCs in Canada.

Thank you for your support.

Yours truly,

Alison Armstrong

Alison Armstrong

# MANAGER's Opinionnaire

INSTRUCTIONS

1. Make sure you have the appropriate opinionnaire:
   ATHLETE or MANAGER or COACH
2. Read each question carefully and respond with your personal opinion. Confidentiality is guaranteed.
3. Seal your opinionnaire in the envelope provided and return it with the other completed and collected opinionnaires.

Thank you for your valuable time and support.

1. Please indicate your position at the HPSC (high performance sport centre)? (√)

   Full-time/Resident HPSC Manager ☐

   On-site Coach and Acting HPSC Manager ☐

   Travelling Coach and Acting HPSC Manager ☐

2. As outlined in Sport Canada's HPSC Policy, the following services define a HPSC.

| a) Indicate (√) whether these services are provided at your HPSC. | | | b) Indicate (√) whether these services should be provided at a HPSC. | |
|---|---|---|---|---|
| Yes | No | | Yes | No |
| ___ | ___ | concentrated and expert training | ___ | ___ |
| ___ | ___ | concentrated and expert coaching | ___ | ___ |
| ___ | ___ | provision of sport specific equipment and facilities for such training | ___ | ___ |
| ___ | ___ | access to professional advice and assistance in the field of sport medicine | ___ | ___ |
| ___ | ___ | access to professional advice and assistance in the field of sport sciences (eg. physiology, psychology, biomechanics) | ___ | ___ |
| ___ | ___ | coaching development in support of improved levels of athletic performance | ___ | ___ |

List any other services that you think should be provided:

_____

_____

_____

_____

3. a) Did your National Sport Organization complete a statement of rationale, outlining the implications and consequences of a HPSC to the organization's long range high performance plan? (√)

___ Yes

___ No

___ Do Not Know

b) Should a National Sport Organization complete such a statement of rationale prior to establishing a HPSC ? (√)

___ Yes

___ No

___ No Opinion

4. a) Should a National Sport Organization develop sport-specific criteria, to be used as standards for the establishment and future evaluation of a HPSC? (see last page of Opinionnaire for Sample of general criteria) (✓)

____ Yes
____ No
____ No Opinion

b) Should input into the development of these criteria come from the following partners in a HPSC? (✓)

| Yes | No | |
|---|---|---|
| ___ | ___ | Athlete |
| ___ | ___ | Coach |
| ___ | ___ | HPSC Manager |
| ___ | ___ | National Sport Organization |
| ___ | ___ | Provincial Sport Organization |
| ___ | ___ | Sport Canada |
| ___ | ___ | Provincial Government Representative for Sport |
| ___ | ___ | Other(s), list them: |

_____
_____
_____

5. a) Before a HPSC is established, should the following people be consulted? (✓)

| | Yes | No | No Opinion |
|---|---|---|---|
| i Athletes | ☐ | ☐ | ☐ |
| ii Coach(es) | ☐ | ☐ | ☐ |

b) Presented with the option of several locations, should the following people be consulted before selecting the locale of a HPSC? (✓)

| | Yes | No | No Opinion |
|---|---|---|---|
| i Athletes | ☐ | ☐ | ☐ |
| ii Coach(es) | ☐ | ☐ | ☐ |

6. Program evaluation ideally consists of two types of review: formal evaluation, including a comprehensive review of the achievement of program goals, and less formal monitoring of the progress and operations of a program.

a) i How often has your HPSC been formally evaluated? (√)

ii How often do you think your HPSC should be formally evaluated? (√)

| | | |
|---|---|---|
| ____ | monthly | ____ |
| ____ | quarterly | ____ |
| ____ | semi-annually | ____ |
| ____ | annually | ____ |
| ____ | bi-annually | ____ |
| ____ | never | ____ |
| ____ | Do Not Know/ No Opinion | ____ |

b) i How often has your HPSC been informally monitored, for example by participant feedback and progress reports? (√)

ii How often do you think your HPSC should be informally monitored? (√)

| | | |
|---|---|---|
| ____ | monthly | ____ |
| ____ | quarterly | ____ |
| ____ | semi-annually | ____ |
| ____ | annually | ____ |
| ____ | bi-annually | ____ |
| ____ | never | ____ |
| ____ | Do Not Know/ No Opinion | ____ |

7. Indicate the type of involvement you believe each of the following partners <u>should</u> have in the evaluation of your HPSC. (✓)

| | | No Involvement | Some Involvement (eg. consultation) | Full Involvement |
|---|---|---|---|---|
| i | National Sport Organization | ☐ | ☐ | ☐ |
| ii | National Coach | ☐ | ☐ | ☐ |
| iii | HPSC Manager | ☐ | ☐ | ☐ |
| iv | Sport Canada | ☐ | ☐ | ☐ |
| v | Facility Host | ☐ | ☐ | ☐ |
| vi | Athletes (or Rep.) | ☐ | ☐ | ☐ |
| vii | Provincial Sport Organization | ☐ | ☐ | ☐ |
| viii | Provincial Government Representative for Sport | ☐ | ☐ | ☐ |

8. Sport Canada's HPSC Policy recommends that evaluation of a HPSC be carried out by a formal Internal Management Committee, comprised of the various partners in a HPSC.

Does your HPSC have a formal Internal Management Committee? (√)

____ Yes
____ No (proceed to #11)
____ Do Not Know (proceed to #11)

9. a) Indicate the actual membership of this Committee. (√)

____ National Sport Organization
____ Provincial Sport Organization
____ National Coach
____ Facility Host
____ Provincial Government Representative for Sport
____ Other(s), list them:

_____
_____
_____

b) i How often do they, as a group, formally evaluate your HPSC? (√)

ii How often do they, as a group, informally monitor the progress of your HPSC? (√

| | | |
|---|---|---|
| ____ | monthly | ____ |
| ____ | quarterly | ____ |
| ____ | semi-annually | ____ |
| ____ | annually | ____ |
| ____ | bi-annually | ____ |
| ____ | never | ____ |
| ____ | Do Not Know | ____ |

10. Do you think your HPSC should have a formal Internal Management Committee to evaluate the HPSC's activities? (✓)

____ Yes
____ No (proceed to #13)
____ No Opinion (proceed to #13)

11. a) What membership would you prefer for a formal Internal Management Committee? (✓)

____ National Sport Organization
____ Provincial Sport Organization
____ National Coach
____ Facility Host
____ Provincial Government Representative for Sport
____ Other(s), list them:

_____

_____

_____

b) i How often should an Internal Management Committee formally evaluate your HPSC? (✓)

ii How often should an Internal Management Committee informally monitor the progress of your HPSC? (✓)

| | | |
|---|---|---|
| ____ | monthly | ____ |
| ____ | quarterly | ____ |
| ____ | semi-annually | ____ |
| ____ | annually | ____ |
| ____ | bi-annually | ____ |
| ____ | never | ____ |
| ____ | No Opinion | ____ |

12. Listed below are certain tasks which contribute to the evaluation process. With specific reference to the evaluation of HPSCs, indicate your support for each task. (√)

| | Do Not Support 1 | 2 | 3 | 4 | Completely Support 5 |
|---|---|---|---|---|---|
| a) completion of a statement of rationale, by the NSO, outlining the implications and consequences of a HPSC to the organization and its long range plan. | ☐ | ☐ | ☐ | ☐ | ☐ |
| b) use of established criteria as standards for the establishment and evaluation of the HPSC (see sample next page). | ☐ | ☐ | ☐ | ☐ | ☐ |
| c) development of additional sport-specific criteria for HPSC establishment and evaluation. | ☐ | ☐ | ☐ | ☐ | ☐ |
| d) creation of files for the informal compilation of information relevant to aspects of the HPSC. | ☐ | ☐ | ☐ | ☐ | ☐ |
| e) development and maintenance of these files by the HPSC Manager. | ☐ | ☐ | ☐ | ☐ | ☐ |
| f) preparation of quarterly evaluation reports, based on the files. | ☐ | ☐ | ☐ | ☐ | ☐ |
| g) compilation of these reports by the HPSC Manager. | ☐ | ☐ | ☐ | ☐ | ☐ |
| h) compilation of an annual report by the HPSC Manager (based on files and reports). | ☐ | ☐ | ☐ | ☐ | ☐ |
| i) distribution of this annual report to all parties involved in the HPSC, for the purpose of feedback re. problems, solutions and decisions. | ☐ | ☐ | ☐ | ☐ | ☐ |
| j) gathering and analysis of feedback and reports by Sport Canada, for the purpose of final evaluation. | ☐ | ☐ | ☐ | ☐ | ☐ |

The following is a description of the High Performance Sport Centres General Criteria, as outlined in Sport Canada's HPSC Policy.

These criteria reflect items that can be considered, and subsequently should be met, in the establishment and operation of an effective HPSC.

ATHLETES

Living (location)
Education (variety, access)
Employment (opportunity, flexibility)
Social (recreation, religion)
Finance (athlete assistance)
Training

COACHES

Employment (support, responsibility, authority)
Assistants
Professional Development
Athlete Identification (contact)
Support Staff (administration, science, medical)
Orientation (facility, authority, communication networks)
Facilities (access, quality)

FACILITY

Location
Training Facilities/Equipment (quality, access, maintenance)
Support (eg. A-V equipment, lockers, science testing, medical care)

ADMINISTRATION

Office/Support (for coach)
Management (formal committee to monitor/plan)
Records (maintenance)
Public Relations
Communication (among HPSC partners - facility, Sport Canada, NSO, etc.)
Contract (re. authority and commitment)

SPORT SCIENCE

Testing (facilities, personnel, commitment, education)
Monitoring
Talent Identification (development of field tests)
Administration (records, files)

MEDICAL/PARAMEDICAL

Facility (appropriate, conveniently available)
Staff (commitment from professionals, sport-specific education)
Administration (records, priority system, budget)

# Appendix B

## PRESENTATION OF OPINIONNAIRE RESULTS

### TABLE 7

Athlete/Coach Consultation Prior to HPSC Establishment

a) Before a HPSC is Established, Should the Athletes Be Consulted?

| | Yes | No | No Opinion |
|---|---|---|---|
| Athlete | 93.1% | 3.0% | 4.0% |
| Coach | 78.6 | 14.3 | 7.1 |
| HPSC Manager | 83.3 | 0 | 16.7 |
| NSGB | 83.3 | 16.7 | 0 |
| Sport Canada | 100.0 | 0 | 0 |

b)....Should the Coaches Be Consulted?

| | Yes | No | No Opinion |
|---|---|---|---|
| Athlete | 99.0% | 0 | 1.0 |
| Coach | 100.0 | 0 | 0 |
| HPSC Manager | 100.0 | 0 | 0 |
| NSGB | 92.3 | 7.7 | 0 |
| Sport Canada | 100.0 | 0 | 0 |

TABLE 8

Athlete/Coach Consultation Prior to Confirmation of HPSC Locale

a) Before the HPSC Locale is Set, Should the Athletes Be Consulted?

| | Yes | No | No Opinion |
|---|---|---|---|
| Athlete | 87.0% | 6.0% | 7.0% |
| Coach | 86.7 | 0 | 13.3% |
| HPSC Manager | 90.0 | 0 | 10.0 |
| NSGB | 69.2 | 30.8 | 0 |
| Sport Canada | 85.7 | 0 | 14.3 |

b)....Should the Coaches Be Consulted?

| | Yes | No | No Opinion |
|---|---|---|---|
| Athlete | 92.2% | 2.9% | 4.9% |
| Coach | 100.0 | 0 | 0 |
| HPSC Manager | 100.0 | 0 | 0 |
| NSGB | 92.3 | 7.7 | 0 |
| Sport Canada | 100.0 | 0 | 0 |

TABLE 9

Statement of Rationale

a) Was a Statement of Rationale Completed Before Your HPSC Was Established?

| | Yes | No |
|---|---|---|
| HPSC Manager | 100.0% | 0 |

b) Should a Statement of Rationale Be Completed Before the Establishment of an HPSC?

| | Yes | No |
|---|---|---|
| HPSC Manager | 100.0% | 0 |
| NSGB | 100.0 | 0 |
| Sport Canada | 100.0 | 0 |

TABLE 10

Support for the Potential Inclusion of the Following Tasks In HPSC Evaluation

| | No Support | | | | Full Support |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| a) Statement of Rationale | | | | | |
| Coach | 0 | 0 | 20.0% | 26.7% | 53.3% |
| HPSC Manager | 0 | 0 | 9.1 | 0 | 90.9 |
| NSGB | 0 | 0 | 0 | 15.4 | 84.6 |
| Sport Canada | 0 | 0 | 14.3 | 0 | 85.7 |
| b) Use of General Criteria | | | | | |
| Coach | 6.7% | 0 | 6.7% | 46.7% | 40.0% |
| HPSC Manager | 0 | 0 | 9.1 | 27.3 | 63.6 |
| NSGB | 0 | 0 | 16.7 | 16.7 | 66.7 |
| Sport Canada | 0 | 0 | 0 | 28.6 | 71.4 |
| c) Use of Sport-Specific Criteria | | | | | |
| Coach | 0 | 7.1% | 28.6% | 21.4% | 38.5% |
| HPSC Manager | 0 | 0 | 18.2 | 18.2 | 63.6 |
| NSGB | 8.3 | 0 | 0 | 8.3 | 83.3 |
| Sport Canada | 0 | 0 | 0 | 14.3 | 85.7 |
| d) Creation of Portfolios | | | | | |
| Coach | 7.7% | 6.7% | 46.7% | 15.4% | 23.1% |
| HPSC Manager | 0 | 9.1 | 18.2 | 0 | 72.7 |
| NSGB | 7.7 | 7.7 | 15.4 | 15.4 | 53.8 |
| Sport Canada | 0 | 0 | 28.6 | 0 | 71.4 |
| e) Development and Maintenance of Portfolios by the HPSC Manager | | | | | |
| Coach | 6.7% | 6.7% | 46.7% | 20.0% | 20.0% |
| HPSC Manager | 0 | 9.1 | 18.2 | 9.1 | 63.6 |
| NSGB | 7.7 | 7.7 | 15.4 | 23.1 | 46.2 |
| Sport Canada | 0 | 0 | 14.3 | 14.3 | 71.4 |

TABLE 10 cont'd.

| | No Support | | | | Full Support |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| f) Preparation of Quarterly Evaluation Reports | | | | | |
| Coach | 13.3% | 13.3% | 53.3% | 13.3% | 6.7% |
| HPSC Manager | 0 | 9.1 | 36.4 | 0 | 54.5 |
| NSGB | 15.4 | 0 | 7.7 | 38.5 | 38.5 |
| Sport Canada | 0 | 16.7 | 33.3 | 0 | 50.0 |
| g) Preparation of Quarterly Evaluation Reports by the HPSC Manager | | | | | |
| Coach | 6.7% | 6.7% | 46.7% | 26.7% | 7.7% |
| HPSC Manager | 0 | 0 | 27.3 | 18.2 | 54.5 |
| NSGB | 16.7 | 0 | 8.3 | 41.7 | 33.3 |
| Sport Canada | 0 | 14.3 | 0 | 14.3 | 71.4 |
| h) Compilation of Annual Report by the HPSC Manager | | | | | |
| Coach | 0 | 0 | 20.0% | 40.0% | 40.0% |
| HPSC Manager | 0 | 0 | 18.2 | 9.1 | 72.7 |
| NSGB | 0 | 0 | 0 | 7.7 | 92.3 |
| Sport Canada | 0 | 0 | 14.3 | 0 | 85.7 |
| i) Distribution of Annual Report to HPSC Partners | | | | | |
| Coach | 0 | 0 | 13.3% | 40.0% | 46.7% |
| HPSC Manager | 0 | 0 | 18.2 | 9.1 | 72.7 |
| NSGB | 0 | 0 | 0 | 15.4 | 84.6 |
| Sport Canada | 0 | 14.3 | 0 | 0 | 85.7 |
| j) Feedback Reports Collected and Analysed by Sport Canada | | | | | |
| Coach | 0 | 6.7% | 46.7% | 33.3% | 13.3% |
| HPSC Manager | 9.1 | 0 | 18.2 | 18.2 | 54.5 |
| NSGB | 0 | 7.7 | 7.7 | 46.2 | 38.5 |
| Sport Canada | 0 | 0 | 0 | 0 | 100.0 |

TABLE 11

Support for the Involvement of the Following Parties in the Development of Sport-Specific Criteria

| | Yes | No |
|---|---|---|
| a) Athlete | | |
| HPSC Manager | 91.7% | 8.3% |
| NSGB | 100.0 | 0 |
| Sport Canada | 100.0 | 0 |
| b) Coach | | |
| HPSC Manager | 83.3% | 16.7% |
| NSGB | 92.3 | 7.7 |
| Sport Canada | 100.0 | 0 |
| c) HPSC Manager | | |
| HPSC Manager | 91.7% | 8.3% |
| NSGB | 100.0 | 0 |
| Sport Canada | 85.7 | 14.3 |
| d) NSGB | | |
| HPSC Manager | 100.0% | 0 |
| NSGB | 100.0 | 0 |
| Sport Canada | 100.0 | 0 |
| e) PSGB | | |
| HPSC Manager | 100.0% | 0 |
| NSGB | 61.5 | 38.5 |
| Sport Canada | 85.7 | 14.3 |
| f) Sport Canada | | |
| HPSC Manager | 91.7% | 8.3% |
| NSGB | 92.3 | 7.7 |
| Sport Canada | 85.7 | 14.3 |
| g) Provincial Government | | |
| HPSC Manager | 100.0% | 0 |
| NSGB | 61.5 | 38.5 |
| Sport Canada | 85.7 | 14.3 |

TABLE 11 cont'd.

| | Yes | No |
|---|---|---|
| h) Others | | |
| HPSC Manager | 100.0% | 0 |
| NSGB | 30.8 | 69.2 |
| Sport Canada | 42.9 | 57.1 |

TABLE 12

Support for an Internal Management Committee for an HPSC

| | Yes | No | No Opinion |
|---|---|---|---|
| Coach | 69.2% | 20.0% | 6.7% |
| HPSC Manager | 83.3 | 8.3 | 8.3 |
| NSGB | 100.0 | 0 | 0 |
| Sport Canada | 100.0 | 0 | 0 |

TABLE 13

Support for the Provision of Various Services at One's HPSC

| | Yes | No |
|---|---|---|
| a) Training | | |
| Athlete | 100.0% | 0 |
| Coach | 100.0 | 0 |
| HPSC Manager | 100.0 | 0 |
| b) Coaching | | |
| Athlete | 100.0% | 0 |
| Coach | 100.0 | 0 |
| HPSC Manager | 100.0 | 0 |
| c) Equipment/Facilities | | |
| Athlete | 100.0% | 0 |
| Coach | 100.0 | 0 |
| HPSC Manager | 100.0 | 0 |
| d) Sportsmedicine | | |
| Athlete | 94.1% | 5.9% |
| Coach | 100.0 | 0 |
| HPSC Manager | 100.0 | 0 |
| e) Sport Science | | |
| Athlete | 98.0% | 2.0% |
| Coach | 92.9 | 7.1 |
| HPSC Manager | 92.3 | 7.7 |
| f) Coaching Development | | |
| Athlete | 99.0% | 1.0% |
| Coach | 92.3 | 7.7 |
| HPSC Manager | 100.0 | 0 |