



12-1-1970

A Survey of Cross Country Programs and Training Methods in Canadian Colleges and Universities

David W. Guss

[How does access to this work benefit you? Let us know!](#)

Follow this and additional works at: <https://commons.und.edu/theses>

Recommended Citation

Guss, David W., "A Survey of Cross Country Programs and Training Methods in Canadian Colleges and Universities" (1970). *Theses and Dissertations*. 3573.

<https://commons.und.edu/theses/3573>

This Thesis is brought to you for free and open access by the Theses, Dissertations, and Senior Projects at UND Scholarly Commons. It has been accepted for inclusion in Theses and Dissertations by an authorized administrator of UND Scholarly Commons. For more information, please contact und.common@library.und.edu.

T1970
996

A SURVEY OF CROSS COUNTRY PROGRAMS AND TRAINING METHODS
IN CANADIAN COLLEGES AND UNIVERSITIES

by

David W. Guss

Bachelor of Science, University of North Dakota 1965

A Thesis

Submitted to the Faculty

of the

University of North Dakota

in partial fulfillment of the requirements

for the degree of

Master of Science

Grand Forks, North Dakota

December
1970

448150

A SURVEY OF CROSS COUNTRY PROGRAMS AND TRAINING METHODS
IN CANADIAN COLLEGES AND UNIVERSITIES

David W. Guss, Master of Science

The University of North Dakota, 1970

Faculty Advisor: Professor Walter C. Koenig

The purpose of this study was to determine current practices and training methods in cross country programs in selected Canadian colleges and universities. Questionnaires were sent out to forty-six colleges and universities, and 38, or 82.6 percent, were returned. Twelve, or 31.5 percent, of the schools indicated that they had no cross country program.

The questionnaire was used to provide general information, reveal policies and practices, determine how athletes were trained and analyze the strengths and weaknesses of the cross country programs in these selected Canadian colleges and universities.

An analysis of the results of the survey indicated that:

1. Canadian college and university cross country programs were not adequate because of the lack of a year-round track program, competition and interest on the part of the athletes.

2. The best methods of creating interest in cross country were through use of bulletin board material, newspaper publicity and travel involved in competition.

3. The important conditioning phases of running were endurance, interval training and hill training. Most coaches based their training programs on fartlek, interval, pace and hill training.

4. There appeared to be little agreement among the coaches regarding the strongest and weakest features of the cross country and training programs.

5. Similar policies and practices regarding organization of meets and training procedures were evident in a majority of the responses.

6. The information accumulated could well serve as a guide or reference to those cross country coaches who desire to improve and re-evaluate their own cross country programs.

7. Finally, coaches and administrators should continue to be instrumental in the development of cross country programs by increasing the budget, providing better facilities and creating more athletic interest in Canadian colleges and universities.

This thesis submitted by David W. Guss in partial fulfillment of the requirements for the Degree of Master of Science from the University of North Dakota is hereby approved by the Faculty Advisory Committee under whom the work has been done.

W. C. Koenig

(Chairman)

John L. Guaday

James R. Peterson

A. William Johnson

Dean of the Graduate School

Permission

Title A SURVEY OF CROSS COUNTRY PROGRAMS AND TRAINING METHODS IN
CANADIAN COLLEGES AND UNIVERSITIES

Department Physical Education

Degree Master of Science

In presenting this thesis in partial fulfillment of the requirements for a graduate degree from the University of North Dakota, I agree that the Library of this University shall make it freely available for inspection. I further agree that permission for extensive copying for scholarly purposes may be granted by the professor who supervised my thesis work or, in his absence, by the Chairman of the Department or the Dean of the Graduate School. It is understood that any copying or publication or other use of this thesis or part thereof for financial gain shall not be allowed without my written permission. It is also understood that due recognition shall be given to me and to the University of North Dakota in any scholarly use which may be made of any material in my thesis.

Signature

Waverly W. Guss

Date

December, 1970

ACKNOWLEDGMENTS

The writer wishes to express his sincere gratitude to all persons whose time, interest and effort made this study possible.

Appreciation is further extended to Mr. Walter Koenig, the director of this thesis, for his helpful suggestions and constant guidance and assistance throughout the completion of this study.

A special thanks is extended to Dr. John Quaday for the helpful suggestions and criticism, and to Dr. Russell Peterson for serving as a member of my committee.

TABLE OF CONTENTS

	Page
ACKNOWLEDGMENTS	iv
LIST OF TABLES	vi
ABSTRACT	vii
Chapter	
I. INTRODUCTION	1
The Problem and Its Scope	
Delimitation	
Limitation	
Definition of Terms	
Related Literature	
II. METHODOLOGY	17
III. ANALYSIS AND TREATMENT OF DATA	19
IV. DISCUSSION	39
V. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS	44
Summary	
Conclusions	
Recommendations	
APPENDIX A	47
APPENDIX B	54
APPENDIX C	56
REFERENCES	59

LIST OF TABLES

Table	Page
1. Qualifications of Coaches	20
2. Coaching Experience	20
3. Total Number of Boys Participating on Cross Country Teams	21
4. Methods of Determining Team Membership	22
5. Methods Used to Create Interest in Cross Country	23
6. Weakest Features of Cross Country Program	23
7. Strongest Features of Cross Country Programs	24
8. Estimated Cost of the Cross Country Program Per Year	25
9. Number of Varsity Meets Participated in During a Season	26
10. Meet Information	27
11. Facilities Used for Cross Country Meets	28
12. Conference Meet Regulations	29
13. When Practices are Scheduled	30
14. Length of Practice Periods	30
15. Training Procedures	32
16. Types of Weight Training Programs	33
17. Types of Summer Programs	33
18. Training Techniques Used	35
19. Phases of Running as Rated by the Coaches	36
20. Opinions of the Strongest Features of the Training Program	37
21. Opinions of the Weakest Features of the Training Program	38

ABSTRACT

The purpose of this study was to determine current practices and training methods in cross country programs in selected Canadian colleges and universities. Questionnaires were sent out to forty-six colleges and universities, and 38, or 82.6 percent, were returned. Twelve, or 31.5 percent, of the schools indicated that they had no cross country program.

The questionnaire was used to provide general information, reveal policies and practices, determine how athletes were trained and analyze the strengths and weaknesses of the cross country programs in these selected Canadian colleges and universities.

An analysis of the results of the survey indicated that:

1. Canadian college and university cross country programs were not adequate because of the lack of a year-round track program, competition and interest on the part of the athletes.
2. The best methods of creating interest in cross country were through use of bulletin board material, newspaper publicity and travel involved in competition.
3. The important conditioning phases of running were endurance, interval training and hill training. Most coaches based their training programs on fartlek, interval, pace and hill training.
4. There appeared to be little agreement among the coaches regarding the strongest and weakest features of the cross country and training programs.

5. Similar policies and practices regarding organization of meets and training procedures were evident in a majority of the responses.

6. The information accumulated could well serve as a guide or reference to those cross country coaches who desire to improve and re-evaluate their own cross country programs.

7. Finally, coaches and administrators should continue to be instrumental in the development of cross country programs by increasing the budget, providing better facilities and creating more athletic interest in Canadian colleges and universities.

CHAPTER I

INTRODUCTION

Cross country running is one of man's oldest activities. It started out originally as a means of getting from place to place in search of the necessities of life. Running became in many ways a matter of life and death. Today, running is one of the most strenuous ways of keeping in shape, and is probably the best way to maintain good body condition and muscle tone. However, in recent years, cross country has gained stature as an individual sport. The cross country technique is important for those who participate in the sport competitively.

Cross country is even more individual than track running because of the remoteness of much of the course. A man running virtually alone on a cross country course has a difficult time convincing himself that it is worth his trouble.

As Fred Wilt (1965), noted writer on track and field, stated:

Men might run short distances slowly and on occasion for fun, but the answer must be sought on a different basis when this question relates to competitive running. It is impossible to comprehend or identify all the innumerable cross-currents of social influences, racial traditions, frustrations, beliefs, aggressions, impulses, fears, and insecurities that may motivate men to competitive racing. There is seldom a single causal motive that can be isolated as exclusively responsible.

Today, there has been tremendous emphasis placed on cross country running in athletic circles. To a middle distance and long

distance runner, the season is considered absolutely essential. Over the past years, cross country running has gained wide acceptance as a training program for all track athletes. However, there are many methods in cross country training that coaches throughout the country have used in their programs. Some have appeared to be controversial, according to Nett (1965):

Educated coaches and athletes, together with medical doctors in the world of sports, today, are of the general opinion that modern training methods should be in conformity with well-established biological laws. Current training methods should be analyzed and checked scientifically to determine those which are really necessary as opposed to others which are purely decorative or even harmful. And in many countries, for several years, scientists and coaches have been working together to that end.

All in all, cross country running plays an important and integral part in the track and field scene. However, the writer believes that any training method used for the cross country athlete has to be adapted to his environment and to the physical characteristics of the athlete in order that it may contribute to the over-all well-being.

The Problem and Its Scope

Since cross country was relatively new in the Canadian colleges and universities regarding competition between schools, the writer wondered how the various cross country coaches conducted their programs and how they trained their athletes. As in all coaching, it is a known fact that some coaches conduct well organized programs and enjoy a great deal of success. Often new coaches seem to have problems in conducting their programs. Frequently a new coach, or for that matter an experienced coach, is confronted with the problem of finding the best way to conduct or upgrade his program.

The purpose of the study was to determine current practices in the cross country programs and methods of training in selected Canadian colleges and universities. In the writer's opinion, it was felt that this study would: (1) provide information to determine how colleges and universities in Canada conduct their cross country programs, (2) reveal policies and practices of Canadian colleges and universities which have cross country programs, (3) determine how Canadian cross country coaches train their athletes, and (4) analyze the strengths and weaknesses of the cross country programs in these selected Canadian colleges and universities.

Since there seems to be a limited amount of information concerning cross country running, the writer felt that a study would make a valuable contribution to the many coaches who are not fully acquainted with the various cross country programs and training techniques practiced by their colleagues.

The material presented in this paper can easily be used as a guide or for reference.

Delimitation

The findings of this survey were dependent upon the following delimitations:

1. The schools selected, except two, belong to the Canadian Intercollegiate Athletic Union. The two exceptions are classified as independents.
2. In utilizing the questionnaire technique for the collection of data, exact personal attitude could not be determined.

3. Only the persons considered head cross country or track coaches in the schools were queried.

Limitation

This study was limited to the shortcomings of the questionnaire method such as the possibility of misinterpretation or suggestiveness of the questions. This may have affected the responses.

However, the questionnaire method represented the most feasible means of conducting a study of this nature. It was impossible to interview all of the coaches even though such an approach might have yielded more valid and reliable data.

Definition of Terms

Cross Country Running.--the distance covered in cross country running varies from one mile to six miles, depending on the age of the contestants.

Canadian Intercollegiate Athletic Union.--the governing body of athletics for Canadian colleges and universities.

Canadian Track and Field Association.--the governing body for amateur track and field competition in Canada.

Fartlek.--a system of training meaning "speed play," which calls for "running" variable speeds and distances as one feels the need or urge to run.

Interval Training.--a system of training which requires continuous changes of pace at fixed times and over fixed distances.

Weight Training Program.--a supervised training program employing weights and barbells to improve an athlete's strength and performance.

Institutions.--the term used in this study in referring to Canadian colleges and universities.

Related Literature

From earliest time, though no training instructions were then developed, man has taken part in sports of some kind. One of the most primitive forms of athletic activity regarded as a sport was cross country running. Fred Wilt (1965) pointed out that cross country running occupied a prominent place in the ancient Olympic games and has continued to grow in popularity and in the number of competitors throughout the world with the passage of time.

Cross country running is considered to be a tremendous individual and team sport offering any young man, regardless of physical ability, the opportunity to engage in competition and to excel. There is also the pure fun of participation in a fast-growing and interesting sport. Calish and Wallack (1960) said that cross country offered a boy three benefits aside from the physical improvement, incentive and pure fun of participation offered by other sports. These were:

1. an activity in which a boy must force himself to perform at near maximum levels,
2. an activity in which the boy can easily see his own abilities and come close to measuring his capacities,
3. an atmosphere in which the boy must be willing to stand on his own feet without benefit of help, do his best and then live up to it.

The writer believes that such benefits are of utmost value in an individual's education.

Rosandich (1967) outlined ten advantages of participating in cross country:

1. provides an opportunity to develop an individual's physical powers to the fullest,

2. develops responsiveness to group discipline,
3. develops lasting friendships,
4. develops self-confidence,
5. develops respect for rules and duly constituted authority.
6. gives opportunities for development of co-operation, resourcefulness, gameness, initiative, and unselfishness,
7. enables an athlete to see other communities and get acquainted with other boys through travel,
8. gives opportunity to participate in an activity which parallels many later life experiences,
9. increases an individual's circle of friends and acquaintances,
10. may help oneself through college.

To the uninitiated, these advantages may seem simple, but any cross country coach knows that, to get high school and college boys to run two to six miles consistently well in competition, he must have every educational resource available.

In a personal interview with Mr. Jim Daley (1970), noted Canadian track authority, the statement was made that, in cross country running, nobody loses, not even the last runner, providing he does not quit running and shows improvement of time in each meet.

Another benefit of cross country as stated by Bill Miller (1959):

Cross country offers "low pressure" team competition, with emphasis on the individual's progress of performance whether he's naturally endowed or not. Whereas in track it is hardly expedient to follow the progress of the tenth and eleventh best in an event, in cross country his daily and weekly accomplishments can be recorded, thus making him realize the benefit to be gained from hard work.

Cross country is a sport which provides endless amounts of personal satisfaction and enjoyment for those willing to put in the required work. Each individual must have the courage to work for self-improvement and the determination to give the time necessary to obtain the desired results.

The continuous growth of cross country is evidenced with Peter Hildreth's (1963) statement that:

Cross country running in the competitive sense is no longer regarded by experts as a training method for middle distances. It is really a specialty in its own right, involving a tough and prolonged season which cannot effectively be combined with a full track season. Nevertheless, cross country brings rewards and good fellowship which its devotees rate higher than those of track athletics, and many are prepared to sacrifice their chances in the latter for the rigours of the rough.

Coaches do not usually distinguish the difference between cross country running and distance running on the track. Bresnahan, Tuttle, and Cretzmeyer (1964) stated that, while cross country racing has many of the characteristics of distance running on the track, there are several points of difference:

The rough type of footing necessitates the use of a more substantial shoe with a paddle heel. The unevenness of the ground demands that the athlete pay attention to the spot where he sets his foot. Uphill running requires form alterations, such as a shortening of the stride, a major vigorous pumping action of the arms, and a more pronounced forward trunk lean. When running downhill, the athlete must cultivate the art of relaxing, maintaining ample speed, and avoiding a severe jar when landing on the heel. The latter is a fault that is similar to applying the brakes. In addition, the trunk is more nearly upright when racing downhill. As in track races, whenever the distance is increased the requirements of an even spread of exertion are likewise more pronounced.

The writer believes that the general opinion among coaches is that cross country is a method of training for the track athlete. Most track competitors, including sprinters, include cross country running as part of their training programs in preparation for the indoor and outdoor seasons.

Fred Wilt (1965), noted American track authority, had this to say about cross country:

The great benefit of cross-country running and racing to the conditioning process of the track performer is beyond question, and as a result the track runner in the U.S.A. who does not put in an autumn of intensive cross country racing and training annually is indeed rare today.

This is the reason why there are very few cross country runners today who are not competing in track and field.

Cross country running is probably one of the most enjoyable forms of running that one will experience. As a training ground for runners who will compete in other events, cross country offers a chance to run at varied distances and paces without the constant presence of the stop watch. For an athlete to be successful in any section of track and field, he must have both speed and strength. These attributes will be derived from the enjoyable forms of cross country running.

The writer believes that cross country is a combination of all forms of running, such as sprinting, middle distance and long distance running. James P. Jesse (1968) stated:

Cross country running, due to changes in terrain, requires form alterations. During part of the race, the runner will adopt the moving characteristics of the middle and long distance runner. Where uphill running is involved, it will require a greater trunk lean, a more vigorous arm and shoulder action, and explosive power in the hips and legs, similar to that of a sprinter.

One of the acquired skills of cross country running is the ability to adapt a technique suitable to running over the various terrains that would be encountered during a competitive race.

Cross country running technique is important for those who run the sport competitively. It is not a relaxed, enjoyable jaunt when a meet or title is at stake, but a gruelling, strength-sapping battle often run under extremely poor weather conditions. Because of this good mental discipline is essential in the competitors. The runners must remember that their opponents are as tired as they are, and that they must not lose their pace or rhythm (Calish and Wallack, 1960).

This is why strenuous conditioning for cross country is of utmost importance to the athlete.

It is interesting to note that there is a lack of uniformity among coaches in the training of cross country runners. There is a wide variety of training methods available to cross country runners and coaches today. A few coaches might try to follow one pattern but the more successful coaches generally employ a variety of training methods.

In the Olympic Cross Country Clinic Notes, Rosandich (1967), it was stated that:

Certain coaches and athletes are linked automatically with a certain type of training. Whichever one is at the top at the time seems to popularize a particular mode of training and others are ready to follow.

Emil Zatopek was the athlete who most popularized interval training and Franz Stampfl and Woldemar Gerschler were the coaches and early exponents. Peter Snell and Arthur Lydiard were the trend setters for marathon training and hill running.

Herb Elliot and Percy Cerutti popularized a certain diet and mental toughness plus weight training and other forms of resistance training such as running sand dunes and super marathon distance over 2 and 3 day periods.

There is no doubt that successful coaches make a practice of using a variety of training methods. Not only is it monotonous to the runners to follow one method but it usually will not meet all of their needs. A cross country runner needs strength, speed and stamina; therefore, more than one type of training method is needed.

It is said that Gasta Holmer, Swedish coach and the developer of the system of fartlek, got his inspiration from watching children play. The way they moved and darted around while playing gave him his ideas. For this reason, fartlek is a more natural way of training than any system that is known today. Rosandich (1967) quoted Holmer when he stated:

My opinion is that it is not the races run that make the runner, but rather his training methods. Here in Sweden we saw ourselves conquered by the Finns; we gained a certain standard, until I, in the middle of 1930, decided to try to create something new, something that suited our mind and the nature of our country. I rejected the American opinion that the runners should have fixed distances to run during their daily training schedule; I realized, of course, the great importance of that, but I wanted to give the boys a feeling of self-creating, I wanted them to get to understand themselves, and then fix the training according to their individuality. Speed and endurance are the marks a runner should follow in his training. Following these lines I made up a system, that I call FARTLEK, meaning in English, Play of Speed, or Speed Play, and it runs as follows:

The running should be done on cross-country where the surface is soft and springy, although in the large cities, where it is difficult to get a forest, you should make a path on or around a sports field, and make the path soft by covering it with saw dust.

Usually an athlete who trains by the fartlek method is on his own with no coach to dictate his movements, distance and pace.

Probably, the most widely used form of training runners that is known today is interval training. Dr. Woldemar Gerschler of Germany and Franz Stampfl of Austria are two of the coaches most responsible for its world wide acceptance.

Interval running involves repeatedly running a specific distance at a pre-determined speed, resting a specific period of time following each fast run. A workout of 10 repetitions of 220 yards in 26 seconds each and jogging 220 yards in 2 minutes after each for recovery, would be an example of interval running. This type of training is usually done off the track over unmarked surfaces without the benefit of stop watch timing.

From interval training, Franz Stampfl developed his famous method of training called repetition running. It differs from interval running because of the length of the run and the degree of recovery

after each fast run. Interval training uses shorter distances, more repetitions and a shorter rest period.

The Lydiard system of training is based on a variety of training methods. Most coaches know something about these methods, but probably the things they remember best are the marathon aspect and perhaps the hill training. Each individual's training is programmed to the extent that gradual improvement is planned. Using Lydiard's system, cross country would be a part of the runner's training program.

Rosandich (1967) stated:

Cross country or track coaches can look at Lydiard's system two ways. He can take pieces of it, i.e., marathon and hill training, or he can take the total program and adapt it the best way he can to the American time schedule for cross country and track. We hope that he already or soon will adopt the total concept - a year round approach to training and specifically a program by which gradual improvement is carefully planned and anticipated.

Since there is no one training method that coaches can say is the answer for all runners, coaches will continue to experiment with various training methods, and the ones that enjoy the most success will say their methods are the best.

While writing about cross country training, Spendler (1965) stated:

The pattern of all training is graduated according to severity. Thus, easy cross country running which makes the least demand on the human nature comes first on the program. This is followed by fartlek, a little more demanding, but still not harsh; followed by interval running which is severe; followed by the fast pace repetition running which is severer still; and finally, by the time trials which make the sternest test of all.

Regardless of the planning and pattern of training for cross country, there is also a lack of uniformity of opinion among coaches regarding the amount and intensity of practice schedules for cross

country running. The differences are especially in the distances to be run, running speed and the designated intervals at which coaches used stop watch readings. However, there seems to be very little difference in the types of training needed for the track distance runner and the cross country runner. The athlete who does run cross country as preparation for track competition should plan and execute his training with care and precision. In recent years, men like John Landry, Herb Elliot, Peter Snell and more recently, Jim Ryan, have shown what can be done by athletes who are prepared to cover long distances over hilly courses.

Actually, cross country running is indispensable in the development of middle and long distance runners. "Cross country racing today involves the element of speed to such an extent that training for hill and dale competition bears an amazing resemblance to orthodox training for middle distance racing" (Wilt, 1965).

Since most coaches believe that cross country running is important to the development of distance runners, there are certain aspects to be considered in the training of these runners. Al Lawrence, a participant in the 1956 Olympics for Australia was quoted by Fred Wilt (1965) as having said:

I believe that there are three main aspects to be considered by any athlete when training for cross country running:

- A) The psychological approach that is used while preparing for the cross country season.
- B) The various changes of technique for different terrain.
- C) Normal conditioning and training.

Without any of the three a runner will never realize his potential competitively during the season.

The writer feels that these are some of the aspects that a coach should be concerned in the planning and developing of cross country runners.

W. Harold O'Connor (1970), cross country coach at Holy Cross College, expressed his thoughts about training and coaching methods in this statement:

Within the past 10 years, much of the writing on track has focused on systems of distance and middle distance running. Literally thousands of pages have been written about the training methods of Zatopek, Kuts, Elliot, Clark, Snell, Bannister, Ryan and others.

The coaching methods of Stampfl, Cerutti, Lydiard, Bowerman, and others have been scrupulously analyzed. No virtue has gone unnoticed, no weakness left unexposed. What, then, is there left to discuss?

In conclusion, coaches who have been successful in training cross country athletes seem to have different philosophies for developing an athlete's potential. What might be successful training for one athlete may not necessarily be successful for another athlete. The actual training program of the athlete, whether he runs cross country, sprints, middle or long distance runs depends upon the coach. The training methods such as fartlek, interval and repetition also depend upon what the coach may believe is the best method to be used for his athletes. However, the general opinion among coaches is that a combination of all training methods is probably the best in training cross country runners.

The writer was unsuccessful in his attempt to find related literature pertaining to cross country in Canada. However, several articles which made reference to distance running and track and field in Canada proved helpful. Through these readings, the writer attempted to express views by Canadian coaches of their track programs. The performance of Canadian athletes in the 1968 Olympics had shown that Canada had not kept up to the standards necessary for success in distance running at the international level. The head coach of the 1968 Canadian Olympic team, Pugh (1969) stated:

If we are looking for the truth about Canada at the Olympics we must recognize that by International standards Canada had a mediocre team and that as a consequence she obtained mediocre results. This does not imply that her athlete's performances were mediocre because many of the athletes performed better than ever before with the women producing five Canadian records and six of the athletes making the top dozen. What the Olympics did demonstrate was that while our performances are rising, there seems to be no doubt that we are NOT keeping pace with the rest of the world.

The idea of not keeping pace with the rest of the world is sometimes blamed on the Canadian culture. Ron Wallingford (1967), currently coaching in a Canadian University, expressed his view in this statement:

Probably the greatest deterrent toward the realization of the full potential in most of the youthful distance runners is their premature retirement from the activity. Canadian distance runners face the problem of confronting and overcoming the whims of an agrarian oriented culture. This Canadian culture, by and large, frowns on serious adult participation in sporting activities that do not enhance the individual's financial situation. Many a promising distance runner succumbs to the temptation of early retirement when he leaves school, due to the persistent taunts of his associates. Hopefully, the young athlete can be challenged by the excitement and enrichment a life of continued competition offers in preference to the vicarious pleasures of a niche on the sidelines. For the youthful athlete to accept the challenge of continued competition, there must be a favorable climate for him to grow in.

The writer believes that this premature retirement of Canadian distance runners often occurs after high school because of the inadequate track programs in some of the Canadian colleges and universities.

The writer feels that Canadian college and university cross country programs are steadily improving every year. They have improved to the point that Jim Daley (1970), noted Canadian track authority, had this comment to make in an interview with the writer: "The Canadian cross country program in our colleges and universities is the only sport that can compete equally with the United States athletic program."

Frank Zazula (1970), cross country coach from the University of North Dakota, supported Mr. Daley's viewpoint by saying: "Some of the Canadian teams that we have competed against in the provinces of Manitoba, Saskatchewan and Alberta are just as good as the teams that we compete with down here."

Since these authorities agree that the Canadian cross country program can compete equally with the United States cross country program, the writer believes that Canadians can look forward to a great improvement in the cross country programs in their institutions. Through better competition, facilities and coaching, the Canadian athletes can improve their stature in cross country and distance running.

It is assumed by the writer that one of the results of a good cross country/track program for distance running in colleges and universities is the improved performance of the team which participates in international competition. This is evident in observing the American college and university programs. It appears, also, that Lionel Pugh, currently the Canadian cross country coach, believes that this is where the foundation of running must be developed if Canada is to keep pace with the rest of the world. Lionel Pugh (1969) said:

Canada should move in two directions at once. The foundation laid by schools and universities must continue to contribute but they must become more efficient and they must become organized. Also, the system must have a structure and every coach and teacher must be aware of his place in it. The second direction must be toward a developmental International Meet program so that the athlete can clearly see what is ahead of him--training does not go on for the sake of training--it must have a purpose.

It is evident from the material available that the basic principles of cross country have not changed materially throughout the

years. If one compares the training methods of the best runners of the past with those of today, it is quite evident that the biggest single contribution to the improved standards in cross country has been the acceptance of the need for regular daily training, over many months and years. Athletes are individuals and react in different ways to the same training, so the athlete's problem is to find the type of training to which he reacts most favorably.

CHAPTER II

METHODOLOGY

The survey method of research was used by the writer in this study. It was felt that a well constructed questionnaire would be the most appropriate means of collecting the necessary data. The questionnaire consisted of three sections, with each used to secure information pertaining to the study. The three sections are:

General Information. The questions in this section were employed to help determine the general organization and evaluation of the cross country programs from the various coaches.

Meet Information. These questions provided the information about the cross country team when competing.

Training Program. This section was used to secure information dealing directly with the cross country training programs used by the coaches in Canadian colleges and universities.

Canadian colleges and universities come under many categories. However, most of the schools selected for this study were major four-year colleges and universities belonging to one of five associations that comprise the most influential athletic body in Canada. The Canadian Intercollegiate Athletic Union is to Canadian colleges and universities what the National Collegiate Athletic Association is to United States colleges and universities. The writer selected two other Canadian schools that had cross country or track programs.

In constructing the questionnaire, the questions were obtained by a review of the literature and from the writer's personal knowledge of the subject. Many ideas used in the questionnaire were derived from a survey of high school training methods by Bob Timmons (1959), when he coached at that level. Also, valuable help in compiling the questionnaire was rendered by two members of the writer's advisory committee.

An introductory letter, along with the questionnaire and a stamped, self-addressed envelop was mailed on October 15, 1969, to the selected 46 colleges and universities in Canada. A period of approximately four weeks was allowed for the respondents to return the questionnaires. Then, on November 15, 1969, a follow-up letter including another questionnaire and a stamped, self-addressed envelop was sent to the non-respondents of the initial letter.

The selection of Canadian colleges and universities was made from a book called "The National Directory of College Athletics." Those schools listed in this book which had appointed cross country/track coaches for the 1969 season were sent questionnaires.

From the returned questionnaires, tables were constructed and data were tabulated and analyzed for comparison. Percentages were computed from the tables and comparisons were made. Finally, from the tables and data, results were discussed, conclusions were drawn and recommendations were made.

CHAPTER III

ANALYSIS AND TREATMENT OF DATA

The data were collected by means of a questionnaire which was sent to 46 cross country coaches in selected Canadian colleges and universities. A total of 46 questionnaires were sent out, and 38 were returned for a total of 82.6 percent.

In each case the questionnaire was sent to the head cross country/track coach listed in the 1969-70 National Director of College Athletics. Those institutions which did not list such a person did not receive a questionnaire. Of the coaches returning questionnaires, 36 belonged to the Canadian Interscholastic Athletic Conference while the remaining two questionnaires were from representatives of independent institutions.

Out of a total of 38 returns, 12, or 31.5 percent of the respondents, reported that they had no cross country programs in their institutions, leaving 26 questionnaires to be used in the study. There were, however, eight, or 17.3 percent of the coaches surveyed, who failed to return either the initial or follow-up questionnaires.

The introductory part of the questionnaire dealt with information concerning the qualifications of the coaches. The respondents were asked to indicate their qualifications by checking one or more of five answers.

Table 1 indicated that 16, or 61.54 percent of the coaches, had a degree in Physical Education and 16, or 61.54 percent, of the coaches had competed in cross country. In addition, 20, or 76.92 percent, of the coaches indicated that they had attended track clinics in cross country.

TABLE 1
QUALIFICATIONS OF COACHES

Qualifications	Number	Percentages
Degree in Physical Education	16	61.54
Taken Courses in Physical Education	6	23.07
Attended Track Clinics	20	76.92
Interested in Cross Country	18	69.20
Competed in Cross Country	16	61.54

Table 2 indicated that 24 coaches, 92.3 percent, had coaching background based on experience in Canada. Eight coaches, 30.77 percent, indicated they had coaching experience in the United States and in Europe.

TABLE 2
COACHING EXPERIENCE

Coaching Background	Number	Percentages
Canada	24	92.30
United States	8	30.77
Europe	8	30.77
United Kingdom	4	15.37
Australia	1	3.84
Switzerland	1	3.84
No Previous Experience	1	3.84

The general information section of the questionnaire sought information regarding the general organization and evaluation of the cross country program from the various coaches.

Of the 26 respondents, 16, or 61.34 percent, reported 6 to 10 boys participated in cross country teams, while 5, or 19.3 percent, had more than 20 participants. Table 3 indicates the number of participants.

TABLE 3

TOTAL NUMBER OF BOYS PARTICIPATING ON CROSS COUNTRY TEAMS

Number of Participants	Number	Percent
0-5	1	3.84
6-10	16	61.54
11-15	4	15.37
more than 20	5	19.30

Twenty-six coaches, or 100 percent of the respondents who had cross country teams, reported their teams competed at the varsity level in cross country competition. It was also reported that five of the 26 respondents had freshman teams and/or B squad teams, four reported age classification, and three reported open classification competition.

In Table 4, page 22, it has been shown that various methods of elimination are used by the coaches to determine their teams. Just over one-half of the coaches reported that hard work was the greatest eliminating factor. Closely following were time trials, meets and eligibility rules. Twelve coaches, or 46.15 percent, did not eliminate any aspirants from the team.

TABLE 4

METHODS OF DETERMINING TEAM MEMBERSHIP

Methods	Number	Percent
Time Trials	12	46.15
Meets	12	46.15
Interclass Meets	3	11.53
No Squad Cut	12	46.15
Eliminated by Hard Work	14	53.84
Eligibility Rules	9	34.61

A good coach will use various methods to create interest in cross country. The individualistic nature of running makes it a difficult sport to coach and in which to create the interest evident in other sports. It was reported that bulletin board material, trips and newspaper publicity were the three methods coaches used most frequently to create interest. As shown in Table 5, page 23, in descending order of importance, coaches listed intramural meets, 50 percent; letter sport and invitation, both 42.30 percent. Although several coaches commented that this was a good system to use only one respondent reported publication of a brochure at the end of the season.

The coaches participating in the study were asked to report one or more factors they considered to be the weakest features of their cross country programs. Thirteen, or 50 percent, of the coaches reported that there was little spectator interest. Ten coaches, 37.46 percent, indicated that cross country offered no recognition and that many cross country athletes were involved in other sports. Table 6, page 23, lists some of the other weak features of Canadian cross country programs reported by the coaches.

TABLE 5

METHODS USED TO CREATE INTEREST IN CROSS COUNTRY

Methods	Number	Percent
Bulletin Board Material	21	80.77
Trips	18	69.20
Newspaper Publicity	16	61.54
Intramural Meets	13	50.00
Letter Sport	11	42.30
Invite Boys Out	11	42.30
Keep Individual Progress Records	6	23.07
Part of Regular Physical Education Program	4	15.37
Public Address System	3	11.53
Brochure at End of Season	1	3.84

TABLE 6

WEAKEST FEATURES OF CROSS COUNTRY PROGRAM

Features	Number	Percent
Little Spectator Interest	13	50.00
Lack of Athletic Interest	11	42.30
No Recognition	10	38.50
Athletes in Other Sports	10	38.50
Not Enough Competition	7	26.90
Part-time Coach	6	23.07
Lack of Meets	6	23.07
Others	4	15.37
Poor Practice Area	4	15.37
No Individual Training	3	11.53
Poor Team Attitude	1	3.84

Table 7 illustrates some of the strongest features of the Canadian cross country program. One half of the coaches reported that they had good facilities. Eleven coaches, or 42.3 percent, stated that the strongest features were: (a) athletes love to run, (b) good attitude, and (c) satisfactory competition. It should be pointed out that no feature had more than a 50 percent rating. Therefore, it would seem that many problems have to be solved before Canadian universities and colleges show that they have an adequate program.

TABLE 7
STRONGEST FEATURES OF CROSS COUNTRY PROGRAMS

Features	Number	Percent
Competition Satisfactory	13	50.00
Athletes Love to Run	11	42.30
Good Attitude	11	42.30
Work Hard	10	38.50
Conditioning	9	34.61
Never Cut Squad	9	34.61
Interest in Program	6	23.07
Winning Tradition	6	23.07
Good Material	5	19.30
Recognition	4	15.37
Others	4	15.37
Large Squad	3	11.53

In estimating the cost of the cross country program, the respondents showed a wide variation in the amounts of money spent on the cross country program. The amounts varied from one hundred dollars to twenty seven hundred dollars. Eight coaches, or 30.77 percent, reported that their budget was between three hundred and six hundred dollars. Table 8 gives the estimated cost of the cross country programs per year. Fourteen respondents estimated the cost below twelve hundred dollars, nine coaches, above twelve hundred dollars, and no responses were received from three.

TABLE 8
ESTIMATED COST OF THE CROSS COUNTRY PROGRAM PER YEAR

Estimated Cost in Dollars	Number	Percent
0 - 300	4	15.37
301 - 600	8	30.77
601 - 900	1	3.84
901 - 1200	1	3.84
1201 - 1500	5	19.30
1501 - 1800	0	0
1801 - 2100	2	7.70
2101 - 2400	0	0
2400 - 2700	2	7.70
No responses	3	11.53

It was apparent from the information available that the lengths of the cross country season was not uniform; some were for a length of two months, while others were reported to last all year. Sixteen of

of the respondents, 61.54 percent, reported that the season lasted through the months of September, October, and November. Two coaches, or 7 percent, reported that they train their team all year.

The second section of the questionnaire elicited information concerning the participation of the cross country team in meet competition. The writer expected that this information would show a lack of similarity in cross country competition across Canada.

Nineteen, 73.07 percent, of the 26 coaches reported that the average distance for the cross country meets was between 4.5 and 6 miles. Three coaches, 11.53 percent, indicated that the average distance was less than 4.5 miles and four coaches, 15.3 percent, indicated that the distance was more than 6 miles.

The number of varsity meets participated in during the season varied. Table 9 reveals that 8, or 30.77 percent of the teams participated in 4 to 6 meets during the season. It was also shown that at least 23 percent participated in less than 4 meets while the same percentage participated in more than 6 meets during the season.

TABLE 9

NUMBER OF VARSITY MEETS PARTICIPATED IN DURING A SEASON

Number of Varsity Meets	Number	Percent
Less than 4	6	23.07
4 to 6 meets	8	30.77
More than 6	6	23.07
No response	5	19.30

Table 10 indicates that the majority of schools, 96.15 percent, participate in a conference meet. It also shows that 23, or 88.5 percent, of the schools participate in a district or regional meet. Twenty respondents, or 76.92 percent, reported that cross country meets were not held in conjunction with other athletic activities.

TABLE 10
MEET INFORMATION

Questions	No		Yes	
	Number	Percent	Number	Percent
Do other teams participate in different meets at their own level	14	53.84	6	23.07
Is there a district or regional meet	2	7.7	23	88.5
Can the team participate in a conference meet	1	3.84	25	96.15
Is there interscholastic competition on a track during the fall track meet	8	30.77	16	61.54
Is there Canadian Track and Field Association Competition for boys in the area	5	19.30	20	76.92
Are any meets held in conjunction with other athletic activities	20	76.92	6	23.07

Note: Four schools reported that cross country meets are held in conjunction with football games.

One of the factors contributing to the development of track and field in Canada has been the Canadian Track and Field Association. Twenty coaches, or 76.92 percent, indicated that this organization has competition for boys in their area of Canada. The survey also revealed that 61 percent of the schools have competition on a track during the fall track meets.

Twenty-five respondents, or 96.15 percent, reported that the majority of cross country meets were held on Saturday.

This writer was interested in finding out where the cross country squad ran and what facilities were used for conference meets. Over 50 percent of the coaches indicated that it depended upon the meet director. Table 11 gives the number of respondents in each category and where the cross country squad ran.

TABLE 11
FACILITIES USED FOR CROSS COUNTRY MEETS

Where	Number	Percent
On the same course all the time	4	15.37
Different course each week	6	23.07
Varies—depending on meet director	14	53.84
Others (i.e. golf course)	<u>2</u>	7.7
Total	26	

In Table 12, page 29, the respondents indicated the regulations that applied to their own conference meets. Twenty-two, or 84.61 percent, of the coaches reported that the top five out of seven runners

counted for the scoring in the conference. Seven, or 26.90 percent, of the coaches indicated that they could enter as many runners as desired.

TABLE 12
CONFERENCE MEET REGULATIONS

	Number	Percent
Top 5 out of 7 count for scoring	22	84.61
Can enter as many runners as one wants	7	26.90
Can enter only 7 runners	6	23.07
All squads run together	4	15.37
All competing teams hold membership in conference	8	30.77

The third section of the questionnaire dealt with information pertaining to the cross country training programs in the various institutions. It was necessary to obtain this information in order to properly assess the cross country programs in Canada.

Cross country practice sessions must be planned well in advance of the first competition. Twenty-two, or 84.61 percent, of the coaches indicated that they held practices on Monday, Tuesday, Wednesday and Thursday. Nine, or 34.61 percent, of the coaches reported that they held practices on Sundays.

Table 13, page 30, lists the practice schedule with respect to time of day. As can be seen from this table, 76.92 percent of the coaches have their practices in the afternoon.

TABLE 13
WHEN PRACTICES ARE SCHEDULED

Practices Scheduled	Number	Percent
Morning	3	11.53
Afternoon	20	76.92
Evening	12	46.15
No Response	2	7.70

Note: Eight coaches indicated that their teams practiced twice a day and one coach indicated that his team practiced three times a day.

The length of practice periods is indicated in Table 14. The general consensus indicated that the majority of the teams, or 73.07 percent, practice between one and one and one-half hours during their practice periods.

TABLE 14
LENGTH OF PRACTICE PERIODS

Periods	Number	Percent
Between 1-1½ hours	19	73.07
Between 1½-2 hours	4	15.37
Between 2-3 hours	1	3.84
Varies	2	7.70

During pre-season practice, the coach must have sufficient time to train the athlete prior to the first competitive cross country meet. Of the 26 respondents, twelve, or 46.15 percent, of the coaches indicated

that they had about two or three weeks to prepare their athletes for competition. Five, or 19.3 percent, of the coaches indicated that their training programs lasted all year.

It would seem significant that the coaches treat cross country as a team sport since twenty-three, or 88.5 percent, of the coaches reported that their boys worked out on a group basis. However, it is even more significant to the writer that, in trying to encourage cross country running, only one coach stated that he posted the results of practices.

It was also shown that only nine, or 34.61 percent, of the coaches had a strategy meeting before each meet.

Nineteen, or 73.07 percent, of the coaches revealed that their squads used a weight training program. In addition, over 80 percent of the coaches indicated that their squads practiced on hills, and over 69 percent of the coaches indicated that they encouraged sprinters to participate in cross country.

All of the questions in Table 15, page 20, are concerned with the training procedures that the various coaches may use in their programs.

Sometimes the coach is limited in the number of athletes he has on the team for a particular meet. The writer was interested in what methods coaches used in selecting their teams.

Among 26 responses by the coaches, twelve, or 46.15 percent, used the previous meet results to make their selections. Eighteen, or 69.2 percent, indicated that everyone runs in each meet. Six, or 23.07 percent, of the coaches indicated that the final decision was left to the coach.

TABLE 15
TRAINING PROCEDURES

Questions	No		Yes	
	Number	Percent	Number	Percent
Are there run-offs, eliminations, or time trials for each meet?	3	11.53	23	88.50
Are there practices on hills?	21	80.80	5	19.30
Does the squad work out on a track during the season?	19	73.07	7	26.90
Does the squad use a weight training program?	19	73.07	7	26.90
Do the boys work out:				
1. On a group basis	23	88.50	1	3.84
2. On an individual basis	14	53.84	1	3.84
Are the results of practice efforts posted?	1	3.84	25	96.15
Are boys permitted to use cross country as conditioning for other sports?	24	92.30	2	7.70
Are the sprinters encouraged to participate in cross country?	18	69.20	5	19.30
Are there strategy meetings before each meet?	9	34.61	14	53.84

Table 16, page 33, shows various weight training programs used by coaches in their cross country programs. This form of training is considered by all coaches as an integral part of cross country conditioning. Nine, or 34.61 percent, of the coaches, indicated that their

squads worked out on their own. It is noteworthy that the types of programs varied greatly. Under the section "others," medicine ball, sandbags, circuit training and own program had been listed.

TABLE 16
TYPES OF WEIGHT TRAINING PROGRAMS

Program	Number	Percent
Progressive resistance exercise	7	26.90
Complete body development	3	11.53
Works out on own	9	34.61
Barbells every other day	1	3.84
Isometrics	1	3.84
Exer-genies	4	15.37
Others	4	15.37

Table 17 gives a breakdown by the coaches of the types of programs followed by the members of their cross country squads during the

TABLE 17
TYPES OF SUMMER PROGRAMS

Examples	Number	Percent
Jobs	11	42.30
Works out on own	18	69.20
Team practices	1	3.84
Play other sports	6	23.07
Participate in competition	10	38.50
Run for track club	20	76.92

summer months. Eighteen, or 69.61 percent, of the coaches indicated that their athletes worked out on their own during the summer. However, the majority of coaches, or 76.92 percent, reported that their athletes ran for track clubs.

Since there seems to be a lag of time between the end of the cross country season and the beginning of spring track, only thirteen, or 50 percent, of the coaches indicated that their athletes ran on indoor tracks. Fifteen, or 57.69 percent, of the coaches reported that their teams continued to run outside.

Most athletes fail to warm-up sufficiently. In competition, if the length or severity of the warm-up is too great, it will probably result in an effort less than the athletes' potential best. The coaches participating in the study were asked to indicate what type of warm-up they required their athletes to participate in prior to the beginning of a race. Twenty, or 76.92 percent, of the coaches reported that their athletes did jogging and striding. Thirteen, or 50 percent, reported that they wanted their athletes to do calisthenics, also. Only four coaches, or 15.37 percent, had their athletes walk or jog the full course of the meet.

The majority of the coaches, or 65.38 percent, stated that the training program they used was basically a combination of overdistance and underdistance. The other nine respondents, 34.61 percent, reported that their programs were basically overdistance training.

Strenuous conditioning for cross country is of utmost importance. Since cross country conditioning methods are so varied, it would be difficult to describe a typical schedule for an athlete to

follow. As shown in Table 18, various training techniques or methods were employed by the respondents. The cross country coaches reported some techniques used more frequently than others, for over 70 percent of the coaches reported they used fartlek, intervals, pace, and hill training techniques or methods.

TABLE 18
TRAINING TECHNIQUES USED

	Number	Percent
Fartlek	19	73.07
Intervals	21	80.80
Time Limit	1	3.84
Progressive (i.e. 220, 440, 880)	6	23.07
Regressive (i.e. mile, 880, 440)	5	19.30
Shuttle Relays	4	15.37
Handicap Relays	2	7.70
Hill Training	22	84.61
Pace Training	20	76.92

The coaches participating in the study were also asked to indicate whether they used any other training techniques. Some techniques mentioned were relay work, circuit training, continuous long-slow runs, and sprint work at the end of workouts.

In order to determine the phases of running the cross country coach worked on the most in his training program, the respondents were asked to list, in order of importance, the various phases of running.

Many of the respondents followed directions; some, instead of numbering in order, used check marks. Table 19 lists the phases of running and shows the selections made by the coaches. It was necessary to take into account both the rating given by the respondents by listing and those simply indicated by a check mark.

TABLE 19
PHASES OF RUNNING AS RATED BY THE COACHES

	1	2	3	4	5	6	7	8	9	10	✓	Total
Pace	2	1	2	1	3	1					1	11
Interval Training	1	3	2	3	1		1				5	16
Endurance	9	2	2	1							5	19
Relaxation		1			1	2	2	2		1	2	11
Finish								1	3	2		6
Conditioning	2	4	2			1	1				5	15
Form					1			1	2	2	1	7
Speed		1	4	1	2	2	1				2	13
Hill Training	1	3	1	5	1	2					3	16
Psychology	1		1	1	2		1	2	1	1		10

As can be seen from the table, the important phases of running indicated by the coaches were endurance, interval training, hill training and conditioning. A runner's individual form and the finish of the race were rated quite low by the coaches. Some of the coaches indicated that many of the phases of running go together so it is impossible to

work on one phase without working on another. The writer agreed with this comment.

The writer asked the coaches to comment on the strongest and weakest features of their training programs. The 26 respondents listed 46 various items as the strongest features.

Table 20 shows the answers categorized and their frequency of occurrence. As can be seen from the table; good spirit and team work were the most frequently mentioned features.

TABLE 20

OPINIONS OF THE STRONGEST FEATURES OF THE TRAINING PROGRAM

Features	Number	Percent
Good Spirit and Team Work	11	42.30
Team Willing to Work Hard	5	19.30
Good Facilities	7	26.90
Interesting Workouts Created	8	30.77
Conditioning	3	11.53
Coach Trains with Boys	2	7.70

Table 21, page 38, shows the categorized answers and their frequency of occurrence for the weakest features of the training program. As can be seen from the table, there appears to be an equal distribution among the items. However, the lack of a year-round track program appears to be the weakest feature of cross country in Canadian colleges and universities.

TABLE 21

OPINIONS OF THE WEAKEST FEATURES OF THE TRAINING PROGRAM

Features	Number	Percent
Lack of Competition	5	19.30
Lack of Track Facilities	6	23.07
Class Scheduling Prevents Team from Training Together	6	23.07
Lack of Athletic Interest	5	19.30
Lack of Year-Round Track Program	8	30.77
Small Budget	3	11.53
Season Too Short	3	11.53

Since cross country running depends greatly on coaching, training programs and facilities available, it was evident that the opinions expressed by the cross country coaches were as diversified as might be expected in other individual college or university sports.

CHAPTER IV

DISCUSSION

It was evident in this study that cross country programs are not as popular as other college and university sports in Canada. Approximately one-third of the institutions surveyed reported they had no cross country programs. The review of related literature showed there was very limited information available in Canada regarding cross country programs and training methods. This seemed to the writer to be detrimental to the whole cross country program. However, the information obtained in this study revealed certain policies and practices of Canadian colleges and universities that have cross country programs.

The writer noted that the majority of cross country teams participated in only six or fewer meets during the season. This restricted participation was probably due to the limited budget allowed the cross country programs. In order to improve cross country it is evident that better financial support must be provided.

The majority of coaches surveyed reported that their teams can participate in district or regional meets and in conference meets. Over seventy-five percent of the coaches revealed that competition was provided in their area by the Canadian Track and Field Association. Canadian colleges and universities have a limited outdoor track season and one of the benefits of this association is that it does provide cross country athletes with the opportunity to participate in a summer

track program when the academic school year is over. If athletes were given this opportunity to compete year-round, an improvement could be realized in the caliber of cross country and track performance in the Canadian colleges and universities.

In recent years, a number of track clubs have been organized in Canada to promote track and field competition. Many of the college and university athletes belong to these clubs during the summer months. In this study, twenty of the twenty-six coaches revealed that their athletes ran for these track clubs. The writer feels that the interest created by these track clubs is a valuable factor in improving the cross country program in the fall. More college and university athletes seem to be competing in distance or cross country running during the summer than ever before. Usually, the athletes who run distance races during track season also run cross country during the fall.

A good coach will use various methods to create interest in a cross country program. Coaches found some of the best methods to be displays of material on bulletin boards, trips, and newspaper publicity. The recognition of athletes by means of publicity is one method coaches should use extensively for creating interest in their cross country programs. Other means of recognition that can be equally important are recognizing cross country as a letter sport, and recruiting boys to participate on the team. In this study, these means of recognition were ignored by over 50 percent of the coaches. This, in itself, should indicate that some Canadian coaches do not provide the recognition that is needed to establish a good cross country program.

The writer, although aware of some of the deficiencies of the cross country program offered in the Canadian colleges and universities,

was, nevertheless, through this study, made aware of many additional problems encountered by participating institutions. Problems such as limited budget, lack of recognition, lack of athlete interest, poor spectator interest and competition for talent from other sports can all have a detrimental effect upon any cross country program. However, awareness of these problems by the coaches can be the first step toward improvement. It is possible that coaches in some of the colleges and universities can improve their programs by knowing how other coaches train their athletes and conduct their programs.

One purpose of this study was to determine how Canadian cross country coaches train their athletes. The survey revealed that endurance running was the most important method of training that coaches employed. It is obvious that a cross country runner who is competing over distances from four to six miles must be in top physical condition. Endurance training, the writer believes, should be gradual in its degree of intensity. In order to develop a combination of endurance and speed for cross country running, training methods such as fartlek, hill training, and interval running are necessary. The results of this study substantiated this point, as it was revealed that over 70 percent of the respondents used these training methods. Most coaches agree that the main factor in developing the potential ability of an athlete is the intensity of training and not the methods employed.

It was significant, perhaps, that coaches did not agree as ^{on} to which phases of running they should concentrate ~~on~~. Even though endurance running was most frequently mentioned, the writer drew the conclusion that many phases of running go together so it is impossible to

work on one phase without affecting another. For example, work on endurance assists in conditioning the athlete.

In analyzing the weaknesses of the cross country and training programs, the same problems kept recurring, as was mentioned previously in this chapter. There appeared no one significant weakness but a combination of many factors that hindered the program. Since there was little recognition for participating in cross country, it may be assumed that many athletes participated in other sports and used cross country for conditioning. In fact, the writer is aware that some coaches of other sports require their athletes to run with the cross country team for conditioning purposes.

It was surprising that financing the cross country program was not one of the major weaknesses indicated by the coaches, but lack of competition, track facilities, and a year round track program were each of more significance. The writer believes that the climate, the lack of indoor facilities and a short academic school year are the reasons why Canadian universities and colleges do not have good year round track programs when compared to American colleges and universities. Probably the development of track and field programs will always be affected in these ways. However, these handicaps need not affect the cross country program to the degree that they do.

The coaches indicated that the strongest feature of the cross country program was the travelling to the meets during the season. Other features such as intramural meets and good competition were mentioned by some respondents. This finding was surprising since lack of competition and meets were two of the weakest features revealed by the coaches. There could be a number of reasons for

for these discrepancies and the writer believes the main factors were: location of the institutions, the conferences to which they belong, and how much they stressed cross country running in their programs.

In conclusion, the writer believes that cross country programs do not have the same stature as other sports in Canadian colleges and universities. The study revealed that there were discrepancies in many parts of the program. Various types of programs, varied training methods, and analysis of the weak and strong features revealed these discrepancies. In the final analysis, the writer concluded that some cross country coaches in Canadian colleges and universities conducted well organized programs, while other coaches conducted mediocre programs.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

The purpose of this study was to determine current practices and training methods in the cross country programs in selected Canadian colleges and universities.

It was hoped that the information accumulated could serve as a guide and reference to cross country coaches. In addition, this study might help the institutions in re-evaluating their own cross country programs.

Specifically the questionnaire was used to: (1) provide information to determine how colleges and universities in Canada conduct their cross country programs, (2) reveal policies and practices of Canadian colleges and universities which have cross country programs, (3) determine how Canadian cross country coaches train their athletes, (4) analyze the strengths and weaknesses of the cross country programs in these selected Canadian colleges and universities.

A questionnaire was distributed to forty-six selected colleges and universities in Canada. In each case the questionnaire was sent to the head cross country/track coach listed in the 1969-70 National Directory of College Athletics. Out of 46 questionnaires, 38, or 82.6 percent, were returned. Twelve, or 31.5 percent, of the coaches

reported they had no cross country programs in their institutions. The results of the questionnaire were used as the basis for conclusions and recommendations.

Conclusions

An analysis of this survey seemed to warrant certain general conclusions:

1. Inadequacies in Canadian college and university cross country programs were due primarily to lack of: (a) year round programs, (b) track facilities, (c) competition, (d) interest in athletics.

2. Most widely used methods for creating interest in cross country were bulletin boards, newspapers and travel involved in competition.

3. The opportunity to compete is not a major problem for the Canadian cross country competitor, since over 60 percent of them can enter three or more competitions during the season.

4. The important conditioning phases of running indicated by the coaches were endurance, interval training and hill training. Most coaches based their training programs on fartlek, intervals and hill training.

5. No specific conclusions were drawn from the survey regarding the types of warm-up procedures and weight training programs followed by the athletes during the season.

6. There appeared to be little agreement among the coaches regarding the strongest and weakest features of their cross country programs and the training programs.

7. Similar policies and practices regarding organization of meets and training procedures were evident in a majority of the reports.

Recommendations

The following recommendations were made as a result of the findings of this study:

1. Emphasis should be placed on conducting cross country programs which will be of maximum benefit to the participants involved.
2. Coaches should improve their public relations with the news media and the community to acquaint the people with the benefits of a cross country program.
3. It was recommended that a study be made to determine which cross country training methods were the most successful, dependable, efficient and beneficial.
4. Coaches should use the findings of this study to analyze their cross country programs and training methods so that they have a better understanding of cross country programs in other parts of Canada.
5. It was recommended that a comparative study should be made of cross country programs and training methods employed by the Canadian cross country coaches and those by the American coaches.
6. Coaches and administrators should continue to improve the program by improving the budget, providing better facilities and creating more athletic interest in cross country.
7. Cross country running should become part of the school's track and field program. It should be used as a conditioning program for all of the track and field athletes.

APPENDIX A

October 15, 1969

Dear Sir:

I am currently working toward my master's degree in physical education at the University of North Dakota. At the present time I am teaching in a Manitoba high school and coaching cross country.

I am enclosing a questionnaire which I am using to conduct a survey of cross country training methods in Canadian colleges and universities. Your assistance in completing this questionnaire will be greatly appreciated, and all information will be treated as strictly confidential. A self-addressed and stamped envelope is included for the return of the questionnaire. If your school has no cross country program, please indicate here _____, and kindly return the unanswered questionnaire.

If you are interested in obtaining a copy of the results of the survey, please indicate on the questionnaire and I shall forward you a copy after it has been compiled.

Thank you in advance for your vital help and co-operation.

Yours truly

David W. Guss.

DWG/NG

Encl.

SURVEY OF CROSS COUNTRY TRAINING METHODS

Name of School _____

Address _____

Name of person reporting _____ Position _____

What are the qualifications of the Cross Country Coach? (Check one or more)

_____ degree of physical education

_____ courses in physical education

_____ attended track clinics

_____ interested in cross country

_____ competed in cross country

Is your coaching background based on experience in Canada, United States or Europe? _____

All questions are related to interscholastic or interschool competition.

On questions requiring check marks, you may check one or more.

1. General Information

How many boys participate on the squads? _____

What levels of competition do the cross country teams run in the school?

Varsity _____ B Squad _____

Freshman _____ Age Class _____

Others: _____

Is everyone welcome to try out for the team? Yes _____ No _____

What methods are used to determine your team?

Time Trials _____ No squad Cut _____

Meets _____ Eliminated by hard work _____

Interclass meets _____ Eligibility Rule _____

Others: _____

What methods are used to create interest in Cross Country?

Newspaper publicity	_____	Part of regular phys. ed. program	_____
Bulletin Board material	_____	Keep individual progress records	_____
P.A. System	_____	Brochure at end of season	_____
A letter Sport	_____	Intramural Meets	_____
Other methods:	_____	Trips	_____
		Invite boys out	_____

What are the weakest features of your program?

Part time coach	_____	Athletes in other sports	_____
Lack of Athletic interest	_____	Lack of meets	_____
Poor practice area	_____	No individual training	_____
Little spectator interest	_____	Poor team attitude	_____
Not enough competition	_____	Too many meets	_____
No recognition	_____	Competition too strong	_____
Others:	_____		

What are the strongest features of your program?

Interest in program	_____	Winning tradition	_____
Athletes love to run	_____	Work hard	_____
Good attitude	_____	Large Squad	_____
Good facilities	_____	Recognition	_____
Competition satisfactory	_____	Conditioning	_____
Never cut squad	_____	Good Material	_____
Others:	_____		

Cross Country budget? Yearly expenditures _____

Cross Country season starts _____ (date)

ends _____ (date)

11. Meet Information

What is the average distance for the cross country meets in the conference?

_____ (miles)?

Number of varsity meets participated during a season _____

Number of meets participated in one week _____

Do the other teams participate in different meets at their own level? (i.e. Freshman, B Squad, etc.) Yes _____ No _____

If YES, when _____

Is there a district or regional meet? Yes _____ No _____

Can the team participate in a conference Cross Country Meet? Yes _____ No _____

Are there run-offs, eliminations or time trials for each meet? Yes _____ No _____

If so when _____

If no run-offs, eliminations or time trials, what methods are used?

Previous meet results _____	Practice attitude _____
Time trials _____	Coach's decision _____
Everybody runs _____	Others _____

Are there practices on hills? Yes _____ No _____

Does the squad work out on a track during the season? Yes _____ No _____

If so, how many times a week _____.

Does the squad use a weight training program? Yes _____ No _____

If so, when is it: (i.e. during season, winter) _____

What does the squad do in their weight training program?

Progressive resistance exercise _____	.
Complete body development _____	.
Works out on own _____	.
Barbells every other day _____	.
Others _____	_____

Do they use: Isometric bars _____

Exer - genies _____

Others _____

How many months per year does the squad train? _____

What does the squad do during the summer?

- Jobs, no running program _____
- Work out on own _____
- Team practices _____
- Play other sports _____
- Participate in Meet Competition _____
- Run for track clubs _____

What does the cross country runners do between the end of cross country season and the beginning of spring track?

- Basketball _____ No program _____
- Continue to run _____
- outside _____ Indoor track _____
- Others _____

Do the boys work out on a group basis? Yes _____ No _____

individual basis? Yes _____ No _____

Are the results of practice efforts posted? Yes _____ No _____

Is the training program basically

- Over distance _____
- Under distance _____
- Combined _____

Check types of training techniques used:

- Fartlek _____ Shuttle Relays _____
- Intervals _____ Handicap Relays _____
- Time limit _____ Hill training _____
- Progressives (i.e. 220, _____ Pace training _____
- 440, 880) _____
- Regressives (i.e. mile, _____
- 880, 440) _____

Other techniques _____

What phases of running does the coach work on the most? List in importance.

- Pace _____ Conditioning _____
- Interval training _____ Form _____
- Endurance _____ Speed _____
- Relaxation _____ Hill training _____
- Finish _____ Psychology _____
- Others _____

Are boys permitted to use cross country as conditioning for other sports if they have no real interest in distance running? Yes _____ No _____

Are the sprinters encouraged to participate in cross country? Yes _____ No _____

Are there strategy meetings before each meet? Yes _____ No _____
If so when _____

What is the warm-up prior to meets?

- Jog or stride (half to 2 miles) _____
- Calisthenics _____
- Sprints _____
- Walk or jog full course _____
- Rest 10-20 minutes prior to race _____
- Others: _____

What are the strongest features of your training program?

What are the weakest features of your training program?

Would you like a copy of the results on this survey after the data has been compiled? Yes _____ No _____

APPENDIX B

November 15, 1969

Dear Sir:

I am a graduate student of the University of North Dakota conducting a survey of cross country training methods in Canadian Colleges and Universities. The response from the selected schools has been very good. Upon checking my records, however, I find that your school has not returned the questionnaire sent to you.

In order to make this survey all inclusive and helpful to everyone concerned, your assistance is required. I am enclosing an additional questionnaire and self-addressed stamped envelope, and ask that you kindly complete same and return it as soon as possible.

Yours truly,

Dave Guss

APPENDIX C

CANADIAN COLLEGES AND UNIVERSITIES

	<u>Return Received/</u>	<u>No Return</u>
Acadia University	x	
Alberta, University of	x	
Bishop's University	x	
Brandon University	x	
British Columbia, University of	x	
Brock, University	x	
Calgary, University of	x	
Carleton, University of	x	
Dalhousie, University	x	
Guelph, University of	x	
Lakehead, University	x	
Laurentian, University	x	
Laval, University	x	
Lethbridge, University of	x	
Loyola, College		x
Manitoba, University of	x	
McGill University	x	
McMaster University		x
Memorial University of Newfoundland	x	
Moncton, University of	x	
Montreal, University of		x
Mount Allison University	x	
New Brunswick, University of	x	

	<u>Return Received/</u>	<u>No Return</u>
Notre Dame, University of Nelson	x	
Ottawa, University of	x	
Prince Edward, University of	x	
Queen's University		x
Royal Military College	x	
Ryerson Polytechnical Institute	x	
St. Dunstan University		x
St. Francis Xavier	x	
Saint Mary's University		x
Saskatchewan, University of (Regina)		x
Saskatchewan, University of (Saskatoon)	x	
Sherbrook, University of	x	
Simon Fraser University	x	
Sir George Williams University	x	
Toronto University		x
Trent University	x	
Victoria University	x	
Waterloo Lutheran University	x	
Waterloo, University of	x	
Western Ontario, University of	x	
Windsor, University of	x	
Winnipeg, University of	x	
York University	<u>x</u>	<u> </u>
	38	8

REFERENCES

- Bresnahan, George T., Tuttle, W. W., and Cretzmeyer, Francis X. Track and Field Athletics. St. Louis: C. V. Mosby Company, 1964.
- Calish, Richard, and Wallack, Jr., Lester C. Teaching Track and Field. Danville, Illinois: The Interstate Printers and Publishers, 1960.
- Daley, Jim. Assistant Director of Physical Education, University of Manitoba. Personal Interview, June 10, 1970.
- Hildreth, Peter. How to Train for Track and Field. New York: Arc Books Inc., 1963.
- Jesse, James P. "Strength and Muscular Power for Distance Runner." All America Athlete, X (August, 1968), 37.
- Miller, Bill. "Cross Country Coaching Basics." Scholastic Coach, XXVIII (June, 1959), 18.
- National Directory of College Athletes. Amarillo, Texas: Ray Franks Publishing Ranch, 1969.
- Nett, Toni. "Is Strength Necessary for the Long Distance Runner?" The Royal Canadian Legion's Coaching Review, III, No. 3 (December, 1965), 1.
- O'Connor, W. Harold. "Speed and Pace in Distance Running." Scholastic Coach, XXXIX (January, 1970), 82.
- Pugh, Lionel. "What Do We Care." Journal of the Canadian Association for Health, Physical Education and Recreation, XXXV, No. 2 (December, 1968 - January, 1969), 35-36.
- Rosandich, Thomas P. Olympia Cross Country Clinic Notes. Upson, Wisconsin: Olympic Sport Publications, 1967.
- Spendler, John. "Views from Foreign Coaches on Training." Track and Field Quarterly Review, (October, 1965), 40.
- Timmons, Bob. "Championship Cross Country Training Methods." Athletic Journal, XXIX (October, 1959), 40-41.
- Wallingford, Ron. "Distance Running." The Royal Canadian Legion's Coaching Review, X, No. 1 (June, 1967), 4-5.

Wilt, Fred. Run Run Run. Los Altos, California: Track and Field News Inc., 1965.

Zazula, Frank. Cross Country Coach, University of North Dakota. Personal Interview, June 10, 1970.