

Research in Athletics

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IN ATHLETICS, progress is made only through research. To trainers and coaches alike, research in athletics presents the same situation as research in medicine presents to the physician. In order to be well equipped for practicing either of these professions, individuals must not only have a broad scientific background, but they must also keep abreast of recent developments in their profession. In many instances those engaged in the practice of their profession are not in a position to carry on extensive investigations, although they can take the initiative in suggesting, and assisting in, research that is urgently needed. In fact, there is considerable virtue in the idea that an individual should focus his attention either on research or practice. However, if one concentrates on the practical side, whether through necessity or by choice, he should keep in close contact with advances in his chosen field. Neither can those concentrating on research afford to lose contact with the practical side of their field of interest. If an applied science such as athletics is to go forward, there must exist close co-operation and contact between those engaging in research and those who have the responsibility of training and coaching.

It should not be necessary for the investigator to have to "sell" the coach and trainer his problems. Where research is to be undertaken which involves the time of athletes, the problems to be investigated should be of material interest to both the coaching staff and the investigator. The coach and trainer owe it to their profession to look upon legitimate research kindly. They cannot afford to refuse to co-operate in the investigation of fundamental problems. A lack of co-operation between the coaching staff and those interested in research will doom the research program to failure. On the other side of the question, a lack of interest in research on the part of coaches and trainers materially limits opportunities for making progress. The ideal situation is one where the coaches and investigators work hand in hand to amass new knowledge and to apply what is already known in an effective manner.

Research in the field of athletics has followed the same pattern as that found in any applied science. A survey of the literature is evidence of the need for investigation, not only in the basic principles involved, but also in the applied side of the subject. The need for research is as demanding today as ever before. At the present time, the problems are more difficult to solve, thus making the investiga-

tions more time-consuming and more technical. This is the way with research in any field. It seems that the easier problems are attacked first, and can be solved by relatively simple methods. As progress is made, the problems become more involved, and likewise the techniques become more complicated.

The writer is inclined to believe that research in athletics has not been as helpful to coaches and trainers as it might have been, and that the fault lies in part with those doing the research. Those engaged in investigating athletic problems, like workers in other specialized fields, have had a tendency to make reports which are clothed in details of procedures and highly technical principles. The result is that unless the reader is familiar with the technicalities of a highly specialized field he gets very little out of the published reports. On the other hand there has not been a concentration of reports of research findings. They have been widely scattered through the various journals of the country, so that to keep informed the trainers and coaches must make a diligent and time-consuming search for the material pertinent to their particular field. Furthermore, in many localities, the coaches and trainers do not have access to library facilities which are extensive enough to permit the routine use of many of the journals which publish important material.

It seems to the writer that this situation could be easily and successfully corrected. In the first place, those who have contributions to make to athletics should give simple, meaningful, and understanding reports of their findings, and in addition these reports should appear in the journals which the coaches and trainers read. If the problems involved in athletics are not below one's dignity as a research worker, then it should not be below the dignity of the worker to have his reports published in athletic journals.

It is recognized that in many instances it is desirable that complete and detailed reports of research be made. It is, also, often advantageous to fellow workers to have access to raw data and details of procedures. Such reports are not usually suitable for publication in the journals which many coaches and trainers read regularly. This situation can be met by the journals themselves. Where technical or specialized articles have a practical bearing on problems in athletics, someone familiar with both the researches and their application to athletics can review and summarize the material and present such

a summary in the journals which the coaches read. In addition, annotated bibliographies prove to be very useful and time saving. Succinct statements of contents of articles of less general interest furnish clues as to the applicability of an article in question to a particular problem. Should such an article appear pertinent to work in progress, the reader can then refer to the original publication.

The volume of literature which appears each year pertaining to the science and practice of athletics is great. In fact it is beyond the realm of possibility for any one person to read and evaluate all of it. This is another good reason why a process of sifting and publishing reviews is of great value. In fact, this is a common practice in many fields. Until such practices are adopted in the field of training and coaching, interest and progress in many phases of the subject of athletic research will suffer materially.

The writer does not wish to leave the impression that coaching, training and research in athletics should be separate endeavors. In fact, quite the opposite procedure is recommended because experience has taught us that much important research, especially in applied fields, has been made possible only by the closest co-operation between the practitioners and investigators. It is within the reach of every coach and trainer to do research of some kind which will contribute important findings. Those who are fortunate enough to be connected with institutions of unlimited facilities can choose the more complicated problems. Research does not necessarily mean being surrounded by laboratories full of expensive equipment. Many important contributions have been made through critical observations, and evaluation of procedures in performing athletic feats. Any coach and trainer should be able to solve some of his problems on the basis of his own research findings.

In the field of research involving athletics, the coach and trainer serve as the pivot around which the whole program of investigation revolves, if the results are to be most fruitful. The careful planning of the research program and the full co-operation of all concerned, insure success in the pursuit of new knowledge.

Sometimes progress in athletic research is hampered because the coach and trainer question the value or feasibility of some of the problems presented to them. Since investigators are usually interested in using varsity athletes as subjects for experiments, the coach and trainer have a

right to be assured that the athletes involved can afford the time, and that adequate precautions are taken to prevent the injury of important team members. Those who propose to use athletes as subjects in experiments must avoid situations which will hamper the athlete either scholastically or physically. Such a situation can be taken care of by co-operative planning.

Coaches and trainers are not only expected to win games, but also to further their profession through sound teaching, coupled with enthusiasm for gaining new

knowledge through research. To the extent that this is done, accomplishments in athletics will continue in the future as they have in the past. "Companions in zealous research" is the slogan of the most coveted scientific fraternity in the world, and expresses the sentiments of all those who strive to gain new knowledge, so as to improve their profession.

In the narrow sense, furthering athletic accomplishments means devising ways whereby athletes can run faster, jump farther and win more games. The demands for accuracy, skill and endurance

in war have taught us that the athletic field is a proving ground for efficiency in fighting a winning war. As a result of this more important phase of athletics, the experimental laboratories of the country have come forth with ways and means for greater efficiency in athletic training. They have furnished evidence of the futility of some procedures of the past, devised new approaches, and provided methods of evaluating the progress of those participating in the program. All of these advances have come about through research.

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