

**A Case Study of the Relationship between Sports Science
Research Practice and Elite Coaches' Perceived Needs**

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Abstract

Elite coaches consider aspects of sports science when preparing athletes for competition. Sports scientists conduct applied research and a fundamental purpose of sports science research is to produce knowledge that helps improve the performance of elite athletes. In view of the considerable resources being directed toward research and coaching at the elite level, there is a need to conduct research to identify the relationship between research and coaching practice at the elite level.

Australia has an institute of sport or academy of sport in each state and territory dedicated to the development of team and individual sports, both Olympic and non-Olympic. In the area of elite athlete performance, the Australian Institute of Sport (AIS) has gained an international reputation for excellence, and the AIS Research Centre has achieved international recognition for the quality of research projects directed toward the performance of elite athletes. Sports scientists at Australian universities also undertake research related to elite coaching, some of which has occurred in partnership with researchers at Australian institutes of sport.

The purpose of the study was to identify the relationship between sports science research at Australian institutes of sport and post-graduate sports science research in Australian universities, and how elite coaches in Australia perceive sports science research practice meeting the needs of elite coaching.

A case study method was selected for this thesis, which involved the following data gathering instruments: a survey of 225 elite coaches and 125 sports science researchers, follow-up interviews of elite coaches and sports science researchers, and document analysis of 725 research projects conducted at Australian institutes of sport and post-graduate theses at Master and Doctoral level at Australian universities. An analysis was also conducted to assess the sports science content contained in the National Coaching Accreditation Scheme's Level Three course material. A schedule was developed for the document analysis called the "Williams Sports Science Research Schedule". Interviews were conducted with elite key informants to validate a model that was developed from the study.

Results of the study revealed a degree of congruence between the perceptions of elite coaches and sports science researchers regarding the research needs of elite coaches and the research activity of sports science researchers. A model, called the "Elite Sports Research Model" was developed to describe that relationship. The Elite Sports Research Model contains four components, namely: coach knowledge, information seeking/dissemination strategies, qualities valued in an elite coach and a sports science researcher, and application of research. Within the model, particular perspectives of elite coaches and particular perspectives of sports science researchers were identified. Some differences were found between elite coaches of team sports and elite coaches of individual sports, as well as some differences between researchers at institutes of sports and researchers at universities. At the elite level in Australia a relationship was found between sports science research activity and the research needs of elite coaches.

With the increase in support for elite coaching and sports science research in Australia and internationally, the results of this study should help to inform improvement in sports science research programs that support elite coaching practice.

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