The planning of training for highly qualified alpine ski racers: The philosophies of expert coaches

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Introduction
Over the latter half of the 20th century much has been written on the theory of training and certain principles have gained acceptance in the literature (e.g., Bompa, 1999; Harre, 1982; Matveyev, 1977/1981; Verkhoshansky, 1985/1988). However, difficulties can arise in the actual planning and implementation of training that can make the application of these principles not always as straight-forward as it would seem. For instance, in the sport of alpine ski racing there are numerous practical considerations which seem to play a significant role in planning. The purpose of this study was to examine the philosophies of expert coaches regarding the design of the annual plan for highly qualified alpine ski racers and to compare these philosophies with the principles espoused in the literature.

Methods
In-depth interviews as described by Kvale (1996) were conducted with fourteen expert coaches from six different countries. The definition of expert coaches used in this study was based on the following two criteria: (1) coaches were to have at least 10 years of full-time coaching experience and (2) coaches were to be currently working at the national team level – or recently retired from working at the national team level. This definition of expertise is consistent with that used in previous studies of the knowledge of expert coaches (e.g., Cote et al., 1995). The six countries included in the study – Austria, Switzerland, the United States, Sweden, Norway, and Slovenia – were specifically selected due to the high level of international success obtained by their respective athletes. After their completion, each of the interviews was transcribed to text for further study. Grounded theory as described by Strauss & Corbin (1998) was used as the theoretical basis for the analysis of the interview data.

Results & Discussion
A number of similarities and differences between the literature and philosophies of coaches became apparent over the course of the interview analysis and review of the literature. It appears that the “Classical Periodization Model” (Balyi, 1992) has had a significant impact on the planning of training in alpine ski racing, at least as far as the preparation period is concerned. The principles of load progression, moderation, continuous load demand, variety, multi-lateral development, and specificity were all applied in the planning of the preparation period.

However, during the competition period things became much more complex due to the instability of the weather, snow conditions, and competition calendar. Thus, while training plans during the preparation period appeared fairly structured and systematic, it seemed that a more flexible planning model was needed during the competition period. The interviewed coaches described certain tasks they used to deal with this uncertainty including defining the long-term plan; keeping plans simple; creating back-up plans; establishing clear philosophies; keeping track of what has been done; and maintaining priorities in the face of changes. In addition, it was important to define the appropriate level of competition for each athlete, to limit the number of competitions, and to treat training and experiential competitions as a part of training.

One important difference from the Classical Periodization Model was the lack of a major transition period following the competition period. To maximize carry-over from the competition period as well as to take advantage of the good snow conditions at that time of the year (March / April), a period of on snow training was often planned for soon after the last competitions. Major recovery periods were instead planned later in the Summer when snow conditions were at their worst (July). This reduction in the length of the transition period is similar to the observations of authors who have studied other sports (e.g., Lange, 1999; Maglischo, 1993). In terms of technique training, the primary difference between the philosophies of the interviewed coaches and the models proposed in the literature was the importance of variety in early stages of training. The interviewed coaches seemed to agree with the sport specific literature regarding the importance of adaptability in skiing technique and the consequence this has for training (e.g., Müller, 1984).

Another difference from theory was the importance of equipment testing in the preparation of the athlete. To our knowledge, how equipment preparation should be organized as a part of the annual plan for an athlete has not been addressed in the literature. Yet, according to the interviewed coaches it is one of the most important aspects of preparation in alpine ski racing.

References