

On the practical knowledge about snow and avalanches -What are the improvements in the last century or do we still use well-known findings?

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This somewhat provocative title induces a couple of further provocative questions: Are welltried findings which were already identified 80 to 100 years ago no more sufficient for skiers? What further improvements became relevant for mountaineers and backcountry skiers? What is new in today's avalanche education? One of the first appropriate books was Zdarsky's „Elements of Avalanche Awareness“ published in 1916; in the 1920s and 1930s the most important influencing factors on avalanches were already well-known; the books from Paulcke (1938), Seligman (1936) and Welzenbach (1930) are milestones in the field of snow and avalanches. Bilgeri (1934) mentioned six most important points which have to be considered when travelling through avalanche terrain (angle of the slope, terrain, ground, depth of the snow, consistency of the snow and anchorage of the snow). In the 1980s Conway et al. found that within short distances stability may be subject to strong variations. However, mountaineers and backcountry skiers could not use the findings because no one was able to identify those areas of instability. A major discussion on avalanche education was initiated as the strategic methods came up end of the 1990s (Munter, Larcher, Engler...); these methods only used another design but did not provide new results. This paper describes the most important findings with regard to the relevance for mountaineers and back-country skiers and reviews them in terms of their practical application.