

The learning of complex whole body activity (Downhill skiing) by simulation



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Abstract

The objective of this thesis is to determine whether a complex full body activity, 'continuous linked ski turns' as performed in downhill skiing, learnt on a new ski simulator can be transferred into the real world.

A secondary goal is to establish whether this process provides any advantages over learning by performing the actual activity (safer, more convenient; available at any location, time and in any weather and cost less than learning those skills from scratch in the real world).

The importance of the research is in testing if the existing benefits of simulators in areas such as aviation and medicine can also be applied to learning whole-body complex skills. As yet it appears that when very complex movements are simulated they are different from those developed on the real task. To date there is little evidence that simulation is effective in acquiring the complex whole-body skills and control necessary for effective action in the sporting arena.

The main results from this research have provided some tentative evidence to support the above mentioned objective and goal.

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