Applying contextual inference to snowboarding skills

Smith, P. J. K. (2002)

Purpose

To test whether intermixing practice of two versions of a complex task would lead to better skill acquisition and retention than blocked practice of the same task.

Experimental Design

38 adult novice snowboarding participants
Control Group (n = 18) Experimental Group (n=20)

All participants engaged in an approximately 2-hour lesson with a British Snowboard Association Instructor. The lesson was constructed in eight stages of acquisition. Both groups followed the same structure for the first four stages. The intervention was applied in the following four stages.

A composite measure of form and outcome, totaling to up to 10 points, was used to assess students.

Acquisition was assessed at the end of the lesson, retention of the skill was tested 1 week later.

Control: Blocked Practice

Blocked practice consisted of all four practice runs of one type being completed attempting the following.

Heel x 4 Toe x 4	Toe x 4 Heel x 4	Heel x 4 Toe x 4	Toe x 4 Heel x 4

Experimental: Alternate Practice

Alternate practice comprised the four attempts on each side being completed alternately.

Heel : Toe x 8	Heel : Toe x 8	Heel : Toe x 8	Heel : Toe x 8

Results

Acquisition
Alternating practice (M= 5.5, SD= 1.5) resulted in better performance at the end of acquisition than blocked practice (M = 4.2, SD = 1.0).

Retention
Alternating practice (M=6.O, SD= 1.7) yielded better performance ratings during retention than the blocked practice (M=4.4, SD= 1.4).

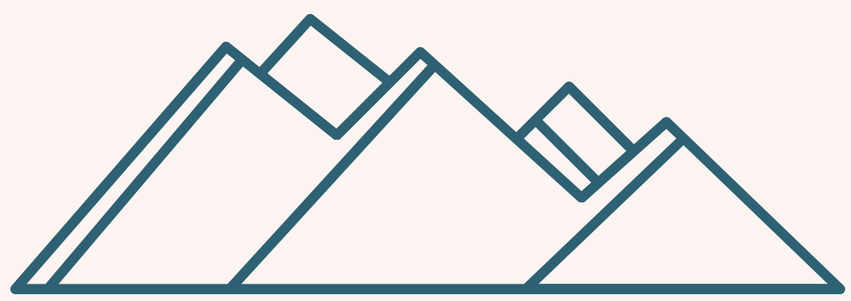
Implications

As alternating practice facilitated better skill retention after one week than a partially blocked practice schedule, even for complex and multilevel skills, practitioners should consider implementing an alternating format.

Future Research Recommendations

To manipulate directly the potential for negative transfer among tasks within a contextual interference paradigm to test whether manipulating this property influences performance during skill acquisition.

To identify whether a totally blocked practice procedure would be still less effective than the partially blocked procedure used in this study.



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