A STUDY ON THE PREFEREND METHOD OF SUBMITING AN ABSTRACT TO THE NATIONAL ASSEMBLY OF THE INTERNATIONAL MOTOR DEVELOPMENT RESEARCH CONSORTIUM

*Ryan S. Sacko[1], An De Meester[2], Nancy Getchell[3], Sam Logan[4], and David F. Stodden[2]

[1]The Citadel, Health and Human Performance, Charleston, SC, USA; rsacko@citadel.edu
[2]University of South Carolina, Physical Education, Columbia, SC, USA
[3]Univeristy of Delaware, Kinesiology and Applied Physiology, Newark DE, USA
[4]Oregon State University, Kinesiology, Corvallis, OR, USA

Objective: To examine how novices and experts safely adapt and transfer their movement skills to new settings and environments. **Method:** To answer this question, we compared the performance of 12 novices (freshmen college students) with the performance of 12 experts (tenured professors) using video data. After an 8 week movement intervention, participants completed a motor skill assessment battery (baseline) and a ninja warrior obstacle course (new setting and environment). We developed a novel algorithm to convert movements (measured by gyroscopic technology) to accelerometer an efficiency quotient based on behavior states defined by a combination of movement time and intensity. A further analysis was performed to identify clusters of performers with similar movement sequence maps. **Results:** Our results showed a trivial effect of expertise (tenured professors generally performed better than novices). Results also revealed that experts have adaptive transfer capacities and are able to transfer their movement skills effectively. However, the expert's performance may be contradicted by the high incidence of injuries sustained during performance. **Implications:** From a safety perspective, this study emphasizes the need to take into account the impact of these environmental changes along with the expert's adaptive capacities.

Preferred Session Type: (Oral, Poster, No preference)
Consideration for Student Poster Competition: Yes / No