عنوان مقاله:

Investigating the process of upgrading hand skills in dart throwing using augmented reality

محل انتشار:

پنجمین همایش بین المللی پژوهش های نوین در علوم ورزشی و تربیت بدنی (سال: 1399)

تعداد صفحات اصل مقاله: 8

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خلاصه مقاله:

Utilizing new technologies to advance in the processof learning and also to create more motivation and greaterattractiveness can be effective for performing movement andquicker learning. The main purpose of this study is to investigateand compare the motion patterns, acceleration and the angle ofmovement in the normal state when performing a particular sportmovement and doing the same action in an augmented realityenvironment using a game designed in this environment. Progresscan be examined by checking errors. Three groups of subjects weretested and evaluated in this paper. The first group consists of 3professional athletes who are asked to perform a movement in anormal position, during which the EMG signal is recorded from thetriceps and biceps.in addition, muscle activity patterns wereextracted from their movements. The second group consists of 3beginners who are asked to do the same movement. EMG recordingof the same muscle is also taken during the movement. The thirdgroup involves 3 beginners who are requested to perform the samemovement in a game designed in an augmented reality environment.EMG signal from the same muscle was also recorded during theexercise. Use of new technologies to advance learning and to createmore motivation and higher appeal can be effective on performing amovement as well as faster learning. The main purpose of this studyis to study and compare normal movement patterns whenperforming a specific sports movement by performing the samemovement in augmented reality environment and using a gamedesigned in this environment. Progress can also be determined byexamining errors. To do this, the results were analyzed by findingpoints from the pattern of muscle activity in which most informationis available as well as the section of Poincaré section from thementioned points.

کلمات کلیدی:

Darts, Electromyogram signal, Synergy, Augmented Reality , Poincaré section

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