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Učinkovito učenje naravoslovja skozi gibanje

Namen raziskave je skozi aktivno poučevanje naravoslovja povečati gibalno aktivnost učencev ter zmanjšati gibalno neaktivnost med samim poukom. V raziskavo je bilo vključenih 23 učencev četrtyh razredov iz goriške regije, ki so bili razdeljeni v kontrolno (KS) in eksperimentalno skupino (ES). Učencem smo merili gibalno/športno aktivnost z merilnikom pospeška, ki so ga pripetega okoli pasu nosili štiri zaporedne delovne dni. Pouk v KS je potekal po klasičnem načinu, pretežno frontalno, medtem ko je bil v ES izveden z aktivnim učenjem ter medpredmetnim povezovanjem naravoslovja in športa. Izbrali smo naravoslovno temo krvožilje in obravnavi namenili tri šolske ure. Pred izvedbo raziskave smo na podlagi preizkusa znanja, ki smo ga pripravili za namen raziskave, preverili predznanje učencev KS in ES. Rezultati so pokazali, da sta KS in ES po znanju izenačeni. Po izvedenem pouku so učenci KS in ES reševali končni preizkus znanja, s katerim smo želeli ugotoviti njihovo znanje, ki so ga pridobili po izvedbi učnih ur. Ugotovili smo, da je ES pokazala boljše znanje o krvožilju kot KS. Na dan intervencije je bila ES srednje in visoke intenzivnosti gibalne/športne aktivnosti deležna več časa kot KS ($p = 0,030$; $d = 1,5$). Čas gibalne neaktivnosti se med skupinama ni razlikoval.

Ključne besede: gibalna/športna aktivnost, pouk naravoslovja, medpredmetne povezave, krvožilje

Effective Learning of Science through Movement

The purpose of this study was to increase physical activity and decrease physical inactivity of students through active learning of science. The study included 23 fourth-grade students from elementary school in the Goriška region, who were divided into a control (CG) and an experimental group (EG). Students' physical activity was measured with the hip-worn accelerometer for four consecutive working days. Lessons in the CG were conducted with a classical approach, while in the EG with active learning and interdisciplinary connection between science and physical education. The science topic of the circulatory system was selected for three lessons. Before conducting the research, the students' prior knowledge was evaluated using the test prepared for the purpose of the research. The results showed that the CG and the EG are equivalent in prior knowledge. After the learning process, the students of the EG and the CG solved the final knowledge test. We found that the EG had better learning outcomes than the CG. On the day of the intervention, the EG spent more time in moderate to vigorous intensity of physical activity than the CG ($p = 0.030$; $d = 1.5$). However, there were no differences in physical inactivity ($p = 0.139$).

Key words: physical activity, science lessons, cross-curricular links, blood circulatory system