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Uvodna riječ urednika

Dragi čitatelji, autori, suradnici,

pred vama je šesti broj časopisa *Educational issues / Odgojno-obrazovne teme* s pet znanstvenih radova i prikazom knjige. Radovi pokrivaju široko područje prakse u vrtiću i školi, i to jedinstvenu studiju slučaja o likovnim umjetničkim poticajima u vrtiću, mikropauze u nastavi, utjecaj borilačkih vještina na kogniciju i područje pozitivnih i negativnih emocija u učenika u razredu, pojednostavljivanje literarnih tekstova u nastavi za osobe s intelektualnim teškoćama te je jedan rad usmjeren na darovite učenike u odgojno-obrazovnom procesu uz primjenu akcijskih istraživanja. Prikaz knjige problematizira pojavu otuđenja od roditelja iz perspektiva terapeuta i sudskog vještaka.

Vjerujemo da će kvaliteta publikacija, njihov sadržaj, a osobito pedagoške implikacije uz aktualnost s obzirom na trenutna zbivanja u odgoju i obrazovanju zadovoljiti vaša očekivanja, da će osim novih odgovora pobuditi i neka nova pitanja, da će vam znanstvena otkrića o kojima ćete čitati biti korisna i poticajna te da ćete i dalje rado biti naši suradnici koji će znati prepoznati vrijednosti ovog časopisa i u njemu objavljivati rezultate svojih istraživanja, a zajedno s nama utjecati na bolju kvalitetu odgoja i obrazovanja.

Urednici

Vilko Petrić i Lucija Jančec

Editors Preface

Dear readers, authors and associates,

In front of you is the sixth issue of the journal *Educational Issues /Odgojno-obrazovne teme*, with five scientific papers and a book review. The papers encompass a wide area of diverse practices in kindergarten and school. To be more precise, we are talking about a unique case study of artistic encouragement in the field of fine arts in kindergarten, followed by an article on micro breaks in instruction, after which you can read about the influence of martial arts on cognition and the field of positive and negative emotions in schoolchildren. There is also an interesting article on simplifying literary texts while instructing persons with intellectual disabilities and a paper focused on gifted pupils in the educational process, while applying action research. The book review addresses the phenomena of children's estrangement from parents, from the perspective of a therapist and of a court expert.

I believe that the quality and content of the publications, and especially the pedagogical implications related to the topicality of the concurrent events in education will satisfy your expectations. Moreover, I hope that they will entice new answers and questions while finding the scientific results useful and inspiring. Finally, I look forward to cooperating with those of you who recognise the values of this journal and consider publishing your research results in it, thereby helping us to raise the quality of education.

Editors

Vilko Petrić & Lucija Jančec

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MIKROPAUZE: STUDIJA SLUČAJA U PRVOM RAZREDU OSNOVNE ŠKOLE

Sažetak

Cilj kvalitativne studije slučaja je utvrditi kako mikropauze utječu na učenikovu motivaciju, pažnju, ali i uspješnost pri rješavanju matematičkih zadataka primjenom mrežnog sustava GoNoodlea. U istraživanju se koristila metoda strukturiranog intervjuja, a podatci su se prikupljali i sustavnim promatranjem i vođenjem zabilježki prije, za vrijeme i nakon svake mikropauze, što je omogućilo praćenje učeničkog ponašanja, pažnje i motivacije za vrijeme nastave. Rezultati studije slučaja ukazuju da su učenici nakon mikropauza bili manje umorni te im je pažnja bila povećana. Angažman učenika je povećan te su bili znatno motiviraniji za nastavu. Iako postoje ograničenja ovog istraživanja, koja se prije svega očituju u malom broju ispitanika, znanstveni doprinos je u obradi aktualne tematike na svjetskoj razini, odnosno pridavanje značaja implementiranju mikropauza u odgojno-obrazovni proces kao oblika aktivnog odmora tijekom nastavnog procesa.

Ključne riječi: GoNoodle; mikropauze; motivacija; uspjeh; pažnja

MICROBREAKS IN THE FIRST GRADE OF ELEMENTARY SCHOOL: CASE STUDY

Abstract

The qualitative case study aims to determine how microbreaks affect students' motivation, attention, and success in solving mathematical tasks using the GoNoodle online system. In this qualitative study, a structured interview method was used, the data were collected by systematic observation and keeping records before, during, and after each microbreak, which enabled monitoring students' behavior, attention, and motivation during instruction. The results of the case study indicate that the students were less tired after a microbreak and their attention was increased. The students' engagement was increased and they were much more motivated to learn. Although there are limitations of this research, which are primarily evident in a small number of subjects, the scientific contribution lies in processing current topics on the global level, i.e. giving importance to the implementation of microbreaks into the educational process as a form of active break during the educational process.

Key words: GoNoodle; Microbreaks; Motivation; Success; Attention

Uvod

Dobro je utvrđeno da tjelesna aktivnost i planirana vježba imaju značajne zdravstvene koristi u brojnim fizičkim, mentalnim i socijalnim aspektima (*Global action plan on physical activity 2018. – 2030.: more active people for a healthier world*, WHO, 2018). Sudjelovanje u redovitoj tjelesnoj aktivnosti nužno je preventivno ponašanje za mlade kako bi se smanjio rizik od razvoja kroničnih bolesti uz istodobno povećanje kvalitete, a možda i dugovječnosti nečijeg života. Tjelesnim vježbanjem omogućuje se povećanje socijalne inkluzije, razvija se sposobnost donošenja odluka i rješavanja situacijskih problema, ali isto tako razvija se samopouzdanje, samopoimanje, upornost, odlučnost te mnoga pozitivna psihička obilježja učenika (Kurikul nastavnog predmeta Tjelesna i zdravstvena kultura za osnovne škole i gimnazije u Republici Hrvatskoj, 2019). Malo koja aktivnost djeteta ima toliko značajan učinak na kvalitetu življenja kao tjelesno vježbanje (Prskalo i Babin, 2011) stoga je škola kao institucija odgoja i obrazovanja od ključne važnosti.

Kako je kineziološka edukacija sveobuhvatan proces koji prati ljudsko biće od predškolske do visokoškolske dobi (Prskalo i Babin, 2006), potrebno je inzistirati na tome da se uz prijeko potreban minimum satnice Tjelesne i zdravstvene kulture učenici i studenti uključuju i u druge organizacijske oblike rada, čime se može osigurati minimalno jedan sat vježbanja dnevno (Prskalo i Babin, 2009). Sadašnja istraživanja mogu imati značajne posljedice na školsku politiku i javno zdravstvo u kontekstu povećanja tjelesne aktivnosti djece, ali i na poboljšanje obrazovnog uspjeha učenika, kao i na motivaciju, pažnju, koncentraciju i ponašanje za vrijeme nastave. Jasno je da promjene životnih uvjeta traže dovoljno dobre odgovore civilizacije, naroda i društva koje želi opstati u tim promjenama te je jasno da promjene u sustavu odgoja i obrazovanja treba optimizirati na dnevnoj razini (Prskalo, Badrić i Lorger, 2019). Kao moguće rješenje ovom gorućem problemu javljaju se mikropauze koje pružaju dodatne mogućnosti tjelesne aktivnosti učenika tijekom školskog dana. Mikropauze, nastavne stanke ili stanke u razredu oblik su aktivnog odmora koji se primjenjuje radi smanjivanja umora tijekom nastavnog procesa (Findak i Stella, 1985). Findak (1999) mikropauze opisuje kao oblik aktivnog odmora kada učitelj uoči opadanje pažnje, bezvoljnost, labilno držanje tijela i sl. ili kada procijeni da je

učenicima potreban odmor od učenja. Pripadaju lociranim izvannastavnim kinziološkim aktivnostima koje se provode u razredu za vrijeme nastave u trajanju do 5 minuta.

Nadalje, kako bi ispunile preporuke SZO-a za tjelesnu aktivnost djece, odnosno za najmanje 60 minuta umjerene do intenzivne tjelesne aktivnosti dnevno, škole bi trebale omogućiti i motivirati djecu da redovito koriste unutarnje i vanjske sportske prostore škole u slobodno vrijeme. Oko dvije trećine, odnosno 63,4 % svih škola nudi organiziranu tjelesnu aktivnost svojim učenicima izvan nastave (Musić Milanović i sur., 2018).

Školu treba smatrati jednom od glavnih institucija za rješavanje tjelesne neaktivnosti, ne samo zbog vremena provedenog u školi i utjecaja koje škola može imati na razvoj učenika već i zbog povećanih količina istraživanja koja sugeriraju to da tjelesna aktivnost može imati pozitivne utjecaje na akademski uspjeh učenika. Nema optimalnog rasta, razvoja i odgoja bez tjelesnog vježbanja jer je vježbanje dijelom genetski uvjetovana potreba koja se ničime ne može kompenzirati (Prskalo i Babin, 2013).

Od vremena starih Grka postoji implicitno uvjerenje da je tjelesna aktivnost povezana s intelektualnim sposobnostima pa su zato znanstvenici počeli proučavati načine na koje ona može utjecati i poboljšati akademski uspjeh učenika i studenata. Od prvog dana u školi ta je institucija usmjerena na dijete i razvoj njegova znanja, vještina i kompetencija. Problem koji se pojavljuje na početku školovanja je dužina nastavnog sata i djetetova mogućnost praćenja sata. Kod sedmogodišnjaka koncentracija traje kratko i potrebno je često raditi pauze u učenju. Kako bi se istovremeno potaknulo učenike na povećanje tjelesne aktivnosti te zadržavanje pažnje i motivacije za rad te kako bi se pomoglo u ostvarivanju što boljeg školskog uspjeha, nužno je pristupiti sveobuhvatnom rješenju problema. Mikropauze obećavajući su način kojima se može utjecati na pažnju, motivaciju za rad, ali i obrazovni uspjeh učenika. Dosadašnjim istraživanjima dokazani su pozitivni utjecaji mikropauza na obrazovni uspjeh i rješavanje numeričkih zadataka, no nedostaci istraživanja očituju se u uključivanju većeg broja nastavnika ili učitelja u studije, čime se izgubilo na objektivnosti dobivenih rezultata.

Iako statistike podržavaju rastuću stigmom da današnja djeca ovise o tehnologiji te da su sve neaktivnija i sklonija poremećajima pažnje, jedan je entuzijast ovaj trend vidio kao rijetku priliku za promjenu paradigme transformirajući način na koji djeca uče, što podrazumijeva obrazovanje kroz zabavu i igru. Pokrenut 2013. godine GoNoodle dizajnira mobilne igre, interaktivne aktivnosti i zabavu prilagođenu djeci kako bi osigurao pauze koje promiču fizičku aktivnost, aktivno učenje, povećani angažman i pojačan fokus. Odabirom iz stotina prilagođenih videozapisa učitelji i roditelji koriste GoNoodle za djelotvorno usmjeravanje djetetove energije, istovremeno se odvajajući od tradicionalnih metoda poučavanja kako bi iskustvo učenja bilo zabavno i relaksirajuće.

GoNoodle je mrežni sustav koji nudi učitelju i učenicima ideje za kreativne i opuštajuće trenutke u pauzama od učenja. Kada učitelj primijeti da je koncentracija i motivacija u učenju slaba, prekida rad i potiče učenike na rekreativne i opuštajuće trenutke. Vježbe su prilagođene djeci i traju od dvije do pet minuta. Sve su vježbe popraćene glazbom i učenici ih s veseljem odrađuju. Koje će se kategorije odabrati, ovisi o trenutnoj situaciji u razredu.

Kako bi mikropauze postale dijelom nastavnog sata, osim tjelesnih su dobrobiti potrebni i empirijski dokazi o utjecaju na pažnju i motivaciju učenika, ali i na odgojno-obrazovne rezultate. Rezultati ovog istraživanja doprinijet će boljem razumijevanju i shvaćanju potrebe integracije pokreta u odgojno-obrazovni sustav kroz pozitivne učinke implementacije mikropauza primjenom sustava GoNoodlea.

Sve je veća zainteresiranost ne samo istraživača nego i obrazovnih stručnjaka za mogućnost da tjelesna aktivnost temeljena na mikropauzama pozitivno utječe na ishode vezane uz obrazovanje, uključujući ponašanje učenika i akademsko postignuće. Cilj ovog rada je kvalitativan prikaz kako mikropauze utječu na učenikovu motivaciju, pažnju i uspješnost pri rješavanju matematičkih zadataka primjenom mrežnog sustava GoNoodlea.

Pregled istraživanja

Postoji ograničeno istraživanje o područjima mikropauza i vježbanja u učionici te kako mikropauze utječu na ponašanje učenika i uspješnost pri rješavanju određenih zadataka. Međutim, postojeća istraživanja pokazuju da kretanje

i vježbanje mogu biti korisni za naše učenike. Mikropauze se u različitim oblicima mogu koristiti za povećanje pažnje i koncentracije, utjecati na ponašanje učenika i na njihov uspjeh pri rješavanju zadataka, ali i poboljšanje finoće motoričke sposobnosti (Maskell, Shapiro i Ridley, 2004). Helgeson (2011) navodi kako se dodavanjem kretanja i mikropauza u učionici ne uključuje samo aktivnost učenika već se time može poboljšati razredno ozračje i smanjiti ometanje za vrijeme nastave. Mnogi učitelji oklijevaju provoditi mikropauze u svojim učionicama zbog nedostatka dostupnih istraživanja i resursa. Webster, Erwin i Parks (2013) otkrili su da je malo istraživanja vezanih za varijable povezano s trendovima promocije tjelesne aktivnosti učitelja u razredu. Ne samo da mikropauze u nastavi mogu doprinijeti svakodnevnom povećavanju tjelesne aktivnosti (do 19 minuta dnevno) (M.Dinkel, Lee i Schaffer, 2016) već su pronađeni i određeni dokazi koji upućuju na to da tjelesna aktivnost poboljšava mnoge akademske rezultate, uključujući uspjeh pri rješavanju zadataka, kognitivne performanse, vještine čitanja i matematike, povećava usredotočenost učenika na zadatke, utječe na stvaranje pozitivnog iskustva učenja i poboljšanu razinu koncentracije (Bartholomew i Jowers, 2011; Bassett, Fitzhugh, Heath, Erwin, Frederick, Wolff i Stout, 2013; Carlson, Engelberg, Cain, Conway, Mignano, Bonilla i Sallis 2015; Dunn, Venturanza, Walsh i Nonas, 2012; Erwin, Fedewa i Ahn, 2013; Kibbe, Hackett, Hurley, McFarland, Schubert, Schultz i Harris 2010; Mahar, 2011). Stoga bi mikropauze u nastavi mogle biti izvediv pristup za pomoć školama u povećanju uspjeha učenika pri rješavanju zadataka i učinkovita metoda poučavanja za poboljšanje akademskih postignuća, a svakako dobar pristup za povećanje tjelesne aktivnosti učenika i poboljšanje njihova općeg zdravlja. Učitelji trebaju pouzdane resurse i načine provedbe mikropauza kako bi ih uključili u svakodnevnu užurbanu atmosferu u učionici. Stoga vjerujem da je važno provesti više istraživačkih studija u školama da se utvrdi pravi utjecaj koji pokret i vježba imaju na učenje i ponašanje učenika te na njihovu motiviranost za rad.

U učionici se često pojavljuje umor i iscrpljenost tijekom nastavnog procesa jer se rad učenika na nastavi svodi na angažiranje manjih grupa mišića koji nepovoljno utječu na funkcionalno stanje organizma (Findak i Stella, 1985). Uzrok tomu, zaključuju Findak i Stella, jest dugotrajan boravak u zatvorenoj prostoriji u kojoj učenici većinu vremena provedu u sjedećem položaju s

nametnutim tempom rada koji predstavlja određeni napor. Dakle, obveza učitelja jest organizirati odgojno-obrazovni rad koji će spriječiti negativne utjecaje te unaprijediti zdravlje i tjelesni razvoj učenika (Findak i Stella, 1985). Mikropauze, nastavne stanke ili stanke u razredu oblik su aktivnog odmora koji se primjenjuje radi smanjivanja umora tijekom nastavnog procesa (Findak i Stella, 1985). Mikropauzama u razredu učenici mogu steći naviku tjelesnog vježbanja tako što se osobno uvjere u pozitivne učinke kratke aktivnosti na organizam i raspoloženje, a potom i u njihov utjecaj na stvaranje pozitivnog radnog ozračja u razredu (Caput-Jogunica i Barić, 2015).

John Helgeson (2011) napominje da učitelji trebaju učiniti više kako bi uključili svoje učenike u nastavni proces, a odlična strategija za to jesu mikropauze. Učenici su dužni dugo sjediti pa često postanu nemirni te ne mogu dugo zadržati koncentraciju i motivaciju za rad. Carrie Braniff (2011) kaže da učenici nisu aktivno uključeni kada nema tjelesne aktivnosti u učionici, a učitelji stalno koriste frontalni oblik nastave. Kad učenici i ustanu te ako se kreću, očekuje se da to čine na način koji se može kontrolirati i regulirati. Često se u školama mogu vidjeti djeca kako tiho hodaju u koloni ili u paru, poput robota.

Jensen (2009) je utvrdio sedam znanstveno utemeljenih razloga zbog kojih je kretanje učenika u učionicama izuzetno važno te pozitivno utječe na njihov uspjeh u školi. Prvo, pokret osigurava cirkulaciju, što znači više krvi i kisika u mozgu, što zauzvrat pomaže mozgu da se bolje usredotoči. Još jedan razlog zbog kojeg je Jensen izjavio da je tjelesna aktivnost u razredu važna je epizodno kodiranje (*episodic encoding*), odnosno dokazano je da mijenjanje mjesta trenutačnog boravka ili promjena položaja u sobi može poboljšati učenje. Jednostavna promjena mjesta sjedenja ili prijelaz iz učionice u učionicu moglo bi biti od koristi. Jensen navodi kako je ljudsko tijelo u zadnjih 400 000 godina uglavnom hodalo, spavalo, trčalo, radilo ili čučalo. Ljudsko tijelo nije sjedilo u stolcima, naslonjačima i sl. Jensen ističe negativne učinke koje sjedenje ima na tijelo na duže vrijeme, uključujući stres živaca donjeg dijela leđa i smanjenje cirkulacije. Kad naše tijelo doživljava negativne fizičke učinke, isto se događa i s našim psihičkim stanjem (Jensen, 2009).

Mikropauze mogu biti posebno korisne za učenike s posebnim potrebama. McMinn, Rowe i Trim (2011) ističu problem zbog kojeg su učenici s posebnim

potrebama manje aktivni u odnosu na svoje vršnjake općeg obrazovanja. Oni sugeriraju povećanje tjelesne aktivnosti upravo kroz mikropauze. Postoji vrlo jasna potreba za kretanjem i tjelesnim aktivnostima u učionici, posebno za učenike s posebnim potrebama. Međutim, neki učenici s posebnim potrebama su očit će se s izazovima u određenim mikropauzama ili tjelesnim aktivnostima. Mnogi učenici s invaliditetom imaju gruba ili fina motorička oštećenja koja mogu ograničiti njihovo kretanje ili uzrokovati zabrinutosti za sigurnost tijekom mikropauza (McLaren, Edwards, Ruddick, Zabjek, i McKeever, 2011). Ovi izazovi trebaju se uzeti u obzir pri provođenju takve prakse u inkluzivnim učionicama (McLaren i suradnici, 2011).

Vježbanje povećava razinu neurotransmitera u određenim područjima mozga, a više razine pomažu održavati ravnotežu, što utječe na sposobnost usmjerenja pozornosti i kontrole impulsa, zaključuje Ratey (2008). Mahar, Murphy, Rowe, Golden, Shields i Raedeker (2006) utvrdili su da su učenici četvrtog razreda koji su aktivniji tijekom mikropauze od 10 minuta usredotočeniji na izvršavanje zadataka od učenika koji nemaju tu priliku. Mahar i sur. (2006) su u svom istraživanju došli do zaključka da je program tjelesne aktivnosti temeljen na mikropauzama bio učinkovit za povećanje dnevne tjelesne aktivnosti u školi i poboljšanje ponašanja učenika tijekom nastave, odnosno da su mikropauze pozitivno utjecale na pažnju i koncentraciju učenika. Do sličnih zaključaka su došli i Riley, Lubans, Holmes i Morgan (2015) koji su se u svom istraživanju usredotočili na učinkovitost mikropauza za vrijeme nastave Matematike u primarnom obrazovanju. Howie, Beets i Pate (2014) su među prvima izravno usporedili utjecaj 5, 10 i 20 minuta tjelesnog vježbanja na pažnju i koncentraciju učenika pri izvršavanju zadataka tijekom sata te su zaključili da 10 minuta tjelesnog vježbanja znatno poboljšava izvršavanje zadataka kod djece. Goh, Hannon, Webster, Podlog i Newton (2016) zamijetili su da produljena razdoblja nastave bez tjelesne aktivnosti djece mogu rezultirati neradom i nezainteresiranošću učenika. Nakon što su proveli svoje istraživanje, zaključili su da mikropauze u razredu mogu pomoći u promicanju pozitivnog ponašanja učenika kad je u pitanju izvršavanje zadataka za vrijeme nastavnog sata. Slične rezultate istraživanja dobili su i Mullender-Wijnsma, Hartman, de Greeff, Bosker, Doolaard i Visscher (2015), kao i Grieco, Jowers, Errisuriz i Bartholomew (2016) u svojim radovima. Učenici s poremećajem pažnje često

imaju poteškoće s mirnim sjedenjem dugo vremena te mogu imati veliku korist od mikropauza zbog strukturirane mogućnosti kretanja. Ti kratki tjelesni predasi mogu takvim učenicima dati mogućnost za pokret koji njihova tijela trebaju kako bi se usredotočila na akademske zadatke (Mulrine, Prater i Jenkins, 2008).

Bez obzira na vrstu tjelesne aktivnosti u mikropauzama, vidimo da sudjelovanje u tim aktivnostima ima akutni učinak na poboljšanje ponašanja učenika kad je u pitanju izvršavanje zadataka za vrijeme nastave. No treba uzeti u obzir da kod učenika, pogotovo mlađe dobi, vrlo brzo dolazi do zasićenja te da tjelesne aktivnosti provedene tijekom mikropauza trebaju biti raznolike kako bi se zadržalo promicanje pozitivnog ponašanja učenika pri izvršavanju zadataka za vrijeme nastave.

Tjelesna aktivnost ima višestruke zdravstvene koristi, pogotovo kod djece. U svijetu se provode mnoga znanstvena istraživanja koja povezuju tjelesnu aktivnost i poboljšanje uspjeha učenika, kao i pozitivne učinke na ponašanje učenika. Iako postoji povezanost tjelesne aktivnosti i postignuća učenika pri rješavanju zadataka, rezultati dosadašnjih istraživanja trebaju se pažljivo interpretirati (Tomporowski, Davis, Miller i Naglieri, 2007). Upravo zbog svih koristi tjelesne aktivnosti, integracija mikropauza u školske kurikule privlači sve više pažnje znanstvenika i medija, ali prvenstveno djelatnika u školskom sustavu.

Raspberry, Lee, Robin, Laris, Russell, Coyle i Nihiser su 2011. godine napravili pregled devet dotadašnjih istraživanja koja su uključivala povezanost mikropauza i uspjeha učenika pri rješavanju zadataka u školi. Svih devet istraživanja temeljilo su se na intervencijama. Rezultati tih intervencijskih ispitivanja pokazali su pozitivne ishode ili izostanak povezanosti. U četirima su studijama navedene sve pozitivne asocijacije između mikropauza, ponašanja učenika za vrijeme nastave i uspješnosti pri rješavanju zadataka. Primjerice, Maeda i Randall (2003) izvijestili su da učenici drugog razreda pokazuju veću koncentraciju i veću sposobnost rješavanja matematičkih zadataka nakon mikropauze. Fredericks, Kokot i Krog (2006) opisali su poboljšanja prostorne sposobnosti, vještine čitanja i matematičke vještine učenika prvog razreda koji su bili izloženi mikropauzama usredotočenima na razvoj perceptivnih i senzornih motoričkih vještina. Međutim, nije bilo povezanosti s drugim pokazateljima

spособnosti kao što su percepcija, razum, pamćenje i verbalno razumijevanje ili emocionalni pokazatelji. Deveto istraživanje nije pokazalo vezu između mikropauza i standardiziranih testova. Ukupno osam od devet pregledanih studija pokazuje kako fizičke aktivnosti temeljene na mikropauzama mogu imati pozitivne asocijacije s pokazateljima kognitivnog funkcioniranja, akademskog ponašanja i/ili akademskog postignuća. Nisu pronađeni nikakvi negativni utjecaji. Norris, van Steen, Direito i Stamatakis su 2019. godine objavili metaanalizu dosadašnjih istraživanja na temu utjecaja mikropauza na vrijeme učenja i ukupnu tjelesnu aktivnost, kao i na zdravlje, spoznaje i obrazovne ishode. Norris i sur. došli su do sličnih spoznaja kao i Rasberry i sur. Prijavili su pozitivan utjecaj mikropauza na obrazovanje i obrazovne ishode, što se podudara s prijašnjim metaanalizama koje su pokazale značajna poboljšanja u ponašanju učenika pri izvršavanju zadataka, kao i poboljšanja u postignućima učenika pri rješavanju zadataka. Samo tri istraživanja uključena u ovu metaanalizu nisu pokazala povezanost mikropauza i kognitivnih i izvršnih funkcija koje su važni prekursori obrazovnih postignuća.

Rezultati ovih istraživanja pokazuju da su mikropauze ili pozitivno povezane s uspjehom učenika pri rješavanju zadataka ili da ne postoji odnos. Obrazac pozitivnih odnosa ili bez odnosa, uz nedostatak negativnih utjecaja, dosljedan je tijekom svih istraživanja i sugerira da mikropauze tijekom školskog dana mogu povećati uspjeh učenika pri rješavanju zadataka i nemaju negativnih posljedica.

Matematika ima visok prioritet u nastavnom kurikulumu osnovne škole, no propisani su ishodi nekoj djeci teško usvojivi. Je li to zbog percepcije roditelja, neutemeljenog rodnog stereotipiziranja ili su tomu neki drugi razlozi (Minetola, Ziegenfuss i Kent Chrisman, 2014)? „Kombinacija matematičkih pojmova s vještinom stjecanja znanja stavlja visoka kognitivna opterećenja na djecu, što može rezultirati povišenom razinom anksioznost ili slabe koncentracije kroz dugotrajno razdoblje. Priroda matematike je takva da sadrži terminologiju za savladavanje i poznavanje matematičkih zakonitosti koje se moraju primijeniti na sve teže probleme koji zahtijevaju upotrebu memorije i višeg stupnja razmišljanja. Omogućujući učenicima da naprave pauze tijekom ovog razdoblja koncentracije i razmišljanja duboke razine kako bi se osvježili i preusmjerili, daje im se mogućnost za izvrsnost i uživanje u učenju” (Stigler i

Hiebert, 2004). Literatura uglavnom podržava koncept korištenja mikropauza za promicanje usredotočene pažnje i učenja, što svakako može imati pozitivan utjecaj na uspjeh učenika pri rješavanju zadataka u području matematike.

Ciljevi i metodologija istraživanja

Ciljevi i istraživačko pitanje

Opći cilj istraživanja je kvalitativan prikaz kako mikropauze utječu na učenikovu motivaciju, pažnju, ali i uspješnost pri rješavanju matematičkih zadataka primjenom mrežnog sustava GoNoodlea, što je ujedno bilo i istraživačko pitanje.

Specifični ciljevi istraživanja:

- ispitati stavove učenika o nastavnim predmetima, poteškoćama praćenja nastave, mikropauzama te kako one utječu na njihovo učenje
- utvrditi temeljne stavove, iskustva i razmišljanja sudionika istraživanja o primjeni mikropauza korištenjem mrežnog sustava GoNoodlea
- promatrati učenike u razredu te sustavno pratiti ponašanje, pažnju i motivaciju za rad odabranih učenika i njihov uspjeh pri rješavanju matematičkih zadataka.

Metode i postupci prikupljanja podataka

Tijekom istraživanja koristilo se nekoliko metoda prikupljanja podataka. U skladu s ciljem pregledana je literatura u spektru primarnih i sekundarnih izvora, međunarodni i nacionalni znanstveni članci objavljeni u akademskim i stručnim časopisima koji su dostupni preko elektroničkih medija, ali i baze podataka knjižnice Učiteljskog fakulteta u Zagrebu. Budući da je ovo istraživanje osmišljeno isključivo kao kvalitativno, jedna od metoda i postupaka prikupljanja podataka kojom se služilo u svrhu produbljivanja spoznaja o predmetu istraživanja je strukturirani intervju. Instrument koji se pritom koristio jest protokol intervjua. Intervjui su se proveli individualno, u obliku razgovora ‘licem u lice’ te su snimani audiouređajem kako bi se osiguralo postojanje zapisa intervjua. Provedeni intervjui obrađeni su analizom transkripta audiosnimki. Prosječno

trajanje intervjuja bilo je u razdoblju od 5 minuta. Intervjui su u potpunosti anonimni te su se odgovori koristili isključivo za potrebe ovog istraživačkog rada. Intervjui su se proveli na početku i na kraju istraživanja s dodanim pitanjem o mikropauzama (koje kategorije sustava GoNoodlea su im najprihvatljivije i pomažu li im u procesu nastave). Postupak pripreme prikupljene građe za obradu sastojao se od transkribiranja intervjuja u pisanom obliku, minimalnog jezičnog uređivanja te podijele parafraziranih zapisa u kategorije. Nakon intervjuja s učenicima je proveden postupak kodiranja i grupiranja dobivenih odgovora.

Također su se vodile zabilješke o učeničkom postignuću pri rješavanju matematičkih zadataka kako bi se utvrdilo postoji li povezanost između mikropauza i sposobnosti učenika da primjene stečene informacije i znanje. Svaki sat Matematike započeo je spoznajom novog sadržaja, a zadnjih petnaest minuta učenici su samostalno rješavali jedan problemski zadatak riječima (računske priče). Zabilješka o postignuću troje učenika vodila se nakon svakog provedenog sata, bez obzira na to je li taj sat provedena mikropauza ili ne.

Istraživanje je provedeno u jednom razrednom odjeljenju, gdje se koristila triangulacija za prikupljanje podataka. Podatci su prikupljeni intervjuom za učenike, anegdotskim bilješkama o trima nasumično odabranim učenicima i bilješkama o uspješnosti riješenih problemskih zadataka iz matematike. Učenici su sudjelovali u mikropauzama pomoću mrežnog sustava GoNoodlea tijekom sata Matematike svaki drugi dan. Za to su vrijeme učenici putem plesnih mikropauza bili tjelesno aktivni te su nakon toga rješavali problemski zadatak. U danima bez mikropauza također su rješavali problemski zadatak na kraju sata Matematike.

Svakog dana su se vodile bilješke o trima nasumično odabranim učenicima na temelju njihove pažljivosti u radu, njihove motivacije i bilo kojeg ponašanja vezanog za izvršavanje zadataka. Ova ponašanja i njihova motivacija kodirana su korištenjem plusa (+) za dobru motivaciju, pažnju i prihvatljivo ponašanje te minusa (-) za nemotiviranost, nepažnju tijekom nastavnog sata i neprihvatljivo ponašanje. Ako je učenik cijelo vrijeme bio motiviran i pažljiv tijekom sata Matematike, dobio je plus. Međutim, ako je bio nepažljiv ili nemotiviran ili se neprihvatljivo ponašao tijekom nastavnog sata, dobio bi minus svaki put kada bi se pokazalo takvo ponašanje. Nepažnja i nemotiviranost se određivala

u trenutcima kada su učenici gledali po učionici, igrali se predmetima na svojim radnim mjestima, nisu bili aktivni tijekom sata ili su odgovarali netočno na postavljena pitanja.

Nakon svakog sata Matematike učenici su rješavali jedan problemski zadatak riječima (računska priča). Ako je učenik točno riješio ovaj zadatak, dobio je nasmiješeno lice. Za netočno riješen zadatak dobio je tužno lice.

Podatci su se prikupljali i putem intervjua prije i poslije istraživanja. U intervju su sudjelovali samo oni učenici za koje su roditelji potpisali suglasnosti i koji su željeli sudjelovati u ovom istraživanju. Odgovori su se kodirali prema boji. Zelena boja bila je označavala je pozitivan odgovor, žuta neutralan, a crvena boja negativan odgovor. Prikupljanje podataka usredotočeno je na dva pitanja – smatraju li da im mikropauze pomažu te je li im teško dugo sjediti za vrijeme nastave.

Istraživanje je provedeno u trajanju od 6 tjedana. Na početku istraživanja učenicima su podijeljene suglasnosti za sudjelovanje u ovom istraživanju koje su roditelji potpisali te je i samim učenicima usmenim putem objašnjeno o kakvom se istraživanju radi i što se od njih očekuje te da u svakom trenutku mogu odustati od sudjelovanja. Od ukupno 14 učenika u razrednom odjeljenju 11 njih je vratilo pozitivno potpisane suglasnosti, odnosno roditelji su bili suglasni da djeca sudjeluju u ovom istraživanju.

Uzorak istraživanja

Za ovo istraživanje uzorkovanje je podređeno potrebama samog istraživanja, a ne kriterijima ekstremne valjanosti, što i jest jedna od karakteristika kvalitativnih istraživanja i metode intervjuiranja (Halmi, 2013). Uzorak sudionika istraživanja jest namjeran, neprobabilistički i broji 11 sudionika. Istraživanje je provedeno u prvom razredu osnovne škole s ukupno 14 učenika, od čega je 7 djevojčica i 7 dječaka. I roditelji i učenici su trebali dati svoj pristanak za sudjelovanje u istraživanju, što je na kraju rezultiralo brojkom od 11 sudionika. Za troje učenika roditelji nisu pristali potpisati suglasnost iz osobnih razloga. Od tih 11 sudionika slučajnim odabirom izabrano je troje učenika koji su podrobnije praćeni te se za njih vodila i evidencija o uspješnosti rješavanja matematičkih zadataka. Nijedno od troje promatranih učenika nema potrebu za primjerenim

oblikom školovanja. Sve troje je upisano u školu s dobrim predznanjem čitanja te usvojenom glasovnom analizom i sintezom te osnovama matematike. Kako bi se zadržala anonimnost učenika koji su promatrani, učenicima su dodijeljena slova: učenik A, učenik B i učenica C.

Učenik A je sedmogodišnji dječak. Živi s majkom u obiteljskoj kući bez braće i sestara, a otac boravi i radi izvan Hrvatske. Pristojnog je ponašanja te vrlo znatiželjan oko sadržaja koji ga zanimaju. Vidljivi su problemi s finom motorikom, posebice grafomotorikom. Često brojke 3 i 5 piše zrcalno, kao i neka slova. Dobro se slaže s ostalim učenicima u razredu.

Učenik B je šestogodišnji dječak, jedinac u obitelji koji živi s majkom, dok otac radi izvan Hrvatske. Vrlo komunikativan, pristojan, bogatog rječnika. Pokazuje želju za usvajanjem novih znanja, no ima vrlo velikih poteškoća s koncentracijom i pažnjom. Izuzetno emotivan i vezan za obitelj te se u početku družio samo sa svojim bratićem s kojim ide u razred. Ostali u razredu dobro ga prihvaćaju.

Učenica C je sedmogodišnja djevojčica. Živi s obama roditeljima, starijom sestrom i mlađim bratom. Vrlo tiha i povučena za vrijeme nastave, dok u igri s ostalom djecom pokazuje osobine vođe. Vrlo uredna i savjesna u izvršavanju svojih obveza. Bavi se sportom.

Istraživanje je provedeno u jednoj od triju gradskih škola grada Petrinje u Sisačko-moslavačkoj županiji. Osnovna škola Mate Lovraka Petrinja sastoji se matične i područne škole. Osnovnu školu Mate Lovraka Petrinja pohađaju učenici od prvog do osmog razreda. Ukupno školu pohađa 392 učenika.

Instrument istraživanja

S obzirom na prethodno postavljen cilj istraživanja kreiran je protokol za vođenje strukturiranog intervjua. On služi kao unaprijed definiran skup pitanja osmišljenih prema sljedećim indikatorima: nastavni predmeti i učenje, pažnja, motivacija i osobno zadovoljstvo mikropauzama. Navedene kategorije vlastito su kreirane proučavanjem relevantne i stručne literature i nisu preuzete od drugih autora te proučavanje Upitnika intrinzične motivacije (Intrinsic Motivation Inventory – IMI), hrvatska verzija upitnika (Barić, Ceciĉ-Erpiĉ i Babić, 2002)

i Big Five upitnika za djecu (BFQ-C), hrvatska verzija upitnika (Barbaranelli, Caprara, Rabasca i Pastorelli, ur. hrvatskog izdanja: Valentina Ružić, 2011).

Pouzdanost

Istraživanje je provedeno kvalitativnom metodom koristeći mikropauze u nastavi putem mrežnog sustava GoNoodlea kako bi se osigurala valjanost dizajna istraživanja. Upravo je iz tog razloga istraživanje provedeno u razdoblju od 6 tjedana. Također je predviđeno sustavno promatranje i bilježenje podataka uz intervjuiranje sudionika. Kako se radi o studiji slučaja u kvalitativnom obliku istraživanja, generaliziranje dobivenih podataka je ograničeno, ali slično istraživanje mogu provesti i drugi istraživači.

Rezultati

Ova studija slučaja dizajnirana je kako bi se utvrdili učinci koje mikropauze putem mrežnog sustava GoNoodlea imaju na ponašanje i pažnju učenika, kao i na motivaciju te na njihova postignuća pri rješavanju matematičkih zadataka.

Nakon analize podataka formulirala su se četiri nalaza kako bi se dobio odgovor na istraživačko pitanje: *Kako mikropauze utječu na učenikovu motivaciju, pažnju, ali i uspješnost pri rješavanju matematičkih zadataka primjenom mrežnog sustava GoNoodlea?* Prvo otkriće je da su učenici bili manje umorni nakon mikropauza. To je dovelo do drugog nalaza: učenici su bili motiviraniji tijekom predavanja nakon mikropauza u odnosu na sate kada ih nije bilo. Međutim, kako su se učenici teže smirivali i usredotočili na rad nakon mikropauze, bilo je potrebno provesti kratku vježbu disanja i smirivanja. Također se moglo zaključiti da je uspješnost rješavanja problemskog zadatka nakon mikropauza zanemariva. Točnost riješenosti ponekad se poboljšavala nakon mikropauza, ali ne mnogo.

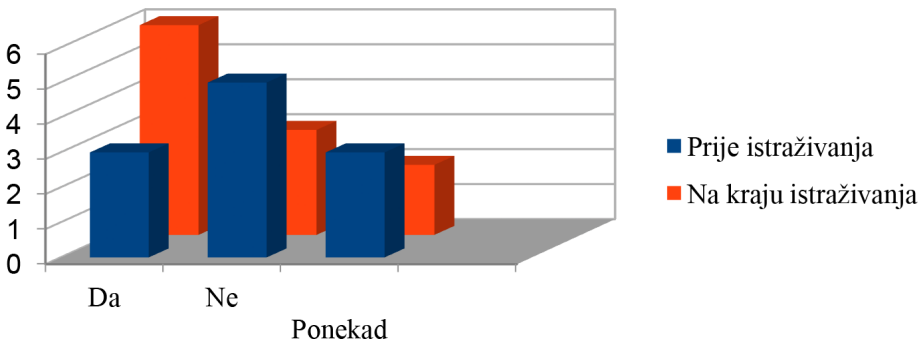
Učenici su intervjuirani prije početka istraživanja i opet na kraju prikupljanja podataka. Na kraju prikupljanja podataka pitanja su bila ista kao i na početku s dodatkom dvaju pitanja: svidaju li im se mikropauze i smatraju li da im pomažu tijekom sata. Odgovori su varirali prije i nakon provedenog istraživanja. Prethodno intervjuiranje pokazalo je da su mnogi učenici izvijestili da se osjećaju umorno nakon dužeg sjedenja. Postintervju potvrdio je ovo otkriće i

pružio još veću podršku tom nalazu jer su odgovori dani detaljnije nakon što su doživjeli mikropauze.

U početnom intervjuu učenici su davali jednostavne odgovore. Na pitanje je li teško sjediti dugo vremena učenici su uglavnom odgovarali kratkim odgovorima poput jednostavnog da, ne ili ponekad s vrlo malo detalja o tome zašto im je teško sjediti. Jedan učenik je izjavio: „Mogu izdržati cijeli dan, ali mi je teško.“ Od jedanaest učenika njih je troje izjavilo da im je teško dugo sjediti, petero učenika izjavilo je da nema poteškoća s dugim sjedenjem, a troje učenika je izjavilo da im je ponekad teško.

Postintervju potvrdio je da su se učenici osjećali umorno nakon dugog sjedenja. Broj učenika koji je vjerovao da je dugo sjedenje teško povećan je nakon mikropauza, a broj učenika koji vjeruje da nije teško smanjio se. Odgovori su bili mnogo detaljniji. U ovom dijelu istraživanja šestero je učenika smatralo da je teško dugo sjediti. Troje je učenika vjerovalo da nije teško dugo sjediti, a broj učenika koji je vjerovao da je ponekad teško je spao na dvoje učenika. Četvero od šestero učenika koji su izjavili da je teško dugo sjediti podupirali su svoje odgovore izjavom da ih predugo sjedenje čini umornima, a mikropauze su im pomogle da se probude. Jedan je učenik rekao: „Da, teško je jer mi se počinje spavati.“ Druga je učenica odgovorila: „Da, jer se moram kretati.“ Nakon što su doživjeli mikropauze, mnogi su učenici priznali da ih dugo sjedenje može umoriti i osjećali su se kao da im je potrebno ustati i kretati se kako bi se mogli usredotočiti i motivirati za rad.

Graf 1. Podatci dobiveni intervjuom prije i nakon što je istraživanje provedeno potvrđuju da je učenicima teško dugo sjediti.



Ti su nalazi ponovno potvrđeni u anegdotskim bilješkama. Često su opažani učenici koji izgledaju umorno, zijevaraju, odmaraju glavu na rukama i nagibaju se kad nije bilo mikropauza. Neka od tih istih ponašanja i dalje su promatrana i uočena nakon provedene mikropauze, ali su se rjeđe ponavljala, kao što je objašnjeno u sljedećim odlomcima. Tijekom nastavnih sati Matematike bez provedenih mikropauza umorno ponašanje zabilježeno je petnaest puta između rezultata provedenih intervjuja. U tom je razdoblju promatrano troje učenika. Osobito je primijećen jedan učenik (učenik A) koji je od deset promatranih nastavnih sati Matematike kada nije provedena mikropauza, pokazivao umorno ponašanje (obično odmarajući glavu na ruci i nagnuvši se prema klupi), i to devet od deset puta (zbog bolesti je izostao s četiriju sati Matematike). Kod njega je primijećeno umorno ponašanje i nakon što su uvedene mikropauze, ali mnogo rjeđe. Kod ostalo dvoje učenika također je primijećeno manje oslanjanje glave na ruku ili na klupu, i to jedan do tri puta u nastavnim satima kada je bilo mikropauza, u usporedbi s prosječno pet puta bez mikropauza. Ponašanje poput umora i nezainteresiranosti za sat očito se smanjilo nakon mikropauza.

Učenici su bili izdržljiviji i pažljiviji nakon što je provedena mikropauza. Oni su se mogli usredotočiti na duže razdoblje, a njihova umorna ponašanja ili nisu bila prisutna ili se nisu javljala do kraja nastavnog sata. Sustavne bilješke također su potvrdile da im je pažnja duže trajala. Nakon mikropauza zabilježeno je mnogo više koncentracije i pažnje nego za vrijeme onih nastavnih sati kada nije provedena mikropauza. Učenik B od početka nastavne godine ima

velikih problema s koncentracijom i pažnjom. Vrlo se često tijekom sata igra priborom, bilo da se radi o gumici za brisanje, olovci ili samo okreće lista papira, odsutan je u svojim mislima, spor u izvršavanju zadataka te na kraju sata pokazuje simptome umora. Nakon što su mikropauze uvedene takvo ponašanje kod učenika B nije nestalo, ali se znatno smanjilo za razliku od onih sati kada nije proveden odmor u obliku mikropauza. Također ga je bilo znatno lakše usmjeriti na izvršavanje zadatka nakon mikropauze. Dovoljno je bilo samo jednom ga opomenuti i skrenuti njegovu pažnju na zadatak. Onih nastavnih sati kada nije bilo mikropauza, ovog učenika je bilo potrebno nekoliko puta opominjati kako bi se njegova pažnja usmjerila na zadatak. Učenica C bila je podjednako usredotočena i pažljiva na satu, bilo da se radilo o onim satima kada su provedene mikropauze ili onim satima kada nisu.

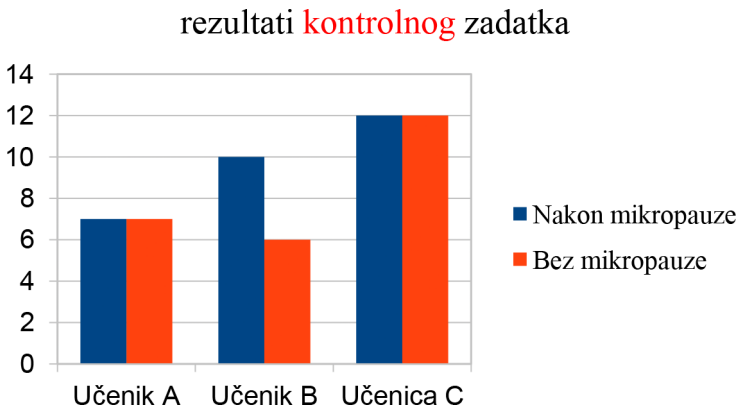
Uspješnost rješavanja problemskih zadataka neznatno se poboljšala nakon uvođenja mikropauza u usporedbi s onim danima kada se mikropauze nisu primjenjivale, ali to poboljšanje nije toliko značajno da bi se moglo zaključiti da su mikropauze razlog tomu. Neke nastavne jedinice su bile zahtjevnije od drugih i niz je drugih čimbenika koji su mogli pridonijeti takvom rezultatu. Posebice treba uzeti u obzir da je samo jedan učenik od troje promatranih svaki put nakon mikropauza postigao bolji rezultat nego onih sati kada se mikropauze nisu primjenjivale. No važno je napomenuti da je uzorak u ovom istraživanju vrlo malen.

Nakon svakog nastavnog sata, bilo da se radilo o spoznaji novog sadržaja ili o ponavljanju i utvrđivanju naučenog, učenicima je zadan jedan problemski zadatak riječima (tzv. računski priča) zadnjih petnaest minuta sata. Dvanaest od dvadeset četiriju nastavnih sati Matematike učenici su sustavno promatrani prije i nakon implementacije mikropauze putem mrežnog sustava GoNoodle, dok ostalih dvanaest puta nije primijenjena mikropauza.

Učenica C je daleko najbolji matematičar od troje promatranih te su njezini rezultati uvijek bili odlični. Na učenika B su mikropauze imale najbolji utjecaj. Naime, on je nakon svake mikropauze bio dovoljno koncentriran i motiviran da bolje riješi problemski zadatak nego kada je rješavao bez prethodne tjelesne aktivnosti. Učenik A je rješavao podjednako dobro ili podjednako loše, ovisno

o težini zadatka, tj. o količini teksta jer se uvijek radilo o računskim pričama, a on je najlošiji čitač od troje promatranih učenika.

Graf 2. Grafički prikaz uspješno riješenih zadataka

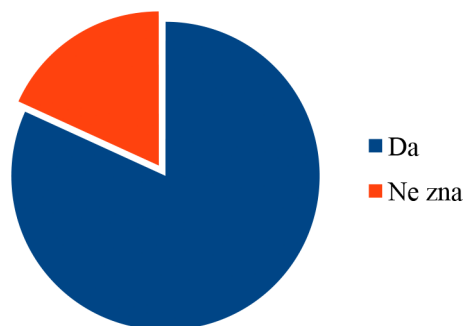


Gornji grafikon prikazuje broj točno riješenih problemskih zadataka nakon svakog nastavnog sata Matematike. Rezultati su poboljšani samo za jednog učenika, a kako je riječ o malenom uzorku, teško je odrediti odnos mikropauza i uspješnosti pri rješavanju matematičkih zadataka.

Iz završnog intervjua jasno je vidljivo da su mikropauze putem mrežnog sustava GoNoodlea motivirajuće djelovale na učenike. Naime, na postavljeno pitanje jesu li im mikropauze pomogle, većina učenika je pozitivno odgovorila. Od jedanaestero intervjuiranih učenika devetero je odgovorilo potvrdno, dok je dvoje učenika odgovorilo da ne zna. Sve troje promatranih učenika je izjavilo da im je to bilo od velike pomoći. Učenik A je izjavio: „Da, pomoglo mi je da se razbudim i baš mi je zabavno kad plešemo. Najbolje mi je kad nam pustite onaj video koji je kao igrica.” Učenik B je također izjavio potvrdno: „Da, volim to raditi. A i dobro je za naše tijelo da ne sjedimo cijeli sat.” Učenica C je kratko konstatirala: „Da, zabavno je.”

Graf 3. Grafikon prikazuje zadovoljstvo učenika mikropauzama

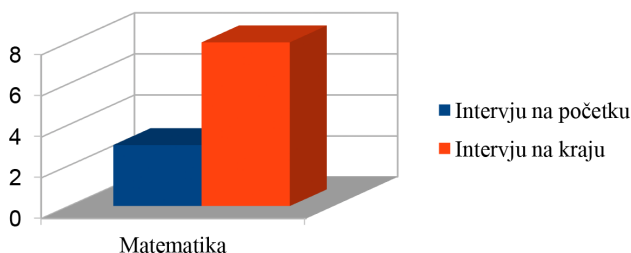
odgovor na pitanje *Jesu li vam mikropauze pomogle?*



U prilog tvrdnji da mikropauze motiviraju učenike za rad ide i podatak da je u postintervjuu osmero učenika od njih jedanaestero izjavilo da im je najdraži predmet Matematika, dok je ta brojka u početnom intervjuu bila znatno manja, samo troje od jedanaestero.

Graf 4. Grafikon prikazuje porast motivacije za nastavu matematike nakon primjene mikropauza

odgovor na pitanje *Koji ti je najdraži nastavni predmet?*



Nakon dvaju tjedana istraživanja učenici su zaključili da se mikropauze uvode samo na satovima Matematike, i to svaki drugi nastavni sat, što je rezultiralo njihovim oduševljenjem i zadovoljstvom tim danima i satima. Na početku radnog dana znali su reći: „Danas mi je najbolji dan jer ćemo opet plesati i skakati na Matematici. Jedva čekam Matematiku!” Zadnja dva tjedna su i

pod drugim nastavnim satima postavljali pitanja: „Učiteljice, možemo li se sad malo odmoriti i razgibati kao pod Matematikom?”

Znanstveni doprinos i ograničenja istraživanja

Znanstveni doprinos ovog istraživanja očituje se prije svega u ulozi kinezioloških aktivnosti u odgojno-obrazovnom sustavu, zdravstvenoj dobrobiti, racionalizaciji skladnog razvoja učenika, ostvarivanju kvalitetnijih intelektualnih potencijala učenika, integraciji organizirane tjelesne aktivnosti u svakodnevni odgojno-obrazovni rad učitelja te prepoznavanju pokreta kao načina za bolje funkcioniranje odgojno-obrazovnih ustanova. Rezultati istraživanja doprinijet će boljem shvaćanju međusobne povezanosti mikropauza s pažnjom, motivacijom i uspješnošću pri rješavanju matematičkih zadataka.

Kao i u svakom istraživanju i u ovoj su studiji postojala ograničenja. Ograničenja su uključivala duljinu istraživanja, dob sudionika i broj djece uključene u studiju. Studija je trajala 6 tjedana. Bilo bi poželjno vidjeti razdoblje istraživanja produljeno tijekom školske godine ili imati višestruke šestotjedne okvire istraživanja tijekom godine kako bi se ispitali dugoročni učinci mikropauza na pažnju, motivaciju i uspjeh učenika pri rješavanju zadataka. Drugo ograničenje bilo je dob sudionika. Učenici prvog razreda osnovne škole još uvijek uče kako artikulirano obraditi pitanja i njihove odgovore. Mali uzorak djece uključene u analizu sprječava prijenos rezultata u drugo okruženje. Ova studija slučaja može pomoći učiteljima da se zalažu za potrebe svakodnevnih tjelesnih aktivnosti djece, pogotovo u primarnom obrazovanju.

Zaključak

Nakon provođenja istraživanja i analize svih podataka može se odgovoriti na istraživačko pitanje: *Kako mikropauze utječu na učenikovu motivaciju, pažnju, ali i uspješnost pri rješavanju matematičkih zadataka primjenom mrežnog sustava GoNoodle?* Otkriveno je da su učenici nakon mikropauza bili manje umorni te im je pažnja bila povećana. Angažman učenika je povećan te su bili znatno motiviraniji za nastavu. Uspješnost rješavanja problemskih zadataka rijetkim neznatno se poboljšala, ali ne uvijek i za sve učenike nakon primjene mikropauze.

Mikropauze imaju prednosti. Učitelji u primarnom obrazovanju trebali bi razmotriti provedbu mikropauza kao dio školske rutine. Mikropauze tijekom dana povećavaju razinu tjelesne aktivnosti učenika i pružaju učenicima predah od strogih obrazovnih zadataka. Djeci u dobi od 6 do 17 godina preporučuje se da dobivaju 60 minuta ili više tjelesne aktivnosti dnevno (WHO, 2010, str. 7 i 8). Prema riječima stručnjaka, djetinjstvo je vrijeme za početak razvoja aktivnog načina života. Djeci je potrebno osigurati znanje, razinu kondicije, motoričke sposobnosti i socijalne vještine da bi bili aktivni. Kada se umor učenika smanji i poveća motivacija, učenici su bolje usredotočeni na poučavanje. Upravo mikropauze mogu podržati učenje učenika. Daljnja istraživanja mogu razmotriti korištenje miješanih metoda te veće veličine uzorka u dužem razdoblju. Duži vremenski okvir bolje bi ukazao na utjecaj mikropauza na ponašanje učenika i tijekom školskog odmora. Buduće studije također mogu razmotriti uključivanje sudionika s dijagnozom ADHD-a i utjecajem mikropauza na pažnju i motivaciju kod tih učenika.

Važno je zapamtiti da je svaki razredni odjel različit pa je teško usporediti podatke i primijeniti ih u svakoj učionici. Važno je da svaki učitelj prilagodi mikropauze svom razredu, baš kao što bi planirali i nastavu iz godine u godinu, ovisno o skupini učenika. Mikropauze možda nisu prava tehnika za svakog učitelja ili svakog učenika te je važno da učitelji poznaju svoje učenike i da znaju koje strategije primijeniti da svima bude ugodno u učionici. GoNoodle može biti sjajan alat za upotrebu ako je učitelj spreman na rad s tehnologijom i ako učitelj vjeruje da učenici mogu napredovati uz mikropauze putem mrežnog sustava GoNoodlea.

Iako samo istraživanje ne donosi nove spoznaje, s obzirom na to da je ovo područje vrlo dobro istraženo u svijetu, pridavanje značaja implementiranju mikropauza u odgojno-obrazovni proces trebalo bi postati temom interesa više istraživača u Republici Hrvatskoj.

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ACTION RESEARCH AS A METHOD OF IMPROVEMENT OF SCHOOL PRACTICE WHILE EDUCATING GIFTED STUDENTS

Abstract

There are two basic organisational approaches to training gifted students in the world: training gifted students in special departments or schools, where they are trained through special, tailor-made programmes, and training together with other students. In Europe, there are great differences in the definition of giftedness, the identification and perception of gifted students. Identifying gifted students and creating individualised programmes for gifted students is a major challenge for school policy, both in the field of legislation and in its implementation in education. This paper presents an action research that was carried out in two cycles at a selected primary school in order to analyse the current situation in the creation of individualised gifted student support curricula and the further work with gifted students. Furthermore, the application of a new participative curriculum for gifted students as an alternative to the existing national programme guidelines for working with gifted students in the Republic of Slovenia is presented. We note that educators face many difficulties (in discovering and adapting didactic strategies and curricular adaptations for gifted students) and highlight the benefits of a participatory programme for the active participation of gifted students in the learning process.

Key words: action research, elementary school, individualised plan for learning, learning individualisation, gifted students.

AKCIJSKA ISTRAŽIVANJA KAO METODA UNAPRIJEĐIVANJA ŠKOLSKE PRAKSE PRI RADU S DAROVITIM UČENICIMA

Sažetak

Postoje dva temeljna organizacijska pristupa obrazovanju nadarenih učenika u svijetu – odvajanje nadarenih u posebne odjele ili škole u kojima se školuju kroz posebne, prilagođene programe i obrazovanje s ostalim učenicima. Međutim, europske se zemlje uvelike razlikuju u definiranju nadarenosti te u prepoznavanju i konceptu darovitih učenika. Identifikacija nadarenih učenika i stvaranje individualiziranih programa za nadarene učenike predstavlja velik izazov školskim politikama kako u području zakonodavstva tako i njihovoj primjeni u obrazovnom radu. Ovaj rad predstavlja akcijsko istraživanje koje je provedeno u dvama ciklusima u odabranoj osnovnoj školi kako bi se analizirala trenutna situacija u pripremi individualiziranih kurikula za nadarene i daljnji rad s njima te primjena novog participativnog nastavnog programa za nadarene kao alternativa postojećim nacionalnim programskim smjernicama za rad s darovitima u Republici Sloveniji. Otkrivamo kako se učitelji suočavaju s mnogim poteškoćama (u otkrivanju i prilagođavanju didaktičkih strategija i prilagodbi nastavnih programa nadarenim učenicima) te koje prednosti participativnog programa ističu u aktivnom sudjelovanju nadarenih u procesu učenja.

Ključne riječi: individualizacija učenja, individualizirani odgojno-obrazovni plan, daroviti učenici, osnovna škola, akcijsko istraživanje.

Introduction

There are 15 countries in Europe that offer a variety of programmes for gifted students as part of the regular education programme at school (European Agency for Development and Special Needs Education 2009, p. 18). Slovenia does not yet have a specialised, unified curricular model for the education of the gifted and/or specialised alternative version of it, as schools adapt to the internal administrative and pedagogical situation in the preparation of specific educational programmes for gifted students. The introduction of individualised programmes for gifted students (named INDEP) also represents a qualitative leap in the curriculum model since the existing curriculum (subject-oriented curriculum) is also joined by a student-oriented curriculum (individualised programme for gifted students). Didactic strategies are based primarily on learning differentiation, individualisation and enrichment. Forms of working with gifted students in Slovenia are therefore organised according to their needs and abilities. Planning programmes for working with the gifted is certainly a neuralgic point of the whole process, since it requires professional readiness of the holder of the educational programme, cooperation with others, program providers, a good knowledge of the highly capable student and his/her needs, the variety of use of programme forms and methods and much more (Kukanja Gabrijelčič, 2015).

We find that gifted and talented students in Slovenia are well taken care of by law and programme legislation (White Paper on Education in the Republic of Slovenia 1995; Primary School Act 1996; 2006; Organisation and Financing of Education Act 1996; Concept of discovering and working with gifted students in a nine-year elementary school in Slovenia 1999; Operationalisation of the Concept of discovering and working with gifted students in a nine-year elementary school in Slovenia 2000; 2008); but legislation does not require differentiated and individualised programmes for them. Therefore, when working with students (who have not been identified as gifted), particular attention should be paid to the enrichment of the learning environment, which is intended to provide emotional security for the student and to be extremely challenging, stimulating and intellectually oriented (George 1997, p. 79). In addition, when preparing an individualised programme, it is essential to take into account the

goals, interests, abilities, characteristics and desires of the gifted and successful student and his/her parents.

Marland's definition (1972), cited by Concept (1999), according to which gifted students were identified, states that talented people make between 3 and 5 % of the population. Jurišević (2009, p. 154) cites data from the school year 2008/09 - at the time, we had 26 % of the identified gifted students among the 9th grade student population. The first reason for the higher percentage of identified talented children is that we have taken Renzulli's concept of talents as a basis, which allows the identification of several types of talents and thus a higher percentage of identified talented children. The second reason, however, lies in the scale of the teacher. The difference between 3–5 % and 26 % is due to identification according to the teachers' scales, which have inappropriate criteria/statements for identification.

Working with the gifted according to the Concept of discovering and working with gifted students (1999) is based on the following basic principles: broadening and deepening of basic knowledge, faster progress in the learning process, development of creativity, use of higher forms of learning, use of cooperative forms of learning, consideration of special abilities and strong interests, respect for individuality, promotion of independence and responsibility, care for holistic personal development, diversity of the offer and freedom of choice of the students, establishing mentoring relationships between students and teachers or other programme providers, ensuring appropriate acceptance of gifted students in their classroom and school environment, creating opportunities for occasional social contacts according to their specific needs and interests. In addition to the fundamental principles, we have provided principles for creating a differentiated programme for gifted students, which have been proposed by the National Curriculum Council of the American Institute for the Education of the Gifted and Talented (Bezic et al. 2006, p. 18). These principles include the following: the principle of the breadth of teaching content; interdisciplinarity; direct experience; the complexity of the learning content; outsourcing tasks; research; integration; introduction of new technologies; personal growth; the principle of evaluating of the learning process (ibid.).

Learning individualisation

Learning individualisation most often occurs in connection with learning differentiation, although we cannot equate it, as these are “highly dependent phenomena with a number of opposites” (Strmčnik, 1993, p. 15). Thus in the text that follows we will concentrate primarily on the pedagogical aspect of learning individualisation, which puts the individual in the foreground (i.e. individually – oriented students’ work or work linked to the independent students’ work with individualised learning tools). We define instructional individualisation as “a didactic principle that requires schools and teachers to discover, respect and develop solid individual differences between students in order to try to individualise and adapt joint teaching and learning as much as possible to the individual educational and learning characteristics, needs, wishes and aspirations of each student and to enable students to carry out independent learning work” (Strmčnik, 1993, p. 13). Interestingly, the author also presents the need for learning individualisation, which he believes is necessary in today’s developed world, where education and skills are becoming an increasingly important force for social and economic development, where it is necessary “to discover and develop every talent and to put each person in the right place where they can benefit most” (1993, p. 12). This notion should also be taken into account when preparing a personalised programme for gifted students in other subjects.

Learner-individualised programmes for gifted students are tailored to the characteristics of each individual student. Teachers of a particular subject, school counsellors and external mentors (academics, other professionals), parents and the most important factor - gifted students - must be involved in the preparation of a personalised programme. The teacher can also plan and design the personalised programme independently, however help, guidance or simply the comment of other professionals is most welcome (Eyre, 2005) and a gifted student.

The levels that the teacher needs to consider when designing an individualised curriculum are defining the goals we want to achieve; identifying individual learning skills, interests and desires; designing a varied, diverse and didactically rich curriculum; creating teaching aids, historical literature, didactic tools and resources, etc. (Eyre 2005; Strmčnik 1993; Welding 1998).

In his statement on working with gifted students, Rosić emphasises that individualised work with them should not be understood in isolation from other models of teaching and learning (1994, p. 69) and points out that this can lead to poverty in the educational process and to indoctrination. There are many opponents of external learning differentiation and individualisation in heterogeneous departments, who advocate the benefit of other students in class. However, we believe the existence of more successful students is necessary because they are role models and thus contribute in making more progress than it would be possible in situations where there were no successful students in the classroom. The teacher does not only help such students to discover and unlock their potential by expressing their creativity and the ability to take a unique approach to learning, but also helps them to overcome the social and other personal problems that these students face much more often than their peers. The teacher can therefore be an authority, mentor, guide, facilitator, friend and confidant for the student. We start from the conviction that by teaching that takes into account the specific needs and above-average abilities of the individual, we contribute to the development of strong areas and interests of a student who is successful in learning. The objectives of differentiated teaching are therefore to prepare meaningful and engaging tasks that are challenging while activities and content are adapted to with different teaching methods and forms; to take into account the students' reactions, interests, needs and preferences; to prepare an appropriate, challenging and rich learning environment; to match the knowledge standards and objectives of the teaching with the curriculum, etc. (Heacox, 2009).

An individualised learning programme

When preparing an individualised learning programme for a gifted, above-average student in teaching (hereinafter referred to as ILP), we must pay attention to a wealth of information that bears witness to the student's abilities (tests, grades, parents' opinions, other teachers' opinions, achievements, etc.). The information should be processed by a specific group of teachers and the school counselling service, which is responsible for the preparation of ILP. The child's interests and wishes should also be discussed, as well as its strong and weak areas, parents' interests and suggestions, assessment and results, as well as other factors that either promote or hinder the development of a student's

high abilities. It is also important to formulate higher goals and standards of knowledge, to integrate them into the general curriculum, to participate in extracurricular activities and to provide continuous training for teachers.

The areas that the ILP preparatory team should consider when preparing an individualised programme for gifted students are following:

(i) learning and teaching strategies; (ii) the student's needs in other areas; (iii) development of the social -emotional sphere; (iv) use of ICT; (v) cooperation with parents and external institutions; (vi) professional development for teachers; (vii) continuous evaluation of ILP progress (ibid.). Van Tassel-Baska (1998) and Sandling (2003) propose different thematic areas when individualised learning programme is prepared: ILP should provide opportunities for accelerated learning; encourage the use of ICT in learning and teaching; encourage learning (metacognition); include a range of motivational and creative thinking techniques; promote understanding and acceptance of diversity, global interdependence and tolerance; develop fine motor skills to produce different authentic products; promote and develop literacy and communication skills; develop the ability to interpret, analyse, synthesise and evaluate primary resources; develop critical thinking skills; be motivated to read different literature, biographies, and be focused on them; raise new moral and other questions.

In addition to focusing on the development of competencies in the chosen subject, the ILP should be broader and deeper, thus covering other areas that significantly influence the development of a child's talents. These include creativity, aesthetics, social skills, the emotional sphere.

In the creative field of ILP, the following aspects should be considered: promoting flexible, deviant, fluid and original thinking, innovation and originality; encouraging the production of specific authentic and other products; artistic and musical expression; possibilities of physical expression (dance and movement); role-plays and simulations; making use of the biography of the creative person; use of numerous techniques and tasks to promote creative thinking; performances and exhibitions of the student's products; extra-curricular integration.

In the field of social skills development, it should promote management and organisational skills and teamwork; volunteering in forms of social work; promoting research and involvement in camps, clubs, associations; providing social-emotional support to the student (Deal, 2003, p. 86; Sandling, 2003, p. 220; Van Tassel-Baska, 1998).

In summary, differentiation means differentiation of teaching (Deal, 2003; Sandling, 2003; Van Tassel-Baska, 1998): recognising different forms of learning among students; affirming and accepting diversity; insisting on the achievement of curriculum goals and standards for all students; diversity in teaching, learning and assessment; ensuring a high level of complexity and challenge and active learning; awareness that not all students need to do the same work in the same way; identifying learning needs and assigning appropriate tasks tailored to students' needs and interests; developing students' skills; designing differentiated tasks; using flexible groups of students to enable them to learn with others who have similar interests and objectives; recognising the importance and value of everything students do ; developing fair and impartial procedures for assessing students' performance and evaluating knowledge.

The education of gifted students is a challenge for school practice, especially in the area of adapting the educational process to the needs of gifted students. There are no easy solutions and there is no one solution that is suitable for all gifted students. For this reason, action research can be one of the more effective ways to improve school practice. Action research differs from other traditional types of research in that it is constructivist, situational, practical, systematic and cyclical (Efrat Efron and Ravid 2013). The purpose of action research is to improve school practice, to involve the participants in a particular process, with research questions arising from specific problems, events and needs (e.g. implementation and adaptation of individualized programs for gifted students. Action research has certain stages of the process (Efrat Efron and Ravid 2013, p. 8): (1) identifying the problem, (2) obtaining information about the problem, (3) planning the research, (4) collecting data, (5) analyzing and interpreting the data and (6) implementing the results.

Methodology

Aim and purpose of the research

The aim of the study is to determine the difference in the structure of gifted students between the two interviews in terms of psychodiagnostic tests and evaluation scales. The aim of the research is (i) to identify the existing situation in the field of work with gifted students in the selected primary school and (ii) to propose improvements in the field of work with gifted students, which contain elements of foreign curriculum theories and which should be introduced and tested on the basis of action research and adapted to the needs of Slovenian gifted students.

We posed the following research questions: How do gifted students assess the relevance of their individualised programme (content and learning approaches)? Does the introduction of the new individualised programme contribute to a better assessment by students, and how? How can systematic work with gifted students improve their performance?

Research methods

We have used action research, mainly to identify and monitor changes. In action research, we resorted to the following: (i) interviewing gifted students at a selected primary school; (ii) action research - introducing new, participatory, individualised programmes for gifted students at their selected primary school; (iii) re-surveying gifted students at the selected primary school.

The basic philosophy of action research was to improve the supervision of gifted students at school. In this way, we increased the degree of complexity of the students and improved the quality of time and teacher guidance in working with gifted students. In defining the framework and conducting action research, we followed the Stringer sequence of action research (Stringer, 2008, pp. 20–21). We focused on research design, data collection and analysis, reporting and action, which led to the introduction of a new action research step.

Participants in action research

First interview

In the first interview the students involved in action research were interviewed. They were all identified as gifted students of the selected primary school. The interview was conducted before the introduction of the first step of action research. 35 gifted students were interviewed, 48.5 % of whom were girls and 51.5 % boys.

Table 1: Overview of identified areas of giftedness in the first cycle of the survey

	<i>area of giftedness</i>	<i>number of students</i>	<i>%</i>	<i>% all areas of giftedness.</i>
TTCT	Creativity (Torrance test - TTCT)	19	48,7	13,9
GIA	General intellectual ability (Raven's Progressive Matrices Test or WISC III)	18	46,2	13,2
MUS	Music	17	43,6	12,5
LEA	Leadership	16	41,0	11,8
TEH	Technical field	11	28,2	8,1
GIA	General intellectual ability	10	25,6	7,4
ART	Art	10	25,6	7,4
LIT	Literature	10	25,6	7,4
LEA	Learning	8	20,5	5,9
KIN	Kinaesthetics	7	17,9	5,1
DRAM	Drama	6	15,4	4,4
CRE	Creativity	3	7,7	2,2
ART2	Artistic field	1	2,6	0,7
FILM	Film	0	0	0
Together				100

Almost half of the gifted students were identified with a psychodiagnostic test, i.e. Torrance tests of creativity (48.7 %). This also makes almost 14 % of

all gifted areas. Similarly, 46.2 % of students were identified as gifted by the Raven Progressive Matrices Test test or the WISC III test, representing 13.2 % of all gifted areas. The following data indicate at the ranking of gifted students according to OLNAD Teacher Scale, 2012. 43.6 % or 12.5 % of all gifted areas were recognized in the music field, 41 % (11.8 % of all gifted areas), 28.2 % in the technical field (8.1 % of all gifted areas). This is followed by the general intellectual, visual and literary fields with 28.6% of students (7.4 % of all fields of talent). 17.9 % of students (5.1% of all gifted students) were identified in the field of kinaesthetics. In the field of acting 15.4 % of students (4.4 % of all gifted areas) were recognized by the teaching staff, and only 7.7 % were recognized in the creative field (2.2 % of all gifted areas). We found that almost half of the students were recognized on the psychodiagnostic TTCT test, and the situation on the teachers' scales was completely different. There was a noticeable difference between teacher identification and psychometric tests.

The students were further classified according to the number of identified areas of giftedness. There were 14 areas. Possible areas were compared with the number of all students in the school. The second interview included 32 identified gifted students out of a total of 34 identified gifted students in school, of which 53.1 % were girls and 46.9 % boys. We also labelled the study subjects (students) as students who participated in the first interview with the following labels:

- 5th grade - UČ1 to UČ5
- 6th grade - UČ6 to UČ8
- 7th grade - UČ9 to UČ17
- 8th grade - UČ18 to UČ26
- 9th grade - UČ27 to UČ35

The labels of the students interviewed in the second part of the survey:

- 4th grade - 2UČ1 to 2UČ4
- 5th grade - 2UČ5 to 2UČ12
- 7th grade - 2UČ13 to 2UČ17

- 8th grade - 2UČ18 to 2UČ23

- 9th grade - 2UČ24 to 2UČ32

Second interview

The second survey (the second part of the survey) involved 17 students from the same sample of students from the first survey, which represents 53.1 % of the total sample in the second survey. In the first interview the students were given the code UČ and the consecutive number in the second interview the code 2UČ. The structure of gifted students in the two interviews differs according to class level. Nevertheless, the consistency of the 6th to 9th grade samples from both interviews is striking. The difference is only noticeable in the 5th grade students.

The students were assigned to a table according to the type or range of talent identified (Table 1). Almost two thirds of the gifted students (58.8 %) were recognised by the Torrance test for creativity, 50.0 % by Raven's Progressive Matrices Test or WISCIII, followed by half recognised by the teacher scale for music (41.2 %). The following are the percentages of gifted teachers in the teacher rankings: 38.2 % were recognised in leadership, 35.3 % in technique, 32.3% in general intellectual ability and art. This is followed by literature (29.4 %), learning (26.5 %), kinaesthetics (17.6 %), drama (8.8 %) and, as the last creative area with only one recognised student (2.9 %).

Table 2: Overview of identified areas of giftedness in the second cycle of the survey

	<i>area of giftedness</i>	<i>number of students</i>	<i>%</i>	<i>% all areas of giftedness.</i>
TTCT	Creativity (Torrance test - TTCT)	20	58,8	15,6
GIA	General intellectual ability (Raven's Progressive Matrices Test or WISC III)	17	50,0	13,3
MUS	Music	14	41,2	10,9
LEA	Leadership	13	38,2	10,2
TEH	Technical field	12	35,3	9,3
GIA	General intellectual ability	11	32,3	8,5

ART	Art	11	32,3	8,5
LIT	Literature	10	29,4	7,8
LEA	Learning	9	26,5	7,0
KIN	Kinaesthetics	6	17,6	4,8
DRAM	Drama	3	8,8	2,3
CRE	Creativity	1	2,9	0,8
ART2	Artistic field	0	0	0
	Together			100

We can observe similar results as those in the first survey cycle, as the number of identified gifted students with the predicate Torrance Test “creativity” is significantly higher (by 13 students or 38.3 %). This indicates a serious problem with the identification or ambiguity of the statements on the teachers’ assessment scales. In any case, this is a fact not to be neglected. It would be worthwhile to investigate the reasons for this with more detailed and extensive research.

The structure of students according to each type of talent differs from the first to the second survey, nevertheless, the first three places are often occupied by both psychodiagnostic tests and musical talents, which are determined on the basis of the teacher’s scales. Other areas of giftedness are scattered differently, as are various areas of talent scattered throughout the gifted population. The students were also classified by the number of areas of giftedness identified, as shown in Table 2.

In the school year 2014/15, 241 students attended the elementary school, including 34 identified gifted students, representing 14.11 % of all students in the school and 20.23 % of students from grades 4 to 9. With the exception of grade 6, the percentages were high and the average of gifted students in each grade was 20 %. This is unrealistic given the definitions derived from the percentage assumptions already refuted in the theoretical part. The percentage assumptions were rejected because of the rigidity of the definitions and not because of the number represented by the percentage.

Data collection process

The data was collected using various data acquisition techniques: (i) semi-structured interview of gifted students before the introduction of the first step of action research to capture the existing situation: understanding and attitudes of gifted students towards recording, identification and the individualised programme as a compulsory document of each identified gifted student; (ii) transcription of the interviews before the introduction of the first step of action research; (iii) analysis of participatory individualised programmes for gifted students; (iv) semi-structured interview of gifted students after completion of the second step of action research; and (v) transcription of the interviews after completion of the second step of action research. In the second interview we focused on the analysis of the following strands: the conception of giftedness, individualised programmes, and teachers' attitudes toward gifted students.

Research approach

The survey was conducted in two phases of action. All data from the first round formed the basis for the second round of action. The first survey was conducted in the school year 2013/14. Prior to the implementation, we identified codes and categories based on the interpretation of transcribed interviews, in which we assessed the needs of the talented people who participated in the programme. The programme was evaluated and progress was made at the conscious level of the students. Students set goals, made efforts to achieve them, and recorded everything in their individualised curriculum. We designed a work programme and alternative activities. After conducting the first interview and analysing the data, we decided with the control group that more radical changes needed to be made. Then we introduced a participatory individualised programme for the gifted students based on student participation, self-activity and metacognition.

We also conducted a teacher training course, where we presented some questions and dilemmas and examples of good practice in the field of discovering and working with gifted students.

After the evaluation of the second research cycle, we noted a trend towards improvement and progress of students in the cognitive and conative areas of the students who actively participated in the training programme.

Participating individualised programme for the gifted student

In principle, primary school offers the student the possibility of educational work according to a personalised work plan, which forms the basis for planning the differentiation, individualisation and personalisation of educational work for a gifted student. Thus, when choosing the contents and designing a participatory individualised programme, we have thought in the direction of approaching the students, as we prepare an individualised programme for them and adapt it to their needs, knowledge, talents, etc. It is designed on the basis of professional guidelines that collect and summarise collected data on important characteristics and identified educational needs of a gifted student.

The active involvement of students in designing an individualised programme has several implications (Alberta, p. 12): selection, goal setting and self-assessment; awareness of one's own thinking and different learning contexts; showing responsibility for one's own learning. Metacognition (Thomas, 2004) thus includes the critical aspects of thinking or awareness of one's own thinking. These are: (i) planning, (ii) control and (iii) evaluation. Planning includes the following activities: setting goals, selecting activities to achieve the goals, dividing up the activities, identifying potential challenges and anticipating the results. Controlling is about following the goal with the focus on the goal, deciding what the next activity is and choosing the right activity, knowing how to deal with the mistakes and obstacles on the way to the goal. Assessment and evaluation include: an evaluation of the achievement of the goal, an evaluation of the appropriateness of the results, an evaluation of the suitability of the selected activities, an evaluation of the challenges and an evaluation of the effectiveness of the plan.

Processing of research data

The data from the action research and from both interviews were processed according to certain principles of qualitative data processing. At the end of

each action step we conducted an analysis. The scope of the analysis of the interviews included the processing of the material, the definition of coding units, the grouping of related concepts into categories and the development of conclusions (theories). After each interview, a transcriptional analysis was conducted and after each round of action an analysis of the participatory individualised programmes was conducted.

Quality criteria for action research results

We have adapted the criteria established by Stringer (2008), Sagadin (1993) and Vogrinc (2008), which can ensure quality by objectivity, credibility, transferability, reliability, verifiability and validity. The objectivity of the test, as defined by Sagadin (1993, p. 90–91), is assessed in several ways: objectivity of the test, objectivity of the evaluation of the answers and objectivity of the interpretation. These aspects can also be applied to our research. We assured the objectivity of the test (interview) in the way that we had not decided on the results in advance and therefore had not influenced them. During the process of action research we tried to ensure credibility, which is often neglected in the research process. To avoid distortions, we have tried to ensure the credibility of our research in various ways. Stringer (2008, p. 68) notes that one of the criteria for validity is long-term performance and that the researcher should spend more time in the environment in which the research takes place. Since we conducted the survey at a well-known school, we met this criterion. Furthermore, we conducted the survey, mostly with the same students, for more than two years. We met with the students every day, talked to them, directed them, etc. We recorded many conversations or observations. We also observed the students during other activities. Furthermore, we fulfilled the criterion of continuous observation (2008, p. 69). As the next criterion the author mentions triangulation, i.e. the use of different sources, methods and concepts to support, fulfil or illuminate a research problem. We tried to meet this criterion by using interview notes, our own notes and an action plan as different sources. One of the criteria for the credibility of research is the interview or testimony of the participants (2008, p. 69). Transferability means the usefulness of the research results in a similar environment with similar topics studied.

The reliability of the survey was achieved through an audit (2008, p. 71). All our research data can be viewed or stored by the researchers. Each participant in the survey also agreed to transcribe their interview. Evidence is achieved by storing recorded and logged information (2008, p. 71). All recorded and transcribed interviews are stored and are available for review by the authors of the paper. The validity of the results is ensured by including different points of view and opinions of the persons investigated. Stringer (2008) notes that the research can also be influenced by our own experiences, which we were also aware of throughout the research. We tried to raise awareness through reflection and self-reflection in order to maintain distance and show unencumbered results.

Results with discussion

Based on the interviews with gifted students and the content analysis of the individualised gifted programmes, we find the following:

Most gifted students see their individualised programme as flawed. The assessment of our own individualised gifted development programme was obtained by a preliminary survey of gifted students before the introduction of the first step of action research, i.e. before the introduction of a new form of individualised programmes.

1st interview:

(i) The phenomenon of giftedness: More than 75 % of students were able to answer the question of when they were identified as gifted. When asked what it means to be identified as gifted, more than 75 % of the students were able to answer it in their own words; e.g. that they solved tests by which they were recognised (identified), that they knew more or were better than the others. In most cases, students named areas, subjects, activities that they liked or in which they were successful, but not those in which teachers recognised them on the assessment scales. Only four students (11 %) were able to indicate areas of their ability, 19 students (54 %) indicated only some areas, while 35 % (12 students) indicated completely different areas or were unable to answer the question.

With this information we asked ourselves where the reasons for the students' answers differ from the established state. The questions went in the wrong direction, i.e. lack of teacher assessment; shortcomings in the assessment scales; a focus on subject-specific lessons that did not take into account the active role of gifted students in helping to shape a working relationship in INDEP planning; the teachers/coordinators were poorly trained to manage the student-centred part of the training. Similarly, they cite Bezić and Deutsch (2011, p. 87), where they offer identification in grade 4 and confirmation in the second half of grade 9 when students show performance. At the same time, however, this does not seem to be the best solution, as most of the primary school system is currently based solely on performance.

(ii) Recording, identification and individualised programmes. Only seven students confirmed that they are aware of the identification process. No one knew what recording was. When asked what they thought of an individualised programme for gifted students, one student responded that it was a programme for working with gifted students. Others (94 %) said they did not know what it was. They were then asked if they knew what was written in it, and all (100 %) replied that they did not know. The question whether they understand the content of INDEP and whether they agree with its content was completely superfluous, as they did not know what INDEP was.

We then asked them what their parents thought about INDEP and whether they agreed with its content. The first question was not answered, but when we helped them with the statement that INDEP had to be signed by their parents, they all agreed that they agreed with the content. One of the following questions was whether they took the content of INDEP into account in their decisions and choices regarding their interests and hobbies. We have not received a single affirmative answer here. We have received such results not only in our research, but they were also recorded by consultants in the research of the Educational Institute of the Republic of Slovenia (2012, p. 5): “/... / In all these years we have never had a case where parents or children disagreed with the development of INDEP, which means that every year a lot of information has to be planned or written down that parents and students do not consider important. This is evidenced by the fact that despite the fact that we talk to students at

the end of the school year about the realisation of INDEP (in terms of the fact that they sign it every year), they do not know they had it in the ninth grade. They show an ignorant attitude towards it, they are not motivated for the planned high level activities recorded with INDEP, and in such case it is difficult to achieve all the planned and written objectives, activities, etc. “or on page 6:” I think that INDEP at school failed to put together one that referred to something other than following the formal rules. The management of the school felt that the quality of the work with the students was the first priority, and therefore some of the INDEP were really missing, just because they ...”

What was worrying was that none of the students knew what an individualised programme for working with gifted students was and that they did not discuss this with their parents. When examining the research question, we found that not only did the students rate their individualised programme as faulty, but 94 % of the students did not even know what an individualised programme was. This points to a gap that goes deeper than just the shortcomings of the programme.

The assessment of gifted students in the context of the new individualised programme (participatory programme) will be higher after its introduction. After careful consideration and review of the various literature, we decided to design an individualised student programme, which we called the participatory individualised programme. After using the new individualised programmes for two and a half years, we conducted a semi-structured interview to examine the students’ attitudes to individual segments of the programme. All interviews were recorded (with prior parental consent) and written down. We then coded and collected the data. We present them in comparison to the first interview.

2nd interview

(i) The phenomenon of giftedness: More than 68 % of students were able to answer the question of when they were identified as gifted. When asked about giftedness, almost all students correctly identified the areas in which they were identified as gifted. In the first survey, only 11 % of the identified gifted students were able to identify their strong area. This time, half (50 %) of the students accurately listed all their strengths and identified talents.

The reason for this improvement is due to the new individualised programme, as we highlighted the areas in which they had been identified on the first page of this programme. In this way, they will know in which psycho-diagnostic test they scored well (if at all) and which evaluation scales were accepted by the teachers. In this way, they become aware of their strengths, which they can develop further. However, we do not neglect the area of self-interest that is not on the assessment scales.

(ii) Recording, identification and individualised programmes. When asked what they thought of the individualised programme for gifted students, two students said that they did not know what it was (6.3 %). Nearly 72 % said that the new individualised programme is very good or good. The rest (21.7 %) could not be identified.

In the first survey, only two students knew what an individualised programme was, and in the second survey only two did not know what it was (the students in Class 4 who learned about their talent six months before and about the fact that that they were part of this individualised programme.

The systematic work and contact with the students has led to positive results. One of our goals was to make the students aware that they are gifted and that only they can do something for themselves and improve what is good for them.

Students have moved from complete ignorance of the individualised programme to a high level of awareness and use of these programmes.

At the end of the action, the performance of the gifted students was higher than at the beginning of the action research. We focused Zois Scholarship on achievements that are relevant for gifted students. These are awards from various competitions. The Zois Scholarship Regulations stipulate that a Zois Scholarship can be awarded to a student who has achieved outstanding achievements in knowledge, research, development or art and a corresponding grade point average in the two years preceding the first application for a scholarship.

The conditions for the award of the Zois Scholarship (Outstanding Achievement in National Competitions) are as follows: “The gold award (or the first prize) will be awarded with 5 points and the silver award (or the second

prize) with 2 points (Zois Scholarship Award Rules, Official Gazette of RS, 2014, Art. 5, indent 6)”.

We compared the performance of the gifted students who were included in the action survey in the school years 2012/13 and 2014/15. We deliberately compared the two school years, although we had already started the first step of the action research in the 2012/13 school year. Since we started our research in the second semester, the systematic work with the students could not produce noticeably better results in such a short time. The second reason is that we included the same students in both compared school years.

Table 3: Comparison of achievements and the number of achievement points from the 2012/13 and 2014/15 school years

Achievement	2012/13	number of points	2014/15	number of points
gold award	-	-	2	10
silver award	6	12	5	10
Together	6	12	7	20

The number of outstanding achievements rose sharply in the 2014/15 school year, with students receiving two gold awards at the end of the action survey, whereas they had not previously received any gold awards. They received 6 silver awards, which would give them 12 points after the evaluation. One of the silver awards was a collective award. At the end of the survey, students scored 20 points according to the Zois Scholarship Score, which is almost half more than before the introduction of the participatory individualised programmes.

In the school year 2012/13, the students achieved silver awards in the Vega Maths Competition, the 9th grade (3 German Competition students), the Happy School Competition, and the “Multimedia Ecoposters” computer science competition (group prize). In the school year 2014/15 they received a gold award in the Slovenian Cankar Award Competition language and in the 9th German Competition grade. At the end of the second step of our research we found that the differences were significant in Happy School Competition. There were more outstanding achievements and the degree of recognition had increased.

Conclusion

The purpose and occasion of action research arose from the fact that the teachers at the school where the research was conducted did not know how to recognise creative students. The purpose of action research was achieved when changes in school practice and a new school practise of planning, implementing and evaluating individualised programmes for gifted students were uncovered. As a result of the action research, a simplified and comprehensible procedure for designing individualised programmes was created. It is also a less bureaucratic process for teachers and coordinators. Most importantly, it has led to a qualitative leap in the design and implementation of individualised programmes, with a focus on the relationship between co-creation, co-participation and co-responsibility of all those involved in the educational process.

The introduction of a participatory individualised programme has led to more talented students participating in the programmes and to a greater awareness of the purpose and goals of the individualised programme. The introduction of a participatory individualised programme also influenced the increase in the research performance of the talented students involved (results in competitions, etc.). The situation at the school where we conducted the action research has improved considerably in the area of planning and implementing individualised programmes. For this reason, we will continue to implement the participatory individualised programme as an example of good practice at the respective school. The importance of a participatory individualised programme as an example of obvious good practice is also reflected in its introduction in other Slovenian schools. The results of action research in other schools will be compared with the results presented in this study and disseminated in the form of a comparative study.

Many new research questions were raised during the action research. Future research should focus on the following issues: (i) how teachers understand the co-design of a specific curriculum for gifted students; (ii) how teachers identify gifted students; (iii) how can gifted students participate more actively in shaping their education and developing talent; (iv) how to improve school practise in designing and implementing individualised programmes; (v) how teachers understand the concept of creativity, who they consider creative and in what areas; (vi) how can an appropriate training programme for educators be designed to identify and work with gifted students.

Because of the cultural conditioning of the conception of giftedness and talent, action research in school practice is a way to design our own way of conceptualising giftedness and talent and to develop unique models of school practice for identifying talent and working with gifted students.

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PODUČAVANJE ELEMENATA TEHNIKE TAI CHIJA U NASTAVI TJELESNOG I ZDRAVSTVENOG ODGOJA: UTJECAJ NA POZITIVNE I NEGATIVNE EMOCIJE UČENIKA

Sažetak

Cilj ovog istraživanja bio je utvrditi utjecaj elemenata tai chi chuana u nastavi Tjelesne i zdravstvene kulture na kogniciju i područje pozitivnih i negativnih emocija u učenika razredne nastave. Uzorak ispitanika činila su dva 4. razreda osnovne škole, s eksperimentalnim razredom koji je činilo 26 učenika i kontrolnim koji su činila 23 učenika. Eksperimentalna grupa je tri puta tjedno u razdoblju od 45 dana vježbala tai chi chuan. Ispitanici su obiju grupa na početku i na kraju istraživanja ispunili skalu SPANE (Scale of positive and negative experiences, hr. Skala pozitivnih i negativnih iskustava). Na temelju dvanaest čestica SPANE-a i triju izvedenih veličina dobiveno je petnaest istoimenih varijabli. Pri statističkoj je analizi korištena aritmetička sredina zbroja pojedinačnih rezultata i Studentov t-test. Rezultati su pokazali da se vježbanjem tai chi chuana značajno povećavaju pozitivne emocije eksperimentalne grupe unutar nje same i u odnosu na kontrolnu te se smanjuju određene negativne emocije. Na temelju dobivenih rezultata zaključeno je da vježbanje tai chi chuana može značajno povećati učestalost pozitivnih emocija, reducirati one negativne te homogenizirati razred u okviru odgojno-obrazovnog procesa.

Glavne riječi: kognicija; negativne emocije; pozitivne emocije; tai chi chuan; Tjelesna i zdravstvena kultura

TEACHING THE ELEMENTS OF TAI CHI'S TECHNIQUE IN PHYSICAL EDUCATION CLASS: INFLUENCE ON POSITIVE AND NEGATIVE EMOTIONS IN STUDENTS

Abstract

The purpose of this study was to determine the influence of the Tai Chi Chuan on cognition, namely on the area of positive and negative emotions of students in primary education. The sample of participants consisted of two classes of 4th - grade students of primary school, with an experimental class consisting of 26 students and a control class comprising 23 students. During the period of 45 days the experimental group had Tai Chi Chuan lessons three times a week. At the beginning and at the end of the program both the experimental and the control group were tested with the Scale of Positive and Negative Experiences. Based on 12 particles and 3 derived sizes, we derived 15 homonym variables. In the statistical analysis the arithmetic middle was used as well as the Student T-Test. The results confirmed that practising Tai Chi Chuan significantly increases positive emotions and decreases specific negative emotions. On the basis of the results of this research it was concluded that practising Tai Chi Chuan during the education process can significantly increase the frequency of positive emotions, reduce negative emotions and create a more homogenic class community.

Key words: cognition; negative emotions; physical education; positive emotions; Tai Chi Chuan

Uvod

Današnji čovjek sve se manje kreće (Biddle, Petrolini, Pearson, 2014). Smanjenje količine kretanja prisutno je u gotovo svim modernim društvima kroz sve životne dobi. Također, edukacija je u zapadnom svijetu, kao i svi ostali aspekti ljudskog života, orijentirana sedentarno (Macedonia i Repetto, 2017). Posljedice nekretanja očituju se u teškoćama s fizičkim i mentalnim zdravljem. Do sada je napisan velik broj istraživanja na temu utjecaja kretanja na zdravlje, prvenstveno na fizičko, a potom i mentalno. Istraživanja su dokazala međudjelovanje tijela i uma, čime je tema djelovanja pokreta na um postala relevantna. Značajno je istraživanje koje objedinjuje spoznaje neuroznanosti, psihologije i medicine pružajući interdisciplinarni, znanstveno utemeljeni pregled na vezu tijelo – um, pri čemu se naglašava edukacija kao važna teorijska pozadina i motivacija za daljnje istraživanje koje se provodi ovim radom (Jensen, 2001, 2005). U istraživanju koje proučava rad mozga navodi se da fizička aktivnost (kretanje, istezanje, hodanje) može unaprijediti proces učenja (Jensen, 2001, 34), kao i da pokret može biti efektivna kognitivna strategija koja osnažuje učenje, poboljšava pamćenje, dosjećanje i pospješuje motivaciju i moral osobe koja uči (Jensen, 2005, 60). Autor navedeno temelji na spoznajama iz medicine koje potvrđuju da ista struktura koja procesuirá pamćenje, pažnju i prostornu percepciju, odnosno proces učenja, procesuirá i pokret tijela. Struktura malog mozga sadrži gotovo pola svih neurona mozga i odgovorna je za slanje informacija ostalim moždanim strukturama (Peterburs i Desmond, 2016). Velik je broj istraživanja koji su dokazali pozitivnu povezanost pokreta s različitim kognitivnim procesima vezanima uz učenje, kao što su povezanost s lingvističkim (Sevimli-Celik, Johnson, 2016) i vizualnim (Fredericks, Kokot, Krog, 2006) područjima, pamćenjem (Sayal, 2015) i pažnjom (Diamond, 2013). Uz navedene neurološke spoznaje sve je veći interes istraživača za područje mogućnosti integracije pokreta u odgojno-obrazovne ustanove kako bi se dokazala svrsishodnost pokreta s ciljem pospješivanja kognitivnih funkcija, odnosno spremnosti za učenje. U istraživanju koje je trajalo dvanaest tjedana učitelji koji su se educirali o važnosti implementacije pokreta kroz igru za vrijeme nastave istaknuli su pozitivne učinke pokreta u odnosu na iskustvo učenja i rasterećenja pri učenju nastavnog gradiva. Prema mišljenju učitelja implementacija pokreta u procesu efikasnijeg učenja pomogla bi učenicima u svladavnju nastavnog

gradiva iz matematike, znanosti, jezika i književnosti (Sevimli-Celik, Johnson, 2016). U istraživanju koje je proučavalo utjecaj vježbanja na ponašanje u razredu i utjecaj na obrazovna postignuća rezultati su pokazali da je eksperimentalna skupina, koja je tijekom četiriju tjedana vježbala tri puta tjedno po 5 minuta, ostvarila bolje rezultate u rješavanju matematičkih zadataka, a učenici su bili usredotočeniji na zadatke u odnosu na kontrolnu skupinu koja nije vježbala (Mavilidi i dr. 2019). Evidentno je da postoji povezanost pokreta i kognicije, no autora ovog istraživanja ne mogu sa sigurnošću tvrditi u kojoj se mjeri manifestira kognitivni napredak. U preglednom se radu izvještava da je godina dana redovitog vježbanja *tai chi chuana* u 21 od 30 studija pokazala značajan utjecaj na psihološku dobrobit, smanjenje osjećaja stresa, anksioznosti i depresije te je pozitivno utjecala na samopouzdanje i opće raspoloženje (Wang i dr.,2010). Borilačku su vještinu *tai chi chuan* Webster i dr. (2016) definirali kao cjelovit način vježbanja koji poboljšava zdravlje, noseći neke fizičke, ali i psihološke dobrobiti, što mu daje prednost nad drugim aktivnostima koje poboljšavaju samo fizičko zdravlje. Disciplina *tai chi chuan* naglašava korištenje svjesnosti pokreta kroz svjesno vježbanje i same vježbe. Takav oblik vježbanja doprinosi tomu da um počinje doživljavati tijelo i sve promjene u njemu. Stalno usmjerenje uma na tijelo te ustrajnost i trud vježbanja rezultiraju time da um može bolje prepoznati pozitivne i negativne promjene te tako održavati homeostazu organizma. Dok se u zapadnom svijetu vježbanje najčešće povezuje uz fizički napor korištenjem mišića, tenzije i dostizanje fit-tijela, Topolšek, majstor *tai chi chuana*, u svojoj knjizi spominje „specifične, fizički relaksirane ukrštene pokrete”. Primjenom *tai chi chuana* istovremeno se aktivira komunikacija između obiju hemisfera mozga te se pruža mogućnost regeneracije i ponovnog uključivanja oštećenih, blokiranih i isključenih dijelova mozga, naročito frontalnog dijela i malog mozga (Topolšek, 2015). Zato se pokreti trebaju izvoditi laganim tempom tako da se tijekom pokreta potiče dubinska relaksacija uma i tijela. Tako izvođeni pokreti otklanjaju blokade i zastoje krvi i energije te utječu na aktivnost cijelog mozga, kao i na funkcije živčanog sustava uz povoljan psihološki utjecaj na anksioznost vježbača (Topolšek, 2015).

Tjelesna i zdravstvena kultura školski je nastavni predmet koji u svom nazivu nosi dva pojma; *tjelesnu* i *zdravstvenu* kulturu. Findak (1994) navodi da se zbog novih otkrića i napretka u gotovo svim područjima ljudske djelatnosti

odražavaju posljedice na čovjekov način rada i zdravlja. Naglašava se da očuvanje i unapređivanje tjelesnog i mentalnog zdravlja postaje imperativ suvremenog čovjeka (Findak, 1994). Upravo komponenta očuvanja zdravlja i homeostaze tjelesnog i mentalnog zdravlja u samom je temelju *tai chi chuana* i zato bi odgojno-obrazovni proces trebao biti usmjeren primarno na motorički razvoj djeteta zbog svojeg značajnog i pozitivnog utjecaja na njegov kognitivni razvoj (Petrić, 2019).

S obzirom na to da je pokret minimalno zastupljen u obrazovnim sustavima, nužna su istraživanja koja bi pokazala u kojoj se mjeri sustavnim implementiranjem pokreta utječe na kogniciju učenika. Trenutni pristup obrazovanju, koji je usmjeren na mirovanje i usvajanje informacija, zahtijeva određene promjene u skladu s novim znanstvenim spoznajama i dostignućima o utjecaju pokreta na kogniciju. Cilj je ovog istraživanja utvrditi utjecaj elemenata borilačke vještine *tai chi chuana* u nastavi Tjelesne i zdravstvene kulture, i to na pozitivne i negativne emocije u učenika razredne nastave.

Metode

Uzorak ispitanika

Uzorak ispitanika čini ukupno 49 učenika iz dvaju četvrtih razreda koji pohađaju cjelodnevnu nastavu u državnoj Osnovnoj školi „Nikola Tesla” u Rijeci. Ispitanici su dobi od 10 godina, a uzorak čine 22 djevojčice i 27 dječaka. U eksperimentalnoj je skupini sudjelovalo 14 dječaka i 12 djevojčica. U kontrolnoj je skupini sudjelovalo 13 dječaka i 10 djevojčica.

Uzorak varijabli i opis mjernog instrumenta

Na temelju 12 čestica Skale pozitivnih i negativnih iskustava izvedeno je 12 istoimenih varijabli: 1) *pozitivno*, 2) *negativno*, 3) *dobro*, 4) *loše*, 5) *ugodno*, 6) *neugodno*, 7) *sretno*, 8) *tužno*, 9) *prestrašeno*, 10) *veselo*, 11) *ljutito*, 12) *zadovoljno* (Deiner i dr., 2009). Također, autori mjernog instrumenta su u sklopu skale predvidjeli 3 izvedene veličine. Prva je suma pozitivnih emocija, SPINI-P, koja nastaje zbrajajući ocjene koje su ispitanici dodijelili za pozitivne emocije: *pozitivno*, *dobro*, *ugodno*, *sretno*, *veselo*, *zadovoljno*. Druga je suma negativnih emocija,

SPINI-N, koja nastaje zbrajajući ocjene koje su ispitanici dodijelili za negativne emocije: *negativno, loše, neugodno, tužno, prestrašeno, ljutito*. Treća izvedena veličina je SPINI-B koja nastaje tako da oduzmemo dobivene vrijednosti negativnih od pozitivnih emocija ($SPINI-B = SPINI-P - SPINI-N$). Te tri izvedene veličine ujedno čine i dodatne tri varijable u ovom istraživanju i zbog toga je ukupno 15 varijabli koje će se koristiti u statističkoj obradi i analizi podataka. SPANE je upitnik koji se sastoji od 12 čestica, od kojih se 6 odnosi na pozitivne emocije (*pozitivno, dobro, ugodno, sretno, veselo, zadovoljno*), dok se drugih 6 odnosi na negativne emocije (*negativno, loše, neugodno, tužno, prestrašeno, ljutito*). U svakoj od tih skupina tri su emocije općenite (*pozitivno, negativno*), dok su druge tri specifične (*radost, tuga*). Ispitanici pored emocije dopisuju ocjenu od 1 do 5 po Likertovoj skali sa sljedećim vrijednostima: 1 – *vrlo rijetko ili nikad*, 2 – *rijetko*, 3 – *ponekad*, 4 – *često*, 5 – *vrlo često ili uvijek*. Autori mjernog instrumenta (Deiner i dr., 2009) napominju da nije provedeno sistematsko istraživanje o daljnjoj granici upotrebljivosti skale te da upotreba skale ovisi o čitalačkim sposobnostima djeteta, čime se može zaključiti da je skala primjenjiva za četvrti razred osnovne škole. U ovom istraživanju koristit će se hrvatska inačica skale koja je prevedena za potrebe ovog istraživanja (Pavlina, 2019).

Protokol mjerenja i opis istraživanja

U predviđenih 6 tjedana provodio se trening *tai chi chuana* tri puta tjedno po jedan školski sat. S obzirom na vremensko ograničenje, podučavao se dio kratke forme *yang 24* te statična *vježba zhan zhuang* radi usvajanja ispravne pozicije i držanja tijela, kao i velike dobrobiti za umnu i emotivnu ravnotežu kojoj pridonosi. Naglasak je stavljen na svladavanje forme kako bi se pokreti što je više moguće ispravnije izvodili. Učenici su po završetku programa demonstrirali formu *yang 24* na raznim događanjima.

Provedeno je istraživanje u trajanju od 45 školskih radnih dana. Sudjelovala su dva četvrta razreda, od kojih je slučajnim odabirom jedan činio eksperimentalnu, a drugi kontrolnu skupinu. S eksperimentalnom skupinom se provodio program *tai chi chuana*, dok kontrolna skupina nije sudjelovala u programu. Treninge *tai chi chuana* provodio je certificirani trener.

Prije početka istraživanja zatražena je suglasnost Učiteljskog fakulteta u Rijeci za njegovo provođenje, kao i suglasnost roditelja, učenika i predstavnika škole, a sve u skladu s Etičkim kodeksom istraživanja s djecom (Ajduković i Kolesarić, 2003). Na početku istraživanja provelo se inicijalno mjerenje s eksperimentalnom i kontrolnom skupinom te je eksperimentalna skupina započela s treninzima. Trener i eksperimentalna skupina provodili su vježbanje *tai chi chuana* u školskoj dvorani ili na školskom igralištu, i to po jedan školski sat, tri puta tjedno, što je prethodno bilo dogovoreno sa školom i razrednim učiteljem. Na kraju istraživanja provedeno je završno mjerenje s eksperimentalnom i kontrolnom skupinom.

Statistička analiza podataka

Svi mjereni podatci obrađeni su i analizirani u programu STATISTIKA 12.5 (StatSoft, Inc., Tulsa, OK, SAD). Rezultati su prikazani u obliku grafičkih priloga i tablica. Razlike između eksperimentalne i kontrolne skupine testirane su Studentovim t-testom za nezavisne uzorke, dok je za razlike u istoj skupini između početnog i završnog mjerenja korišten Studentov t-test za zavisne uzorke. Statistička razina značajnosti testirana je uz pogrešku $p < 0,05$ %.

Rezultati

U *Tablici 1.* prikazani su rezultati aritmetičke sredine i standardne devijacije za 12 ispitivanih emocija, kao i za 3 izvedene veličine. Na temelju izvedenih veličina, koje čine zbroj 6 pozitivnih ili 6 negativnih emocija, odnosno njihove razlike, moguće je na lakši način promatrati i interpretirati dobivene rezultate. Iz varijable pozitivnih emocija SPIN-P-a može se vidjeti da su učenici eksperimentalne skupine u završnom mjerenju dodijelili više ocjene za pozitivne emocije u odnosu na inicijalno mjerenje, dok se iz rezultata na varijabli SPIN-N-a eksperimentalne skupine može vidjeti da su učenici češće osjećali negativne emocije u završnom mjerenju u odnosu na početno mjerenje. Vrlo značajan je i rezultat na varijabli SPIN-B eksperimentalne skupine iz koje se može vidjeti da je došlo do značajne razlike između pozitivnih i negativnih emocija u završnom mjerenju u odnosu na početno mjerenje. Također, iz *Tablice 1.* vidljivo je da su učenici kontrolne skupine u završnom mjerenju manje osjećali pozitivne emocije pa je i razlika pozitivnih i negativnih emocija (SPIN-B) u završnom

mjerenju također bila manja u odnosu na početno mjerenje. Zanimljivo je da su u završnom mjerenju učenici kontrolne skupine dodijelili niže ocjene negativnim emocijama u odnosu na početno mjerenje.

Tablica 1. Deskriptivni parametri (AS ± SD) eksperimentalne i kontrolne skupine

	Eksperimentalna		Kontrolna	
	POČETNO	ZAVRŠNO	POČETNO	ZAVRŠNO
pozitivno	4,5 ± 0,8	4,3 ± 0,7	4,4 ± 0,7	3,7 ± 0,9
negativno	1,9 ± 1,1	1,7 ± 0,9	2,4 ± 0,8	2,5 ± 1,1
dobro	4,0 ± 1,2	4,4 ± 0,8	4,1 ± 0,5	3,7 ± 1,0
loše	1,7 ± 1,01	1,8 ± 0,9	2,1 ± 0,9	2,2 ± 0,9
ugodno	4,4 ± 0,5	4,3 ± 0,7	3,9 ± 0,8	3,8 ± 0,5
neugodno	1,8 ± 0,8	1,8 ± 0,9	2,1 ± 1,1	1,8 ± 0,9
sretno	4,5 ± 0,6	4,5 ± 0,6	4,1 ± 0,7	3,9 ± 1,1
tužno	1,9 ± 1,1	2,2 ± 0,9	2,1 ± 1,1	2,3 ± 1,1
prestrašeno	1,8 ± 1,03	2,1 ± 1,3	1,4 ± 0,7	1,5 ± 0,8
veselo	4,5 ± 0,6	4,5 ± 0,7	4,1 ± 0,9	4,0 ± 0,8
ljutito	2,3 ± 1,1	2,5 ± 1,1	2,6 ± 0,9	2,7 ± 1,1
zadovoljno	4,4 ± 0,6	4,5 ± 0,6	4,2 ± 0,8	4,1 ± 0,7
SPIN-P	21,3 ± 10,9	26,5 ± 2,6	24,0 ± 3,2	22,3 ± 6,1
SPIN-N	9,3 ± 5,7	12,0 ± 4,5	13,3 ± 3,4	12,7 ± 4,8
SPIN-B	12,1 ± 8,1	14,4 ± 5,1	10,6 ± 6,1	9,6 ± 7,3

Tablica 2. prikazuje rezultate početnog i završnog mjerenja Studentovog t-testa za nezavisne uzorke s ciljem utvrđivanja statističke značajnosti razlika između kontrolne i eksperimentalne skupine. Rezultatima je utvrđeno da postoji statistički značajna razlika na varijabli negativnih emocija ($t(df) = -2,9040$, $p < 0,05$), odnosno da učenici iz kontrolne skupine češće osjećaju negativne emocije, dok na ostalim varijablama nije bilo statistički značajne razlike. Iz *Tablice 2.* također se može vidjeti da učenici eksperimentalne skupine u završnom mjerenju statistički značajno češće izražavaju pozitivne emocije (*pozitivno, dobro, ugodno, sretno, veselo i zadovoljno*) u odnosu na kontrolnu skupinu. Eksperimentalna skupina u završnom mjerenju statistički značajno rjeđe izražava osjećaje negativnog u odnosu na kontrolnu skupinu. U varijablama

SPIN-P i SPIN-B eksperimentalna skupina u završnom mjerenju ima statistički značajno veći broj bodova u odnosu na kontrolnu skupinu.

Tablica 2. Razlike između eksperimentalne i kontrolne skupine u početnom i završnom mjerenju

	Početno mjerenje				Završno mjerenje			
	AS-EKSP.	AS-KONT.	t	p	AS-EKSP.	AS-KONT.	t	p
pozitivno	4,52	4,44	2,24	0,05	4,35	3,77	2,31	0,03
negativno	1,90	2,43	-1,77	0,08	1,69	2,59	-3,01	0,00
dobro	4,00	4,13	-0,45	0,65	4,38	3,77	2,32	0,02
loše	1,71	2,13	-1,40	0,17	1,77	2,23	-1,65	0,11
ugodno	4,43	3,98	2,89	0,07	4,27	3,82	2,23	0,03
neugodno	1,81	2,13	-2,15	0,06	1,77	1,86	-0,34	0,74
sretno	4,52	4,13	1,90	0,06	4,46	3,91	2,04	0,05
tužno	1,90	2,17	-0,84	0,40	2,15	2,36	-0,71	0,48
prestrašeno	1,81	1,43	1,36	0,18	2,12	1,55	1,69	0,10
veselo	4,52	4,17	1,41	0,17	4,46	4,00	1,96	0,04
ljutito	2,38	2,70	-0,98	0,33	2,54	2,77	-0,69	0,49
zadovoljno	4,48	4,27	3,10	0,05	4,54	4,14	1,96	0,05
SPIN-P	21,38	24,00	-1,10	0,28	26,46	22,39	3,07	0,00
SPIN-N	9,31	13,30	-2,90	0,01	12,04	12,78	-0,56	0,58
SPIN-B	12,08	10,70	0,67	0,51	14,42	9,61	2,69	0,01

U *Tablici 3.* mogu se vidjeti rezultati razlika između početnog i završnog mjerenja u eksperimentalnoj i kontrolnoj skupini. Nakon provedenog Studentovog t-testa za zavisne uzorke utvrđeno je da u eksperimentalnoj skupini postoji statistički značajna razlika na varijabli pozitivnih emocija ($t(df) = -2,2903$, $p < 0,05$). Pritom je zbroj bodova na varijabli pozitivnih emocija viši pri završnom mjerenju ($M = 26,5$; $SD = \pm 2,6$) u odnosu na bodove početnog mjerenja ($M = 21,3$; $SD = \pm 10,9$). Na ostalim varijablama unutar eksperimentalne skupine nema statistički značajne razlike između početnog i završnog mjerenja. U kontrolnoj skupini ni u jednoj varijabli nije došlo do statističke značajnosti u razlikama između početnog i završnog mjerenja.

Tablica 3. Razlike između početnog i završnog mjerenje u eksperimentalnoj i kontrolnoj skupini

	Eksperimentalna skupina				Kontrolna skupina			
	AS-INIC.	AS-FINA.	t	p	AS-INIC.	AS-FINA.	t	p
pozitivno	4,5	4,3	0,68	0,51	4,4	3,7	0,75	0,46
negativno	1,9	1,7	1,19	0,25	2,4	2,5	-0,39	0,70
dobro	4,0	4,4	-1,10	0,28	4,1	3,7	1,45	0,16
loše	1,7	1,8	0,51	0,61	2,1	2,2	-0,15	0,88
ugodno	4,4	4,3	0,94	0,36	3,9	3,8	-0,21	0,83
neugodno	1,8	1,8	0,50	0,62	2,1	1,8	1,93	0,07
sretno	4,5	4,5	0,24	0,82	4,1	3,9	0,74	0,47
tužno	1,9	2,2	-0,17	0,87	2,1	2,3	-0,71	0,49
prestrašeno	1,8	2,1	-0,79	0,44	1,4	1,5	-0,68	0,50
veselo	4,5	4,5	0,25	0,80	4,1	4,0	0,64	0,53
ljutito	2,3	2,5	-0,82	0,42	2,6	2,7	-0,26	0,80
zadovoljno	4,4	4,5	-0,22	0,82	4,2	4,1	-1,48	0,15
SPIN-P	21,3	26,5	-2,29	0,03	24,0	22,3	1,01	0,32
SPIN-N	9,3	12,0	-1,74	0,09	13,3	12,7	0,39	0,70
SPIN-B	12,1	14,4	-1,40	0,17	10,6	9,6	0,48	0,64

Rasprava

Rezultati su pokazali da se vježbanjem *tai chi chuana* doprinosi promjena- ma u pozitivnim i negativnim emocijama. Utvrđeno je da postoji statistički zna- čajna razlika na varijabli *pozitivno* ($t(df) = 2,3110$, $p < 0,05$) između kontrolne i eksperimentalne skupine u završnom mjerenju. Eksperimentalna skupina sta- tistički značajno češće izražava pozitivne osjećaje ($M = 4,3$; $SD = \pm 0,7$) od kontrolne skupine ($M = 3,7$; $SD = \pm 0,9$), i to u sljedećim varijablama/emocija- ma: *dobro*, *ugodno*, *sretno*, *veselo* i *zadovoljno*, kao i u skupnoj varijabli svih pozitivnih emocija (SPIN-P). U ovom istraživanju, u kojem su sudjelovali uče- nici 4. razreda, starosti 10 godina, dobiveni rezultati potvrđuju rezultate pret- hodnog istraživanja (Wang i dr., 2010) koje je dokazalo da je godina dana redo- vitog vježbanja *tai chi chuana* u ispitanika doprinijela značajnom povećanju psihološke dobrobiti, povećanju samopouzdanja i poboljšanju općeg raspolože- nja. Ovi podatci nedvojbeno pokazuju promjenu na planu pozitivnih emocija u

odnosu na kontrolnu skupinu. Nakon dvaju mjeseci vježbanja *tai chi chuana* učenici su više iskazivali emocije *pozitivno, dobro, ugodno, sretno, veselo, zadovoljno* te je ukupan zbroj pozitivnih emocija bio statistički značajno veći. Može se reći da je to značajna promjena, posebice ako se promatra kao cjelina te se može zaključiti da je *tai chi chuan* rezultirao time da učenici više osjećaju pozitivne emocije u svakodnevnom životu. Jedno srodno istraživanje koje je objavljeno 2011. godine o utjecaju *qi gonga* na smanjenje stresa i anksioznosti, pokazalo je da su ispitanici nakon osam tjedana vježbanja *qi gonga* primjećivali svoje bolje raspoloženje i bolju kvalitetu života u odnosu na kontrolnu grupu, dok je nakon 12 tjedana od početka istraživanja došlo do značajne razlike u psihološkoj dobrobiti i raspoloženju, što je u skladu i s rezultatima ovog istraživanja (Chow i dr., 2011). *Qi gong* je komplementarna vještina *tai chi chuanu* i može se koristiti kao priprema i usavršavanje pravilnog položaja tijela u *tai chi chuanu*. Rezultati ovog istraživanja pokazali su da postoji statistički značajna razlika na varijabli *negativno* ($t(df) = -3,0100, p < 0,05$) između kontrolne i eksperimentalne skupine u završnom mjerenju. Pritom eksperimentalna skupina rjeđe izražava negativne osjećaje ($M = 1,7; SD = \pm 0,9$) od kontrolne skupine ($M = 2,5; SD = \pm 1,1$). U ukupnom zbroju negativnih emocija (SPIN-N) ne postoji statistički značajna razlika između kontrolne i eksperimentalne skupine, osim kod emocije *negativno*, gdje postoji statistički značajna razlika. Po navedenome se može zaključiti da postoje jasne indikacije da bi se u slučaju duljeg razdoblja vježbanja moglo utjecati i na promjenu negativnih emocija. Tomu u prilog govori utvrđena statistički značajna razlika na varijabli *negativno*, odnosno rjeđe izražavanje negativnih osjećaja eksperimentalne skupine. Navedenom zaključku također pridonose rezultati istraživanja koje su proveli Chow i dr. (2011), a koje je pokazalo da su ispitanici u kontrolnoj skupini nakon 12 tjedana istraživanja pokazali značajno manju razinu stresa i anksioznosti. Wang i dr. (2010) u istraživanju vježbanja *tai chi chuana* na psihološku dobrobit zaključuju da *tai chi chuan* može biti povezan sa smanjenjem stresa, anksioznosti, depresije i lošeg raspoloženja. Negativne emocije koje su se koristile u ovom istraživanju bliske su dobi učenika 4. razreda i njihovu razumijevanju. Također, one mogu biti indikator onog što se u, najčešće odrasloj dobi ali i u dječjoj, počinje nazivati depresija, stres, anksioznost. Zbog toga se preporučuje prakticiranje ovakve vrste mjerenja u učenika, odnosno istraživanje s većim

parametrima koji mogu pružiti indikacije za primjenu onih metoda koje smanjuju pojavu i učestalost negativnih emocija. Zanimarivanje mjerenja emotivnog stanja učenika u školi i intervencije u svrhu njihove redukcije znači zanimarivanje emotivnog stanja zajednice, moguće eskalacije u problem mladih i odraslih osoba i moguće patološko stanje poput depresije i anksioznosti. Ako se stanje ne mjeri, nije moguć znanstveni pristup promjene metodologije rada učitelja u svrhu stvaranja pristupa i programa koji radi na socijalnom aspektu odgoja, već su metode podložne paradigmama i pedagoškim trendovima određenog doba. Ovo istraživanje pruža uvid u jednu dimenziju vrijednosti *tai chi chuana*, no daje i poticaj za moguće interventno istraživanje učitelja u okviru svog razreda, kao i sustavno istraživanje metodologije u odgoju i obrazovanju radi uravnoteživanja odgojnog i obrazovnog aspekta školovanja. S ciljem utvrđivanja statističke značajnosti razlika između početnog i završnog mjerenja unutar eksperimentalne skupine, proveden je Studentov t-test za zavisne uzorke. Utvrđeno je da postoji statistički značajna razlika na varijabli pozitivnih emocija (SPINI-P) ($t(df) = -2,2903$, $p < 0,05$). Pritom je zbroj bodova na varijabli pozitivnih emocija viši pri završnom mjerenju ($M = 26,5$; $SD = \pm 2,6$) u odnosu na bodove početnog mjerenja ($M = 21,3$; $SD = \pm 10,9$). Iz rezultata se može zaključiti da se grupa koja je prakticirala *tai chi chuan* homogenizirala na afektivnoj razini te se ukupan zbroj vrijednosti dodijeljenih pozitivnim emocijama statistički značajno povećao. Analizirajući rezultate, može se vidjeti da je *tai chi chuan* primjenjiv u primarnoj edukaciji, bez obzira na antropomorfne predispozicije učenike, i to kroz individualizirani pristup, utječući na stvaranje pozitivnih emocija i iskustava. Svoju ulogu *tai chi chuan* može imati i u homogeniziranju pozitivnog afektivnog stanja u sklopu odgojno-obrazovne skupine, s ciljem optimalizacije samog procesa obrazovanja. Pozitivne emocije mogu djelovati afirmativno na dobrobit djeteta i općenito na dobrobit cijelog društva. S ciljem utvrđivanja statističke značajnosti razlika između početnog i završnog mjerenja unutar eksperimentalne skupine proveden je Studentov t-test za zavisne uzorke. Utvrđeno je da ne postoji statistički značajna razlika na varijabli negativnih emocija (SPIN-N) ($t(df) = -1,7378$, $p < 0,05$). Pritom je zbroj bodova na varijabli negativnih emocija viši pri završnom mjerenju ($M = 12,0$; $SD = \pm 4,5$) u odnosu na bodove početnog mjerenja ($M = 9,3$; $SD = \pm 5,7$). Smatra se da se može ostvariti promjena i na polju negativnih emocija s obzirom na

rezultate dobivene usporedbom eksperimentalne i kontrolne skupine u završnom mjerenju, gdje je emocija *negativno* statistički značajno bila veća u kontrolnoj negoli u inicijalnoj eksperimentalnoj skupini, no za potvrdu navoda potrebno je provesti istraživanje s programom duljeg trajanja. S ciljem utvrđivanja statističke značajnosti razlika između početnog i završnog mjerenja unutar kontrolne skupine proveden je Studentov t-test za zavisne uzorke. Utvrđeno je da nema statistički značajne razlike između početnog i završnog mjerenja unutar kontrolne skupine. Nije utvrđena statistički značajna razlika, međutim u kontrolnoj skupini zbroj pozitivnih emocija (SPIN-P) u početnom je mjerenju veći ($M = 24,0$, $SD = \pm 3,2$), dok je u završnom mjerenju manji ($M = 22,3$, $SD = \pm 6,1$). Iz rezultata je vidljivo gotovo dvostruko povećanje standardne devijacije u odgovorima ispitanika kontrolne skupine, što može ukazivati na dodatnu vrijednost *tai chi chuana* i njegovu primjenu u okviru primarne edukacije u svrhu homogeniziranja odgojno-obrazovnih skupina po pitanju afektivnog područja. Također, navedeno upućuje na potrebu daljnjih longitudinalnih istraživanja utjecaja *tai chi chuana* na radne skupine u području odgoja i obrazovanja, kao i u ostalim područjima ljudske djelatnosti. Proveden je Studentov t-test za zavisne uzorke kako bi se utvrdilo postoje li statistički značajne razlike između kontrolne i eksperimentalne skupine u rezultatima završnog mjerenja. Utvrđeno je da postoji statistički značajna razlika na varijabli *afektivni bilans* (SPIN-B) ($t(df) = 2,6882$, $p < 0,05$) između kontrolne i eksperimentalne skupine u završnom mjerenju. Pritom eksperimentalna skupina ima više rezultate na varijabli *afektivni bilans* ($M = 14,4$; $SD = \pm 5,1$) od kontrolne skupine ($M = 9,6$; $SD = \pm 7,3$). Prema Diener i dr. (2019), *afektivni bilans* je izvedena veličina unutar SPANE-a. Dobiva se razlikom zbroja pozitivnih emocija (SPIN-P) i zbroja negativnih emocija (SPIN-N), čime je ona pokazatelj općeg stanja ispitanika. Zato ju je vrijedno spomenuti kako bi se upotpunila analiza dobivenih promjena i povezala s tisućljetnim spoznajama tradicionalne kineske medicine, koje su jedne od temelja *tai chi chuana*. Pokreti i principi *tai chi chuana* oblikovani su na temelju razumijevanja tradicionalne kineske medicine (TCM) koja se temelji na teoriji povezanosti pet elemenata (vode, drva, vatre, zemlje, metala) s vitalnim organima i njihovoj povezanosti s ravnotežom i prisutnošću naših emocija. Problemi sa srećem i tankim crijevom povezani su s negativnim emocijama mržnje, nestrpljenja, okrutnosti, dok je dobro funkcioniranje srca i tankog

crijeva povezano s pozitivnim emocijama radosti, ljubavi, zadovoljstva, prihvaćanja. Problemi slezene i želuca povezani su s negativnim emocijama brige, anksioznosti, nepovjerenja, a dobro funkcioniranje s pozitivnim emocijama iskrenosti, povjerenja, vjere u moguć pozitivan ishod. Zdravstveni problemi s plućima i debelim crijevom povezani su s negativnim emocijama tuge i depresije, a dobro funkcioniranje ovih organa s pozitivnim emocijama hrabrosti i pravednosti. Problemi s bubrežima i mokraćnim mjehurom povezani su s negativnom emocijom straha, a dobro je funkcioniranje povezano s pozitivnim emocijama smirenosti, mira, staloženosti. Zdravstvene teškoće s jetrom i žučnom vrećicom povezane su s ljutnjom, ljubomorom i zavišću, a normalno funkcioniranje bubrega i mokraćnog mjehura s pozitivnim emocijama ljubavnosti i velikodušnosti. Navedeni utjecaji emocija na zdravstveni status naglašavaju da je fizičko zdravlje itekako povezano s onim mentalnim te da promjena u jednom rezultira promjenom u drugom. Razumijevajući tih principe, pokreti *tai chi chuana* oblikovani su tako da njeguju organe i stvaraju ravnotežu mišića, tetiva i organskih sustava. Dobiveni rezultati ovog istraživanja pokazuju statistički značajne razlike u tome kako se osjećaju ispitanici unutar grupe koja je prakticirala *tai chi chuan* i grupe koja nije. Rezultati ovog istraživanja pružaju znanstvenu potvrdu da njegovanje tijela uz ispravno prakticiranje *tai chi chuana* donosi i generira pozitivne emocije, a smanjuje negativne. S obzirom na to da je istraživanje trajalo 8 tjedana, vidljiv je napredak koji pokazuje mogućnosti i potencijal *tai chi chuana* u stvaranju značajne promjene u pozitivnom i negativnom iskustvu učenika.

Zaključak

rezultati istraživanja pokazali su da se vježbanjem *tai chi chuana* značajno doprinosi pozitivnim emocijama učenika te da postoje statistički značajne indikacije da elementi *tai chi chuana* značajno smanjuju utjecaj negativnih emocija učenika. Rezultati pružaju praktičan doprinos u iskazivanju vrijednosti primjene *tai chi chuana* u odgojno-obrazovnom sustavu. Pokazuje se da se ispravnom primjenom *tai chi chuana* može pozitivno utjecati na promjene u osjećajima učenika. Zato ove spoznaje prikazuju *tai chi chuan* kao metodu kojom se odgojno-obrazovni sustav može upotpuniti tako da kroz ispravno njegovanje i vježbanje *tai chi chuana* učenici nauče metodu kojom mogu imati pozitivno

iskustvo tijekom redovitog procesa odgoja i obrazovanja. Ovo je jedno od prvih interdisciplinarnih istraživanja u području kineziologije koje povezuje vježbanje s promjenama na kogniciji, afektivnom području, odnosno emocijama. Današnji način života suočava čovjeka s velikom količinom stresa i izazova s kojima treba živjeti. Zato je pitanje uma i tijela vrlo važno i treba mu pridavati pažnju. *Tai chi chuan* može, ako se ispravno poučava, unijeti novu dimenziju odgoja i obrazovanja. Ima potencijal biti važnim alatom u stvaranju koherentnih mikrozajednica razreda s pozitivnijim emocijama učenika. Navedeno doprinosi stvaranju koherentnih makrozajednica škole, gradova, država i društva općenito. Za buduća se istraživanja predlaže provođenje longitudinalne studije s većim uzorkom kako bi njezina znanstvena vrijednost bila veća te mjerenje i drugih antropomorfnih karakteristika. Također, buduća su istraživanja nužna kako bi se opravdala mogućnost integracije *tai chi chuana* u školski sustav, ali i njegova šira društvena primjena.

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DO EASY-TO-READ TEXTS HELP PEOPLE WITH INTELLECTUAL DISABILITIES ACHIEVE LITERACY?

Abstract

Easy-to-read texts enable people with intellectual disabilities to have a quality experience in understanding texts. Since people with intellectual disabilities receive and process information more slowly than other individuals, adapted texts enable individuals with intellectual disabilities for self-education and literacy competence in the wider social environment. Our empirical research showed that students with intellectual disabilities better understand the content of easy-to-read texts. When talking about the text, they can interact with people more easily. They can discuss the text more easily, express their opinion and support it with arguments. The research has shown that adapted texts have a positive impact in all aspects on the understanding of content in people with intellectual disabilities.

Keywords: intellectual disability, reading, understanding of content, peer violence, students.

POMAŽU LI POJEDNOSTAVLJENI TEKSTOVI U POSTIZANJU ČITALAČKE PISMENOSTI OSOBA S INTELKTUALNIM TEŠKOĆAMA?

Sažetak

Pojednostavljeni tekstovi omogućavaju osobama s intelektualnim teškoćama kvalitetno iskustvo u razumijevanju tekstova. Budući da osobe s intelektualnim teškoćama primaju i obrađuju informacije sporije od ostalih pojedinaca, prilagođeni im tekstovi omogućavaju samoobrazovanje i kompetenciju u širem društvenom okruženju. Naše empirijsko istraživanje pokazalo je da učenici s intelektualnim teškoćama bolje razumiju sadržaj lako čitljivih tekstova. Kad razgovaraju o tekstu, mogu lakše komunicirati s ljudima. O tekstu mogu lakše raspravljati, izraziti svoje mišljenje i potkrijepiti ga argumentima. Istraživanje je pokazalo da prilagođeni tekstovi u svim aspektima pozitivno utječu na razumijevanje sadržaja kod osoba s intelektualnim teškoćama.

Ključne riječi: intelektualne teškoće; čitanje; razumijevanje sadržaja; vršnjačko nasilje; učenici.

Introduction

Reading literacy is the lifelong right, responsibility and value of each individual, as well as a prerequisite of all forms of learning (National Strategy of Development of Literacy, 2017). Some people lack literacy skills due to underdeveloped language competence and consequently need text adaptations. Such adjustments make it easier for them to understand the text (Haramija, 2017).

Adapted texts, which are easier to understand, are so-called easy-to-read texts. In other words, easy-to-read texts are adaptations of original texts that make them easier to read and to understand (Haramija, 2017).

Adapted texts contain two types of adjustments: linguistic and clarifying adjustments. Language adjustments simplify understanding and pronunciation: such adjustments include avoidance of synonyms and foreign words, acronyms, splitting words, multiple numbers and special symbols, as well as the use of concrete terms and explanations of less known words.

Short and simple sentences, simple events and subordinate clauses are used, and negation is avoided in adapted texts. The second type of adjustment makes adapted texts clearer. These adjustments are following: using suitable font size (size 14), using fonts without serif like Arial or Tahoma, using line spacing (1.5), using left alignment, and using up to six words in one line. One of the design adaptations of easy-to-read texts is also the use of graphic material, which is related to the content of the text and which strengthens the linguistic and visual literacy of individuals. Reading adapted texts encourages groups of people with literacy problems to read independently while encouraging them to actively interact with the environment and the text (Haramija and Batič, 2016).

Adapted texts allow information to be accessible and understandable to all people. People with intellectual disabilities experience difficulties not only in the field of memory but also in acquiring reading competencies. Adapted texts enable them to understand simple instructions, events and rights. In short, adapted texts allow them to understand information from the environment and get information on topics that are interesting to them (Tronbacke, 1993).

As mentioned above, adapted texts are also suitable for people with intellectual disabilities. People with intellectual disabilities are characterized by

significant limitations in both intellectual functioning and adaptive behavior (AAIDD, 2017). Gloucestershire (2017) states that people with intellectual disabilities have a significantly reduced ability to understand complex information and to learn new skills. People with intellectual disabilities are cognitively slow and have problems with generalization and abstract thinking. Problems may also arise in the areas of perception, forming thoughts, memory and short-term span (Čas, Kastelic and Šter, 2003).

Individuals with intellectual disabilities are slower than their peers when it comes to learning and memory processing. Opara (2016) states that the reason for the slower adoption of information is primarily reduced attention and modest memory. Among the causes, there were also perception disorder, poor differentiation and modes verbal abilities. People with intellectual disorders learn more slowly; their learning is easiest through practical tasks. They encounter problems when transitioning from theory to practice, and their knowledge is poorly synthesized.

Despite these challenges, people with intellectual disabilities can learn. To do so, they need to utilize their past experiences. People with intellectual disabilities do not learn spontaneously; therefore, it is important that learning is clearly planned (Opara, 2016). It is necessary to include graphic sub-content and visual materials that help people with intellectual disabilities understand the content they are trying to learn. (Bock and Erickson, 2015).

People with intellectual disabilities can also learn significantly from adapted texts. Such texts allow them to learn systematically, while their experiences through these texts can be included and transformed into a concrete learning opportunity (Fijardo et al., 2014).

Easy-to-read texts are one of the learning methods that enable people with intellectual disabilities to engage in receptive language activities independently and to understand written or heard content. They also expand vocabulary and put the reader into a communicative relationship that enables progress in the field of speech and language competences (Tronbacke, 1993).

Empirical research

Purpose

The purpose of the research was:

- a) to research the differences in understanding of the text among students who listened to the easy-to-read text and students who listened to the original text with the same content;
- a) to research the differences between the groups regarding understanding of peer violence and tolerance.
- a) We posed two research questions:
 - a) Will students understand peer violence and the content of the adapted text better than the content of the text in the standard form?
 - a) Will students from the experimental group communicate on a higher level about the content?

Research method

For the purposes of this research, we chose an idiographic approach and a descriptive research method and prepared a qualitative and quantitative case study. The study was based on a one-off case and was carried out during four sessions. Assessment scales for individual student participants was prepared.

Sample

The survey included a sample comprising of ten students with intellectual disabilities and associated speech linguistic disorders. All students were fifth grade primary school students who attended a class for children with lower educational requirements. The average age of the participants was ten. The control group comprised two females and three males. The control group listened to the text in the original form. The experimental group also included two girls and three boys. They listened to the adapted text with the same content. All students attended the same special education primary school in Slovenia.

Data collection

The data were collected during the four sessions with each group in 2018. In the control group, the teacher read the text in the original form; in the experimental group, the teacher read the adapted text. Both the original and the adapted texts were based on Nina Volčanjk's children's literary work titled *Me + You + He = We* (originally: *Jaz + ti + on = mi*). It covered seven chapters and was divided into four parts. After each session, an individual interview with the student participants was conducted, on the basis of which the evaluation scales were prepared.

Instrumentation

For the purposes of this research, we created a questionnaire that contained questions that tested understanding of the text that was read. The questions were divided into four sets, one set for each session. Each set consisted of one or two chapters from the read text. Each section also contained a question where students had to express and find arguments to support their disagreement with the teacher (e.g. "Blaming is fine, right?"). Each section also included questions where students had to explain new vocabulary. The answer to each question was evaluated on the scale from 1 to 5; number one meaning *an insufficient response* or *no response*, two meaning *a sufficient answer*, three meaning *a good answer*, four meaning *a very good answer* and five meaning *an almost perfect or a perfect answer*.

Data analysis

The collected data were categorized and processed with a *t*-test for independent samples. The data were analyzed in the SPSS program by means of statistical data processing at the level of descriptive and inferential statistics. In order to analyze differences between the experimental (EG) and control (CG) groups, the *t*-test for independent samples was used, based on the average result of each student. The Levene's test was used to measure in-group differences. The data are shown in a tabular form. The author's observations were also included.

Results

Understanding branched text

Table 1: Results of the t-test of differences between the EG's and the CG's understanding of the first chapter.

	Group	Mean	Standard deviation	Levene's test		<i>t</i> -test	
		M	SD	F	P	<i>t</i> (<i>df</i>)	<i>p</i>
How are people different (i.e. understanding content)?	EG	3.00	1.22	0.14	0.71	0.30 (8)	0.771
	CG	2.80	0.84				
How are people alike (i.e. understanding content)?	EG	2.60	1.52	1.25	0.30	0.30 (8)	0.620
	CG	2.20	0.84				

The results of the Levene's test indicate that the assumption of homogeneity of variances was met in both variables. There were no statistically significant differences between groups in understanding this chapter ($t(8) = 0.30$; $p > 0.771$ and $t(8) = 0.30$; $p > 0.620$).

However, the results indicate a tendency for students in the EG to express superior levels of skills in both questions ($M = 3.00$; $SD = 1.22$ and $M = 2.60$; $SD = 0.84$) in comparison with the students in the CG ($M = 2.80$; $SD = 0.84$ and $M = 2.20$; $SD = 0.84$).

The students from the EG provided substantially more complete answers. Their explanation of the answers was based on the examples from the text. The students from the CG mostly provided partial answers or did not answer the question. The majority of students from the CG's answer to the first question was that people differ in skin tone, while students from the EG also mentioned other physical characteristics. However, they were not able to support their answer with an example from the branched text.

We also observed that the students from the CG responded to the questions less convincingly.

Table 2: Results of the t-test of differences between the EG’s and the CG’s understanding of the second chapter.

	Group	Mean	Standard deviation	Levene’s test		t-test	
		M	SD	F	P	t (df)	p
Where did Nejc previously see the boy, who entered the class (i.e. understanding content)?	EG	4.60	0.55	2.33	0.17	3.54 (8)	0.008
	CG	2.60	1.14				
Goran’s illegal behavior was justifiable, right (i.e. disagreement with the teacher, understanding peer violence)?	EG	3.20	1.79	0.00	1.00	0.88 (8)	0.403
	CG	2.20	1.79				
What does it mean to mock somebody (i.e. explaining new vocabulary, understanding peer violence)?	EG	3.80	1.30	6.17	0.04	3.24 (8)	0.023
	CG	1.80	0.45				
What’s the name of a dark-skinned boy (i.e. understanding content)?	EG	2.00	1.22	0.10	0.77	0.49 (8)	0.636
	CG	1.60	1.34				
What did the students get for their homework (i.e. understanding content)?	EG	4.00	1.00	0.06	0.81	2.36 (8)	0.046
	CG	2.40	1.14				

The results of Levene’s test indicate that the assumption of homogeneity of variances was met in all variables, except in the variable where students explained what it means to mock somebody. There were statistically significant

differences between the first ($t(8) = 3.45; p = 0.008$), the third ($t(8) = 3.24; p = 0.023$) and the fifth ($t(8) = 2.36; p = 0.046$) question.

The results indicate a tendency for students in the EG to express superior levels of skills in understanding the second chapter in comparison with students in the CG.

In the second chapter, the students from the EG responded to almost all of the questions in their entirety or provided almost complete answers. The students from the CG responded partly correctly or did not answer the questions at all. In the CG, fictitious responses also appeared several times.

There were major differences between the two groups when the students had to disagree with the teacher. The students from the EG disagreed more clearly ($M = 3.20; SD = 1.79$), but they had problems with providing arguments, while students from the CG did not express their disagreement with the teacher. They were less sure of their answers and responded with questions ($M = 2.20; SD = 1.79$).

The students from the EG also correctly explained the word mockery. They supported their explanation with an example from the text. The students from the CG had problems with providing arguments. The students from the EG expressed a better understanding of the word mockery ($M = 4.00; SD = 1.00$), than students from the CG ($M = 2.40; SD = 1.14$).

Table 3: Results of the t-test of differences between the EG’s and CG’s understanding of the third chapter.

	Group	Mean	Standard deviation	Levene’s test		t-test	
		M	SD	F	P	t (df)	p
Where does Nejc’s family live (i.e. understanding content)?	EG	4.00	1.41	0.00	1.00	0.00 (8)	1.000
	CG	4.00	1.73				

Why did Bomani become sad (i.e. understanding content)?	EG	4.40	0.55	12.12	0.01	2.77 (8)	0.039
	CG	2.40	1.52				
What does it mean to adopt someone (i.e. explaining new vocabulary)?	EG	3.80	1.64	0.11	0.75	2.27 (8)	0.053
	CG	1.80	1.10				
Who is a biological mother (i.e. explaining new vocabulary)?	EG	3.40	1.82	0.16	0.70	0.55 (8)	0.599
	CG	2.80	1.64				
Who is a foster mother (i.e. explaining new vocabulary)?	EG	3.60	1.52	0.70	0.43	1.81 (8)	0.108
	CG	2.20	0.84				

The results of the Levene's test indicate that the assumption of homogeneity of variances was met in all variables, except in the variable where students explained why Bomani is sad. There were statistically significant differences between the second ($t(8) = 2.77; p = 0.039$) and the third ($t(8) = 2.27; p = 0.053$) question.

In the first question, both students in the CG and the EG expressed the same level of skills in understanding the third chapter. However, the results for other questions indicate a tendency for students in the EG to express superior levels of skills in understanding the adapted text, in comparison with the CG's understanding of the original text.

The EG also gave complete or partly complete answers for this section, while the CG provided quite a few incorrect answers.

The students from the EG explained new vocabulary more clearly and also substantiated their answers with examples from the text. The students from the CG could not answer the questions and they did not give concrete examples.

A great difference between the EG and the CG also occurred in the understanding of the concepts of biological (EG – M = 3.40; SD = 1.82; CG – M = 2.80; SD = 1.64) and foster mothers (EG – M = 3.60; SD = 1.52; CG – M = 2.20; SD = 0.84). All students from the EG were able to explain these concepts, while the students from the CG either could not answer the question or they misinterpreted the concepts.

Table 4: Results of the t-test of differences between EG’s and CG’s understanding of the fourth chapter.

	Group	Mean	Standard deviation	Levene’s test		<i>t</i> -test	
		M	SD	F	P	<i>t</i> (<i>df</i>)	<i>p</i>
Where did Bomani invite Nejc (i.e. understanding content)?	EG	4.80	0.45	1.52	0.25	3.80 (8)	0.005
	CG	3.60	0.55				
What did Nejc buy for Bomani’s birthday (i.e. understanding content)?	EG	4.20	1.30	0.04	0.85	2.32 (8)	0.049
	CG	2.40	1.14				
Blaming is fine, right (i.e. disagreement with the teacher)?	EG	3.80	0.45	3.88	0.08	2.57 (8)	0.034
	CG	2.40	1.14				
What does it mean to report (i.e. explaining new vocabulary)?	EG	3.60	1.34	27.03	0.00	4.33 (8)	0.012
	CG	1.00	0.00				
What were they doing at the birthday party (i.e. understanding content)?	EG	3.20	1.48	2.82	0.13	2.02 (8)	0.078
	CG	1.80	0.45				

The results of Levene’s test indicate that the assumption of homogeneity of variances was met in all variables, except in the variable where students explained the word report. There were no statistically significant differences between the first ($t(8) = 3.80; p = 0.005$), the second ($t(8) = 2.32; p = 0.049$), the third ($t(8) = 2.57; p = 0.034$) and the fourth ($t(8) = 4.33; p = 0.012$) question. There is a tendency in the fifth question ($t(8) = 2.02; p = 0.078$).

The students from the EG answered the questions correctly and completely, while the students from the CG responded with less complete and fictitious answers. Some answers of the students from the CG included wrong explanations. We can interpret this by a higher mean in the EG than in the CG in all questions.

In this chapter the students from the EG increasingly expressed disagreement ($M = 3.80; SD = 0.45$) with the teacher in comparison with the students from the CG ($M = 2.40; SD = 1.14$). Both groups had difficulty in justifying their opinion. The participants in CG repeatedly contemplated the question of disagreement and were not sure about their answer.

Again, the EG ($M = 3.60; SD = 1.34$) described the meaning of the words more accurately than the CG ($M = 1.00; SD = 0.000$). Students from the CG did not know how to answer those questions.

Table 5: Results of the t-test of differences between EG’s and CG’s understanding of the fifth chapter.

	Group	Mean	Standard deviation	Levene’s test		t-test	
		M	SD	F	P	t (df)	p
Why was Bomani bare foot (i.e. understanding content)?	EG	4.60	0.89	0.26	0.62	2.67 (8)	0.029
	CG	3.00	1.00				
Why did Goran return Bomani’s slippers (i.e. understanding content)?	EG	3.60	1.34	0.46	0.52	2.32 (8)	0.049
	CG	1.80	1.10				

What happened in the art class (i.e. understanding peer violence)?	EG	4.40	0.55	12.12	0.01	2.77 (8)	0.039
	CG	2.40	1.52				
Why didn't Bomani want to tell the teacher what was happening (i.e. understanding peer violence)?	EG	4.40	0.55	2.33	0.17	3.18 (8)	0.013
	CG	2.60	1.14				
What did Nejc do after the class (i.e. understanding content)?	EG	4.60	0.55	19.20	0.00	4.38 (8)	0.005
	CG	2.20	1.10				
Nejc made a mistake when he told the teacher about violence, didn't he (i.e. disagreement with the teacher)?	EG	3.60	1.67	0.03	0.86	1.63 (8)	0.141
	CG	2.00	1.41				
What does it mean to be violent (i.e. explaining new vocabulary, understanding peer violence)?	EG	4.00	0.00	96.00	0.00	5.72 (8)	0.005
	CG	2.60	0.55				

The results of Levene's test indicate that the assumption of homogeneity of variances was met in all variables, except in the variable where the students explained Nejc's reaction after class. There were statistically significant differences between the second ($t(8) = 2.32; p = 0.042$), the third ($t(8) = 2.77; p = 0.093$), the fourth ($t(8) = 3.18; p = 0.013$), the fifth ($t(8) = 4.38; p = 0.005$), and the seventh ($t(8) = 5.72; p = 0.005$) question.

The results indicate a tendency for students in the EG to express superior levels of skills in understanding the chapter in comparison with students in the CG.

The EG also provided better responses to this chapter than the CG. The students from the CG were not very sure of their answers. Their answers were not perfect, and they even did not answer a few times.

The students from the EG responded more substantially and more correctly to the content. The students of the EG were also answering questions more vigorously and did not need any additional questions (the mean in the EG is higher in all cases). Likewise, the students who were read the adapted text, the EG, explained the meaning of the words more correctly and were able to argue with concrete examples from the text or their lives (the mean in the CG is lower in all cases).

In the penultimate question, the students again had to express disagreement with the teacher. The students in the EG expressed more disagreement ($M = 3.60$; $SD = 1.67$) than the students of the CG ($M = 2.00$; $SD = 1.41$). Again, both groups had problems with argumentation. The students of the CG fully agreed with the teacher, although two students did not know how to answer the question.

Table 6: Results of the t-test of differences between EG's and CG's understanding of the sixth chapter.

	Group	Mean	Standard deviation	Levene's test		t-test	
		M	SD	F	P	t (df)	p
What did Nejc and Bomani take to the playground (i.e. understanding content)?	EG	4.20	1.30	0.70	0.43	3.46 (8)	0.009
	CG	1.80	0.84				
Why did Bomani start to cry (i.e. understanding content, understanding peer violence)?	EG	4.60	0.55	0.00	1.00	8.66 (8)	0.000
	CG	1.60	0.55				
How did Nejc help Bomani (i.e. understanding content)?	EG	3.60	1.14	0.55	0.48	2.85 (8)	0.022
	CG	1.80	0.84				

The results of Levene’s test indicate that the assumption of homogeneity of variances was met in all variables. There were statistically significant differences between the first ($t(8) = 3.46; p = 0.009$), the second ($t(8) = 8.66; p < 0.000$) and the third ($t(8) = 2.85; p = 0.022$) question.

The results indicate a tendency for students in the EG to express superior levels of skills in understanding the chapter in comparison with the students in the CG.

In the first question, which refers to the understanding of the sixth chapter, the EG responded with complete or partly complete answers ($M = 4.20; SD = 1.30$), while the CG responded with partial or even fictitious answers ($M = 1.80; SD = 0.84$).

The students from the EG showed more understanding of the text and they gave more comprehensive and correct answers about the cause and result question ($M = 4.60; SD = 0.55$). The students from the CG responded incompletely while needing a lot of encouragement and additional questions ($M = 1.60; SD = 0.55$).

Table 7: Results of the t-test of differences between EG’s and CG’s understanding of the seventh chapter.

	Group	Mean	Standard deviation	Levene’s test		<i>t</i> -test	
		M	SD	F	P	<i>t</i> (<i>df</i>)	<i>p</i>
Why did Nejc paint himself with colors (i.e. understanding content)?	EG	4.20	1.10	2.17	0.18	3.24 (8)	0.012
	CG	2.20	0.84				
What does it mean to be harassed (i.e. explaining new vocabulary)?	EG	3.40	0.55	0.00	1.00	5.20 (8)	0.001
	CG	1.60	0.55				

When someone harasses us, we feel good, don't we (i.e. disagreement with the teacher)?	EG	5.00	0.00	7.11	0.03	11.00 (8)	0.000																												
	CG	2.80	0.45					Who represented the stones that were given to the children in Nejc's classroom (i.e. understanding content)?	EG	3.60	1.52	14.22	0.01	3.39 (8)	0.021	CG	1.20	0.450	What did the teacher want to show the children when she threw all the stones into the water (i.e. understanding content, understanding peer violence)?	EG	3.80	0.84	0.09	0.77	4.02 (8)	0.004	CG	1.60	0.89	Did Goran and Bomani agree in the end (i.e. understanding content)?	EG	4.80	0.45	3.57	0.10
Who represented the stones that were given to the children in Nejc's classroom (i.e. understanding content)?	EG	3.60	1.52	14.22	0.01	3.39 (8)	0.021																												
	CG	1.20	0.450					What did the teacher want to show the children when she threw all the stones into the water (i.e. understanding content, understanding peer violence)?	EG	3.80	0.84	0.09	0.77	4.02 (8)	0.004	CG	1.60	0.89	Did Goran and Bomani agree in the end (i.e. understanding content)?	EG	4.80	0.45	3.57	0.10	5.37 (8)	0.001	CG	2.40	0.89						
What did the teacher want to show the children when she threw all the stones into the water (i.e. understanding content, understanding peer violence)?	EG	3.80	0.84	0.09	0.77	4.02 (8)	0.004																												
	CG	1.60	0.89					Did Goran and Bomani agree in the end (i.e. understanding content)?	EG	4.80	0.45	3.57	0.10	5.37 (8)	0.001	CG	2.40	0.89																	
Did Goran and Bomani agree in the end (i.e. understanding content)?	EG	4.80	0.45	3.57	0.10	5.37 (8)	0.001																												
	CG	2.40	0.89																																

The results of Levene's test indicate that the assumption of homogeneity of variances was met in all variables, except in variables three and four. There were statistically significant differences between the first ($t(8) = 3.42$; $p = 0.012$), the second ($t(8) = 5.20$; $p = 0.001$), the third ($t(8) = 11.00$; $p < 0.004$) and the sixth ($t(8) = 5.37$; $p = 0.001$) question.

The results indicate a tendency for students in the EG to express superior levels of skills in understanding the chapter in comparison with the students in the CG in all cases.

In the last chapter, the students of the EG responded more correctly about the content ($M = 4.80$; $SD = 0.45$), while the CG responded less correctly to the content ($M = 2.40$; $SD = 0.89$). Their answers were unconvincing.

When interpreting concepts, the students of the EG explained the concepts better and supported their interpretation with a concrete example ($M = 3.40$; $SD = 0.55$). The interpretation of the concepts in the CG was not supported by concrete examples and their explanation was poor ($M = 1.60$; $SD = 0.55$).

In this chapter, we also examined the instances of disagreement with the teacher. The students of the EG fully expressed their disagreement and clearly argued their opinion ($M = 5.00$; $SD = 0.000$). In the CG, all students hesitated and contemplated expressing disagreement. If they disagreed, they did not argue their disagreement ($M = 2.80$; $SD = 0.45$).

Changes of easy-to-read text in the verification protocol

At the time of reading the adapted text, the students suggested minimal text changes. Most of the corrections included new explanations for individual words. There were also added sentences or phrases that better explained the causal-consequence and time links.

Minor changes occurred between the unverified and verified text. The students suggested the changes while reading the adapted text.

Discussion

- a) Will students understand peer violence and the content of an adapted text better than the content of a text in the standard form?

Fijardo (2014) found in his study that participants with an intellectual disability showed significantly higher results related to content questions if they read adapted texts. The author emphasized that adapted texts are easier to understand for people with intellectual disabilities. Easy-to-read texts, in addition to greater understanding, also maintain the level of motivation.

In our study, we also concluded that the understanding of the content was better in the EG, where the adapted text was read. From this matter, we can

recognize the following factors that showed us a significantly better understanding of the easy-to-read text:

- Deliberately asked questions by the teacher to provoke disagreement: the students in the EG recognized that the statement was incorrect and that the story or the meaning differed from that proposed. They expressed their disagreement, although they did have difficulties in explaining their answer. The students in the CG failed to recognize those questions and tended to agree with the statements, although they were illogical.
- Expressing their own opinion about the read content: the students in the EG expressed their own opinions and disagreement more freely than the students in the CG. They supported their answers with examples from the text. This indicates a better understanding of the content.
- Vocabulary understanding: the students from the CG were unable to remember new vocabulary.
- Answering the questions about the content: difficulties in understanding the text in CG were obvious, even if students did not explicitly say so. The understanding of the content was poorer in the CG. The students from the CG were more insecure about the answer, they needed more breaks between the answers, regularly stumbled, or failed to respond.
- Peer violence and tolerance understanding: the students of the EG subsequently showed more understanding of the content regarding peer violence and tolerance. Their explanations of the words regarding this topic were more correct. The students expressed their disagreement regarding peer violence and tolerance in the EG more often than students in the CG, where students often agreed with the teacher's statements.

We can conclude that the students understood the adapted text more comprehensively than the text with the same content in its original form.

The results of Ruth-Janneck (2011) showed that overall, language complexity is the most critical barrier to access information. The author concluded that simplifying a text is an adequate intervention to tackle this issue.

The study of Karreman (2007) also indicated that people with intellectual disabilities understood the text better when it is read in an adapted form. Furthermore, the users were more satisfied when using the adapted version than when using the conventional one.

The results of both studies were the same as those in our study.

b) Will students from the experimental group communicate on a higher level about the content?

Regarding differences in speech, we observed that the students in the EG spoke about the content more independently and fluently than the students in the CG. The responses of the students in the EG were full of substance and meaningful, while they also produced longer sentences. The students in the EG included new words from the text in their answers more often. Their pronunciation was superior, their responses were more accurate, both regarding their complexity and grammatical correctness.

The students in the CG used shorter sentences and fewer words. They needed more breaks and had difficulties with pronunciation. They were more insecure about the answer, or they failed to respond.

The differences in communication indicated that the students in the EG were more talkative and motivated to maintain the conversation. The students from the EG showed more initiative when involved in a discussion with the teacher.

Based on these results, we can confirm that the students from EG communicated on a higher level.

We were unable to find studies including the use of adapted texts with a population of primary school students with an intellectual disability. Nevertheless, similar results are reported in the study of Karreman (2007), where participants with an intellectual disability were reading a website that contained adapted texts and texts without any adjustments. The study showed that language skills of the individuals who read adapted texts were better than of the ones who read a website with non-adapted texts and thus the former should be promoted and used as often as possible by teachers and other professionals.

Conclusion

The research study aimed to examine the differences in understanding of the text and peer violence and tolerance among students who listened to the adapted text and students who listened to the original text with the same content. It also focused on researching the differences in communication skills between students in the control and those in the experimental group.

People with intellectual disabilities have difficulty understanding the texts they read. Their understanding can improve by using texts in an easy-to-read form, which enable them to understand the content more easily.

If we compare the differences in understanding of the text among students who listened to the adapted text and those who listened to the original text with the same content, we can conclude that the students who were in the EG showed more understanding of the text than students from the CG. Similarly, these students had much less difficulty in explaining the cause-and-effect relationships described in the text. They were able to provide arguments for their answers as well as describe new words using concrete experiences. The students from the EG also participated in the conversation more independently and they interacted with the teacher more.

Therefore, it is not only clear that there are differences between the two groups, but that in general students from the EG who were read the easy-to-read text benefited from these.

The findings of the research show the benefits of easy-to-read texts and significantly influence the recognition of reading adapted texts.

We believe our insights will assist professionals in the field of education. Reading and learning when using adapted texts could be easier and more enjoyable for students with intellectual disabilities. Easy-to-read texts could help children become fluent and proficient readers and could lead to long-term reading and academic success. Adapted texts could also be used for understanding the meaning of the words, definitions and their context as they contribute to increasing vocabulary.

Using easy-to-read textbooks and worksheets could increase students' vocabulary and help them to deepen their understanding of new topics and concepts. Moreover, adjusted texts are easy to integrate into a pedagogical routine.

However, although our research questions have been answered, further research is needed in order to tackle the several limitations of our study.

Firstly, it should be noted that our research was carried out on a relatively small sample, which makes the generalization to the entire population limited. Therefore, before it can be generalized, our study should be replicated with a larger sample size, different age groups and other levels of intellectual disability.

Secondly, an important methodological limitation that needs to be overcome in future research is the use of open - ended questions, which are more sensitive to comprehension differences. On the other hand using open - ended questions can confound memory and comprehension skills. The disadvantages of open - ended questions also include the potential masking effects of hearing competences and verbalization of students.

The third methodological issue is related to the design of our study. Prior to the survey itself, no initial test was conducted to confirm the equivalence of the control and experimental group. The equal memory and language skills of participants in both groups were only hypothetical.

Finally, our expectations could influence the objectivity of results. The personal subjectivity could ultimately play a role in the research because the researcher was a part of the construction. Another challenge refers to not only the personal subjectivity of the researcher but interpreting the data itself. The data related to communication skills could be viewed by multiple perspectives.

In conclusion, we can say that despite the limitations of our methodology, the research opens up many possibilities as well as a need to study the understanding of adapted texts further. Future research could include analysis of written texts, the impact of reading easy-to-read texts on social and communication skills, adapted texts in connection with lifelong learning and literacy, or the impact of easy-to-read texts on language and linguistic skills.

These areas are insufficiently studied in Slovenia, therefore a continuation of research in this direction is certainly needed.

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VOJO RADOIČIĆ'S ARTWORK AS A STIMULUS FOR EARLY AND PRESCHOOL-AGED CHILDREN'S ARTISTIC CREATIVITY – CASE STUDY

Abstract

Art appreciation is an interactive experience, that leads to the development of artistic sensibility, but also encourages creative thinking. Therefore, it is important to expose children to a variety of artistic stimuli that also include artworks. In this paper, possibilities are being researched to use reproductions of Vojo Radoičić's artworks to encourage art expression in preschool children, as well as the impact of this kind of incentive on the development of creativity and motivation in the tested group of children. Vojo Radoičić is a famous artist from Rijeka and an unavoidable figure in the Croatian art scene of the second half of the 20th century. His art expression is characterised as poetic, playful and is well - known for its lively coloring, resulting in his art pieces to often be compared to spontaneous children art expression. The research results showed that the selected artworks as a stimulus for children's artistic expression had a positive impact on the development of art creativity and motivation in children who participated in the research. These positive qualitative changes can help preschool teachers in planning future art activities in kindergartens.

Key words: art appreciation, artwork, case study, children artistic expression.

DJELO VOJE RADOIČIĆA KAO POTICAJ ZA LIKOVNO STVARALAŠTVO DJECE PREDŠKOLSKE DOBI – STUDIJA SLUČAJA

Sažetak

Promatranje umjetničkih djela interaktivno je iskustvo koje dovodi do razvijanja umjetničkog senzibiliteta, ali i poticanja kreativnog mišljenja. Stoga je od najranijih dana važno izlagati djecu raznovrsnim umjetničkim poticajima koji uključuju (i) likovnoumjetnička djela. U ovome se radu istražuju mogućnosti uporabe umjetničkih reprodukcija Voje Radoičića u poticanju likovnog izražavanja djece predškolske dobi te utjecaj primjene ove vrste poticaja na razvoj dječje likovne kreativnosti i motivacije. Vojo Radoičić poznati je riječki umjetnik i nezaobilazna figura u hrvatskoj likovnoj umjetnosti druge polovice 20. stoljeća. Njegov likovni izraz karakterizira poetičnost, zaigranost i živi kolorit zbog čega se njegova djela često dovode u korelaciju sa spontanošću dječjeg likovnog stvaralaštva. Rezultati istraživanja pokazali su da su odabrana likovnoumjetnička djela kao poticaj za dječje likovno izražavanje pozitivno utjecala na razvoj likovne kreativnosti i motivacije kod djece koja su sudjelovala u istraživanju. Navedene pozitivne kvalitativne promjene mogu pomoći odgajateljima u daljnjem planiranju likovnih aktivnosti u vrtićima.

Ključne riječi: dječje likovno stvaralaštvo; likovna aprecijacija, studija slučaja; umjetničko djelo.

Introduction

Creativity is a mental process that comprises the spheres of emotion, motivation, and ability to create new ideas and solve problems in a new and unusual way. The roots of creativity go back to the earliest childhood when every child explores intensively the world around him in order to understand it better. Therefore, every child from the earliest age needs to be provided with a stimulating (interesting, comfortable, and relaxed) environment. (Slunjski, 2013). The children's creativity can be expressed in different ways, and one of the areas most stimulating and inspiring for children's expression is the visual arts area. Children can approach art through art activities, but also through observing artworks, through i.e. art appreciation. During the interaction between children and an artwork, the preschool teacher directs their attention to certain artistic phenomena and thus encourages them to notice artistic phenomena around them, to think, compare, ask questions, imagine, create associations and new ideas, develop artistic sensibility, as well as to develop higher-order cognitive activities such as analysis, synthesis, evaluation, critical thinking. In this way, the attention of the individual can be shifted from the initial awareness of art elements on an artwork (colors, lines, shapes ...) to noticing the relationship between these elements, as well as to the feeling that the observation of the work leaves on the individual, after which, in the last phase, newly acquired thoughts and impressions can be joined by previously acquired knowledge and experiences, creating new cognitive and affective constructs. In this complex process, it is necessary to combine intellectual and intuitive understanding, since understanding and experiencing of an artwork requires a holistic approach, i.e. the engagement of all human inner potentials, which have to be developed from the earliest days of life. Duh, Herzog, and Lazar (2016) state that the creative process is accompanied by categories such as absorption, inclination to imagination and daydreaming, which leads to the conclusion that an artwork cannot be perceived only rationally and analytically, but also by the activation of feelings, imagination, and intuition.

Not much research has been carried out that deals with the influence of an artist and his/her artworks on children's development in the area of visual arts, although a few interesting researches related to this issue have been conducted

in the region over the last decade (Brajčić, Kuščević, Katić, 2011; Duh, 2016; Novaković, 2015; Zupančič, Duh, 2009). In this paper, the authors explore the extent to which the artwork of the artist Vjekoslav Vojo Radoičić can influence the development of children's artistic creativity and motivation for artistic expression. Namely, the playful artistic expression and style of Vojo Radoičić's work is very close to the child's artistic expression, and for that very reason we decided to explore the influence of his work on the artistic creation of preschool-aged children.

Artwork as a stimulus for children's artistic creativity

The child experiences and feels aesthetic values from the earliest age. This is why children should be given the opportunity to establish a direct contact with artworks already in pre-school age. Getting acquainted with quality artworks will develop in children the sense of appreciation and ability to create and express themselves through artistic activities. In visual art education the perceptual-receptive dimension, i.e. art appreciation, is the component as important as the development of art expression (art production) (Duh, Zupančič, 2013). Art appreciation contributes to the development of artistic and aesthetic sensibility, verbal and communication skills, creative and critical thinking and a positive attitude towards cultural heritage and artistic values in general. In combining both processes, namely art reception and art production, the child's need for active cognition of the environment can be connected with the development of the ability to become aware and verbalize new experiences.

Some authors cite the fifth year as the lower threshold for art appreciation, which coincides with the stages of development of children's artistic expression and visual perception (Zlateva, Tineva-Gyurkovska, 2019). In this period of life, children observe paintings as a pleasant stimuli. They are generally not interested in other people's opinions, they do not evaluate artworks, and they do not have the need / ability to assess whether artworks are quality or not (Kuščević, 2016). Art production around the age of five and six is mostly still spontaneous; the child's perceptions of the world are strongly marked by imagination. The artistic expression is unpredictable and associated with play. However, various and interesting compositional solutions can be noticed in the

created works, since in that period children are more and more able to become aware of their own thoughts and feelings, i.e. to interpret them in a visual arts medium (Duh, Vrlič, 2003). Getting acquainted with quality artworks will encourage in children the release of inclinations and abilities for artistic creation and expression. Artworks will become a part of the child's consciousness and will also stimulate the imagination needed for creations in visual arts area (Grgurić, Jakubin, 1996). Therefore, artworks can be seen as an important didactic tool for acquiring artistic knowledge, stimulating imagination and creativity, and contributing to the expansion of children's experience and knowledge of the world around them (Selaković, 2017).

Visual artworks are part of historical and cultural heritage, which is an important contribution to the development of human society and civilization. From them, we can obtain important information about the human appearance as well as their appearance in the past, activities, trends, and everyday lives; their spiritual aspirations, ideals, and ideas. The experience and interpretation of an artwork depends on children's previous experience, as well as on the social, economic, and cultural determinants of the environment in which they grew up. The experience and understanding of an artwork begins with the observation. It is the skill that children acquire and develop step by step through practice. A very important dimension in the appreciation of visual art is the qualitative dimension, i.e., the moment when reception becomes a two-way activity, when it evokes in the observer mental and experiential sensations that result in new experiences – new thoughts, ideas, and emotions. Appreciation of artworks is an interactive experience that leads to the development or refinement of the existing artistic sensibility as well as to the encouragement of creative thinking; it enriches the individual's inner life and enhances his/her everyday life. For these reasons, it is of great importance to expose children from the earliest days to various stimuli that include artworks, not only by observing reproductions, but also by visiting places where original artworks are exhibited. In museums and galleries, children have an opportunity to come into contact with various new aspects of reality that are beyond the reach of their space and time (Nenadić-Bilan, 2015). While encountering and interacting with authentic artworks, children create a unique experience, which can encourage the development of their creativity, cultural identity and positive attitude towards arts.

In addition to visiting galleries and museums, children can get acquainted with artworks through art reproductions on posters, books, catalogs, etc. It is necessary to select works that meet high artistic criteria and which, through their appearance and message, are appropriate for a certain age and developmental stage of the child. Artwork can, apart from observation and analysis, serve as a motif or source of motifs in children's art creation and expression.

Artworks can be used as an incentive to work with children in many ways. Petrač (2015) states the following classification:

1. an artwork as a visual-linguistic and thematic quote - children observe and talk to the preschool teacher about artworks, based on which their interest in artistic expression is stimulated, where artworks can be a stimulus in terms of presented motif or elements of visual language;
2. visual-linguistic redefinition of an artwork - after observing an artwork, it can be redefined in various ways, from changing colors, changing sizes, adding new textures, drawing over existing colors and structures, etc. ; in this way, children become aware of individual artistic elements, they notice the relationships between them and the different impressions that arise from changing individual elements. This method also develops various forms of creative thinking, such as originality, flexibility and fluency;
3. an artwork as a source of new motifs - an artwork can serve as an incentive to invent new motifs based on what is seen; this method also encourages the development of creative thinking;
4. artistic and compositional elements of an artwork as a stimulus for expression and creation - observation of a work of art can be focused on noticing the elements of visual arts language - colors, lines, shapes, textures, and their interrelationships: rhythm, contrast, balance, etc.; in that way children's attention is directed from the motif to the perception of the mentioned values and to the awareness of their use in their own artistic expression;
5. independence of the detail from the whole - this category refers to the observation of details within an art composition, where children focus

their attention on one part of the work, observe and analyze its structure, color form, etc., and then adapt the seen motif to their own interpretation in their own artistic expression; the process of observing an artwork can go the other way around.

Cox and Watts (2016) list some of the main reasons why an artwork should be used in education. The reasons are as follows:

1. an artwork affects children's development of awareness, understanding, and appreciation for the arts;
2. an artwork allows children to identify and to find the links between their work and the artwork;
3. an artwork encourages children to develop their critical thinking by looking at it.

Kuščević (2016, according to: Zupančič, 2006) states the following criteria for the selection of artworks in working with children: *importance / quality of the author and his work; the typicality of the author and his work* (representation of authors who are typical of a particular artistic style); *visibility of works, i.e. the possibility of clearly reading a way of artistic expression; content adequacy of artworks; content suitability of artworks* (artworks that enable children to enjoy and understand certain phenomena and tasks).

The role of preschool teachers in children's communication with artworks

The preschool teacher has a great role to play in promoting the development of children's creativity during early and pre-school age. A creative preschool teacher encourages the development of certain characteristics in children that contribute to the manifestation of their creative abilities. The preschool teacher should be competent to use contemporary creative educational methods and he/she should have a great love for his/her calling in general (Cvetković Lay, 2002; Brajčić, Kuščević, & Katić, 2011). This requires the possession of professional-methodical competencies for selecting stimuli in order to develop drawing, painting, graphic, space-plastic, and media communication skills (Grgurić, Jakubin, 1996). In order to assist the development and preserve

children's creative potential, the preschool teacher should neither impose his/her vision of reality on the child nor over-focus the attention on what he/she considers important since sometimes what seems important to us does not have to be important to the children. This task may sometimes appear arduous, because preschool teachers often think that directing the child in a certain direction is an essential part of their job, so they do it when this is required but also when it is not (Slunjski, 2013).

The purpose of visual arts is not only aesthetic, but also communicative, and the aim of the observer's communicating with an artwork is to decode and interpret its meaning (Gombrich, 1982). An artwork is considered a means of that communication, and its openness and ambiguity requires a developed ability to interpret its content. Therefore, the role of preschool teachers is to acquaint children with the basic possibilities of communication with artworks that, due to their complexity and layering, they themselves cannot fully understand (Kuščević, 2016). The preschool teacher has the role of a mediator in children's communication with an artwork. His/her task is to encourage the children to actively participate in observing the artwork by asking questions, comparing, imagining, recognizing, understanding, exploring, etc. By doing so, children can analyze a certain piece of artwork by recognizing the contents, comparing mutual relationships between the lines, shapes, colors, finding similarities and differences, drawing conclusions, etc. Kuščević (2016) cites Hickman's (1994) guidelines according to which children's spontaneity and sincerity should be taken into account in a child's contact with artworks. Their initial reactions should be used in order to create a new experience in a way more appropriate for the child. An appropriate conversation with a child significantly contributes to this. Questions such as: *What feelings and thoughts does this artwork arouse in you? What does it remind you of? What do you think...; What do you notice ...; How do you imagine ...; What would you change?* etc, help in encouraging the child to express his thoughts and feelings.

The extent of relaxation and freedom in children's artistic expression also depends on the preschool teacher's ability to listen and perceive the internal logic of children's visual language. Careful observation and monitoring of children's artistic expression enables the preschool teacher to create a relaxed

and stimulating environment for the development of children's creativity (Novaković, Tomljenović, Rončević, 2016). In this way, preschool teachers also reduce their potential need to direct the child's thinking and artistic expression, as well as the possibility of misinterpreting children's artwork, which can lead to inhibition of the development of children's creativity, curiosity and self-confidence. On the other hand, encouraging expression of any kind, from verbal to visual, as well as providing opportunities for children's comments and free expression of ideas, will contribute to the development of aforementioned abilities.

Methodology

Subject, purpose and objectives of the research

In the research carried out, the authors discussed the influence of artworks as a stimulus for preschool-aged children's artistic creativity. The work of Vojo Radoičić, a famous Rijeka artist, who marked the Rijeka and Croatian art scene of the second half of the 20th century, was selected as an inspiration for children's artistic expression. The purpose of the research was to identify some of the ways in which artwork can be a stimulus for the preschool-aged children's artistic expression. The first aim of the research was to discover how Vojo Radoičić's artwork, as a stimulus for the preschool-aged children's artistic expression, affects the children's artistic creativity and their motivation for work. The second aim of the research was also to examine the attitudes and opinions of the preschool teachers who participated in the research of the features of children's artistic expression inspired by Vojo Radoičić's artwork, as well as the advantages and disadvantages of this type of work.

Considering the set goals, the following research questions were formed:

1. *Does Vojo Radoičić's artwork affect children's artistic creativity in the kindergarten?*
2. *Does Vojo Radoičić's artwork affect children's motivation for artistic expression in the kindergarten?*

The research carried out **was** based on a qualitative research paradigm characterized by the methods of observation, description, and interpretation of phenomena, leading to new insights and reclassifications of data and an extension of our specific understanding, as opposed to generalizations and strict numerical classifications characteristic for quantitative research (Glaser, Strauss, 1967; Willis, 1978). The research covered three phases: data collection, content analysis, and comparative analysis (Strauss & Corbin, 1990).

The sample

Since qualitative research implies a specific and cautious selection of samples, as well as methods of data collection and processing, the sample of participants was thoughtfully planned. The research was conducted in a branch of the pre-school institution “Zamet” . 23 six and seven-year-old children were enrolled in the group. There were 10 girls and 13 boys in the group. All the children from this group participated in the research as well as their two preschool teachers, who had 8 and 13 years of work experience respectively .

Method of data collection and processing

The data were collected through a semi-structured interview with the preschool teachers. This is an interview that contains open-ended questions followed by their interpretation, explanation, and qualification of responses, thus avoiding the limitations of predetermined categories of responses (Cohen, Manion, Morrison, 2007). The interview was conducted at the end of June with both preschool teachers simultaneously and was recorded with a dictaphone, so that the data obtained could later be easily analyzed. The obtained data were generalized, classified, and categorized, which was followed by a structured story describing the contents of the interview (Cohen, Manion, Morrison, 2007).

The research process

The research was conducted in the kindergarten “Zamet”, Rijeka, in May 2018. In the group of children that participated in the research, three activities were conducted over three weeks, one activity per week. In the week preceding the activity and during the course of the research, children were offered picture books written by and/or illustrated by Vojo Radoičić. Examples of

his artworks, such as calendars, picture books, and announcements for various events were displayed on the walls for the children to see, as well as the board game “Parcheesi,” designed by Radoičić.

The first activity carried out was an individual activity with a girl named E., who had shown an artistic talent since an early age. The individual activity was conducted with the aim of evaluating whether there is a difference in the child’s experience of the process and the result of art activity in relation to the same categories during group activities with children. The preschool teachers were also aware that this girl is mostly motivated for painting when she can create based on a certain pattern/stimulus. That is the reason why this individual activity was carried out with that particular girl. The preschool teacher showed her the works of Vojo Radoičić on a tablet during the morning and after the conversation about the artist and his artworks, she chose some reproductions which she liked most. Then, the preschool teacher suggested she painted a picture of her own, to which she replied that she needed tempera paints and asked if she could paint outdoors. When asked what she wanted to paint, she replied that she wanted to paint a painting with the motifs that she liked the most. She chose a larger format for the painting than one usually used for children’s drawings and pictures. First, she drew the contours with a magic marker, after which she painted the shapes and added numerous details. The activity started after breakfast and lasted almost until lunch. Since the girl did not take an afternoon nap in the kindergarten, the picture was completed after lunch (Picture 1, Picture 2).

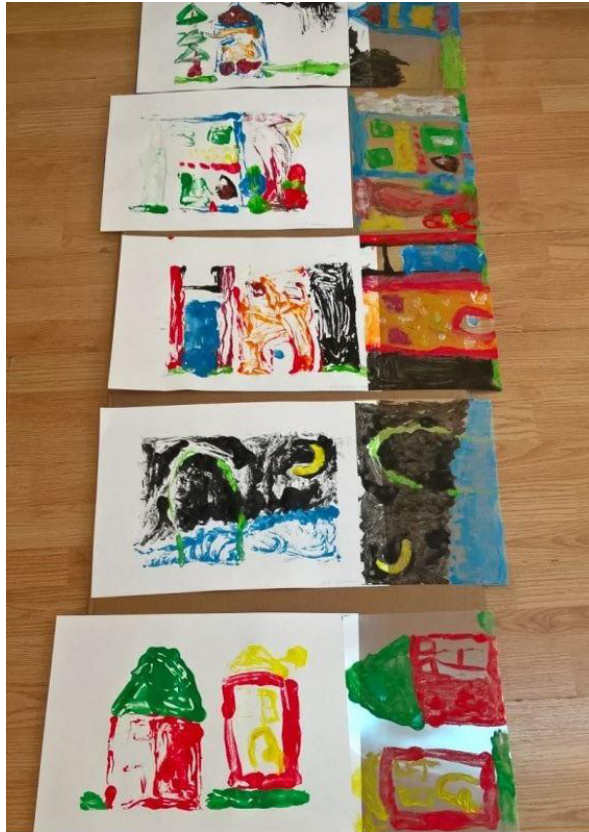


Picture 1: the first artistic activity - drawing in a felt-tip pen and the beginning of paper painting



Picture 2: the first artistic activity, performed in the art technique of tempera

The second activity was carried out in the following week. The motif was “The city I live in.” The art technique employed was the graphic technique of monotype printmaking. This technique was chosen in order for children to try to work in some of the graphic techniques, that are quite neglected in working with children of early and preschool age. On the other hand, monotype is one of the simplest and safest graphic techniques, and as such is very suitable for use in kindergartens. It is characterized, as the name suggests, by printing only one print from the stencil, and a simple and fast way of making a drawing / image on the background (stencil) using tempera, watercolors or similar art material. Therefore, this technique can also be spoken of as a unique process, in which painting and printing are combined (Ayres, 1991). The researcher gathered the children and talked to them about where they lived, what their neighborhood looked like and what can be found there. At the same time, picture books were shown to the children in which they could see and comment how the artist Vojo Radoičić saw his city and how he painted it, as well as what kind of colors, shapes, and spatial relationships he used. After the conversation, tempera paints were offered to the children as well as white paper and transparent foil paper. They were asked how the foil could be used. One girl said that she could paint on that foil, so she did it on the suggestion of the researcher. The children decided by themselves to place the offered picture books on the table and started to paint houses, pets, and outdoor spaces on the foils, stimulated by the previous conversation. Finished paintings were printed onto the paper. Initially, fewer children were included in the activity, and as each of the children finished up their work, other children joined in the activity. Eventually, nearly all the children participated in the described activity (Picture 3).



Picture 3: the second artistic activity, performed in the graphic technique of monotypes

The third conducted activity involved three-dimensional modelling. Due to its specificity and complexity, it was carried out in two parts. First, the researcher started the conversation with the children about Vojo Radoičić as an artist and a man who loved children, worked with them and for them. They also talked about what artists can do for children. The children recalled past activities when they studied Radoičić's sculptures in the book "Radoičić: The Dream" and linked them with illustrations in his picture books. During the conversation, the children expressed their desire to try to make sculptures, which was the reason for considering how to make them, i.e., which materials might be used and

what children can do to create their own sculpture. At the end of the conversation, different sizes of wooden planks were offered to the children. All children were involved in this activity, and the interest which some boys showed was extremely high. In the initial phase of sculpting, the children combined smaller planks, and they worked in pairs and smaller groups. In order to finish the sculptures, the researcher and the preschool teachers glued the pieces of wood with hot glue according to the children's instructions. They also tried to stick the pieces together by themselves under the supervision of the researcher and the preschool teacher. Finished objects were placed on a cabinet and the first part of the activity was completed. The following week the children painted their sculptures with tempera paints. After a few days, some of the children discovered that the tiny details on their sculptures were missing, because they could not be painted with tempera paints, so they drew them with markers. In this way, the second part of the activity was finished (Picture 4, Picture 5).



Picture 4: third artistic activity, modelling in wood, creation of compositions made by adding wooden pieces of various shapes



Picture 5: the third artistic activity, performed in modelling and tempera painting

Upon the completion of the children's artistic activities, a semi-structured interview was conducted with the two preschool teachers who participated in the research. We wanted to determine the preschool teachers' impressions and opinions about the conducted activities as well as about the advantages and disadvantages of the activities. During the interview, the researcher asked open-ended questions, and the preschool teachers verbally presented their observations.

Results and Discussion

Preschool teachers' opinions of the conducted children's artistic activities

The preschool teachers approached the research activities with a lot of enthusiasm. At the beginning of the interview, both of them noted that the children reacted very positively to the artist's artwork. They thought that the reason for it was in the fact that Radoičić's artistic style is relatable to children so that they feel competent to critically comment on his artworks. Namely, one of the preschool teachers stated that some children commented on Radoičić's works with the words "Did a child do that?", "It crossed his line a bit", which showed their critical opinion, but also their interest in the artist's work. Both preschool teachers also agreed that the children were especially interested in artistic activities that involved sculpting, and that almost all of them were included in the mentioned activities. One of the preschool teachers pointed out that the children reacted very well to sculpting, since the children had not yet participated in this art technique. The second preschool teacher added that in the upcoming months the children continued with similar activities; they took all the wooden cubes they had in the group and glued them together with wood glue. She also pointed out that children did not choose only the usual, standard shapes (cubes, pyramids) to create their homes, but "weird buildings", constructed by more elaborated ideas. Both preschool teachers stated that, after the conducted activities, the children often returned to modelling activities, thereby independently exploring and finding ways to model and construct.

Regarding the requirements for the implementation of the activities themselves, the preschool teachers concluded that the artistic activities carried out with the children weren't more difficult than their usual artistic activities. They also pointed out that during the activities the children showed greater artistic creativity and motivation for work. One preschool teacher said that the activities were saturated with colors, that the children liked using bright colors in painting, which motivated them to be creative and use the color palette also in later artistic activities that were not related to Radoičić. She thereby noticed a positive influence of Vojo Radoičić's artwork and believed that the children had the need to integrate the new experience into their own artistic expression, in

their own way, especially in the use of bright colors, which she herself called "Vojo's colors". Similar results have been obtained and described in some other studies that have addressed this issue (Zlateva, Tineva-Gyurkovska, 2019). Considering the children's motivation for artistic activities, one of the preschool teachers stated that some children were more and some less motivated. As an example, she pointed out a girl, whose motivation for the offered activities was exceptionally high and thinks that Radoičić's artwork has left the greatest impression on her. The second preschool teacher added that this girl had been looking often for inspiration in other children's work, so she felt encouraged to create a picture stimulated by the examples of the offered artworks. The preschool teacher also pointed out that the conducted artistic activities had a strong influence on the development of the girl's self-confidence and the creation of a positive self-image. That also seemed to be a big encouragement for her before enrolling at elementary school because she is usually quite self-critical. On the other hand, although all the children participated in the activities, some of them were almost indifferent during the work. One of the preschool teachers observed that this probably happened because these children are not particularly interested in art given and that their interests are manifested in some other areas.

The preschool teachers also compared the first individual artistic activity with other two group activities. The first activity was evaluated as "better" because of the fact that, during the individual activity, it was easier to direct the child's attention to what the preschool teachers considered important, to talk to the child about color mixing and all details in a more effective way, which can result in better paintings. The preschool teachers think that possibilities for individual interaction in group work are significantly smaller. One preschool teacher believes that, in group work, there is always the possibility that some child will copy the other and will not use their own creativity and imagination to make a picture, and that individual work is in many ways superior to group work. She sees the value of the individual activity, and can see how much work and quality can be achieved through such activities. The preschool teachers evaluated the individual work as being better than group work, but they also emphasized that both modes of work have their qualities and advantages, which are listed in the next section. When comparing individual activity with group work, one of the preschool teachers concluded that every form of work

has its own benefits and that the preschool teacher is the one who, depending on the goal to be achieved, decides which form to choose.

Both preschool teachers agreed that the artwork of Vojo Radočić has left a large and powerful impression on certain children. They pointed out that a few girls believe they have been greatly influenced by the artist's artwork. On the other hand, they pointed out that the influence of observing the artworks was not that great on some other children. One of the preschool teachers believes that the influence was more pronounced in girls than in boys. She mentioned the example of a boy who enjoyed art-modelling with wood, i.e., constructing, but showed less motivation in other activities. This preschool teacher believes that the boys in that group are more oriented to construction in general. Although they do not want to generalize and create gender differences, both preschool teachers agreed that girls are more interested in artistic activities than boys and that they also react better to artistic stimuli. They also said that creative or artistic stimuli were sometimes the only way in which they could attract and activate some girls in different projects. As an example, one of the preschool teachers cites the project named "Power," which some girls showed no interest in unless "they could paint using electricity."

At the end of the conversation, the preschool teachers pointed out that the children were very impressed by the literature in which they had access to information about the artist's life and work. The big impression on most of the children was made especially by the monograph "Radočić: The Dream," through which the children, by looking at the photos, became familiarized with Radočić as an artist who often worked with children and for the children. The children in the educational group who participated in the research asked the researcher if they could look again at "that book of that artist" every time she arrived to the kindergarden, which shows that the artist and his artwork truly left a big impression on them. The preschool teachers also noticed the influence of Radočić's artwork on children's artistic expression in the children's interest to use colors which he used in his work. This is especially noticeable in later activities that were self-initiated by the children, which were inspired by the carried out activities, as described in more detail earlier in t.

Benefits of the conducted children's artistic activities according to the preschool teachers' opinion

The preschool teachers see several positive effects on the artistic activities of those children who participated in the research. The greatest emphasis is placed on the positive influence not only on children's artistic development but also on many other areas of children's development, especially on their socio-emotional development. While describing some examples, they emphasized a strong influence on the development of children's self-confidence as well as on the development of a positive self-image. The preschool teachers also pointed out how much the activities had stimulated co-operation among the children, especially because this is the element to which they pay a great deal of attention in their work with children.

Disadvantages of the conducted children's artistic activities according to the preschool teachers' opinion

The preschool teachers also pointed out some disadvantages they observed in the overall research process. One of them suggested that it might have been better if there had been more activities, because in that case the influence of the artist's artwork on the children's activities would have been more obvious. The second preschool teacher added that, if the research had been implemented as a project, the children would have been given much more opportunities for expression in the broader sense, not just in the area of the visual arts. In the end, she pointed it as an idea for further work and research, not actually as a real disadvantage. The preschool teachers saw another disadvantage in the organisation of group work, in which children sometimes do not have complete freedom (for example, when mixing colors, since several children use the same palette and in doing so, they are adding their color to a clean one, and are thereby changing the existing color). However, in this case it is more about the material conditions of the educational institution, than the lack related to group work of children.

We can conclude, that the answer to the first research question (*Does Vojo Radoičić's artwork affect the children's artistic creativity in the kindergarten?*) is positive. After studying Radoičić's artworks, the children talked about them and presented unusual ideas in elaborating and making their artwork, not only

in painting, but also in three-dimensional modeling and construction, which led to unusual shapes and compositions of their artworks. The children showed the ability to recognize more color tones and use them in their artwork. They were more stimulated compared to regular colouring experience, which led to more detailed and interesting artworks. Radoičić's artwork triggered their imagination, and the response was visible in a free, spontaneous, and creative approach to the followed art activities. The results of the conducted activities were also visible in using more elaborated and unusual ideas, and richer color palette in subsequent children's art activities. The children's response to the activities in new material and technique (sculpting) was also very creative, which brings us to the conclusion that it is very important to offer visual arts stimuli in various art areas (painting, drawing, modelling...) as much as possible, so that every child could find out what his favorable materials and way of working are.

We can also conclude that the answer to the second research question (*Does Vojo Radoičić's artwork affect children's motivation for artistic expression in kindergarten?*) is positive. Most children showed a great interest in Vojo Radoičić's artwork. This was observed, among other things, in the children's interest in looking at the photos of the artist surrounded with children and in asking questions such as: "What can he do for children?", "Why is he sitting with the children?" etc. Also, the increased children's motivation for work and artistic creativity is observed in the use of larger forms of papers or cardboards for painting, as well as in the use and combination of various art materials in the art activities. In other words, children came "out of the box" with more courage and security, i.e., they overcame the limitations through the frequent use of common art techniques and formats. It was found that children used more color tones and stronger colors in their artistic expression than before. It was also found that they paid more attention to detail, which is why their artworks seemed more elaborate than before. Some children who participated in the research also made progress in the socio-emotional area, which was reflected in greater confidence, perseverance, and pride in their achievements.

The positive developments are due to the careful planning of art activities by preschool teachers, where in interaction with children they took into account the way children observe, perceive and react to the presented artworks. By

asking questions and encouraging children to verbally express their impressions, they encouraged children's immersion in activities and their independent artistic expression and research. A strong positive reaction to the presented artworks was noticed in most children, as well as the desire to actively communicate with preschool teachers about the experienced artworks and to react to them in the visual arts medium. In the communication with children the preschool teachers' attention was focused on each individual child, and each individual could express his opinion and impressions. In this way, the children got a feeling that their opinion was important, and thus their self-confidence was strengthened both in conversation and in artistic expression. Research by some other authors also shows that children are successful and confident in artistic expression when they are supported by a preschool teacher, with whom they can share their experience and who supports that experience (Anderson, 2000; Cutcher, Boyd, 2018). An individual approach throughout the process is another very important component of art activities at preschool age, which results in a better development of the child's socio-emotional structure, as well as his creative thinking and expression.

It can be concluded that artwork as a stimulus in children's art activities has a positive impact on the artistic and general development of preschool children if it is selected in accordance with the preferences of children of a certain age. It has also been found that artwork affects children differently, and the way and intensity of that influence depends on the children's level of interest in art, on the way of presenting and analyzing the artwork, and on the offered stimuli or activities. Preschool children prefer artworks with recognizable figural motifs and bright, clean colors (Kušević, Kardum, Brajčić, 2014; Zlateva, Tineva-Gyurkovska, 2019). The artwork of Vojo Radoičić was chosen because of the playfulness and imagination in the presentation of motifs, as well as strong, vivid colors in his artistic expression, which is very close to children's artistic expression and the sensibility of preschool children. Although the ability to talk about one's own experience of artworks develops in children around the age of five, the reception of artworks can begin earlier. At the earlier ages of a child's life, the reception of artworks can only refer to the observation of quality artworks without direct conversation about them. Just being in the environment, which offers quality artistic stimuli, can indirectly provoke a certain emotional

experience in the child, as an unconscious / subconscious experience that accumulates, which at a later stage of the child's development can serve as a quality foundation for further development of artistic sensibility, artistic and aesthetic sensitivity and creative and critical thinking. However, the organization of artistic stimulation in a kindergarten environment requires the preschool teachers' expertise in the art area, their knowledge of the basics of art history and creative processes, understanding of children's art development and methodical planning of art activities. The stimulating environment also implies providing the child with the conditions to respond to artistic stimuli, depending on his individual preferences and abilities (Novaković, 2015). The research of the mentioned author showed that there is a statistically significant correlation between preschool teachers' attitudes to personal knowledge of the basics of art history and the frequency of using artworks as a stimulus for children's art activities in kindergarten. It also showed that most preschool teachers in Croatian preschool institutions do not apply modern methods which are based on independent research, experimentation and problem solving to a sufficient extent in art activities with children. Namely, in kindergarten practice, the traditional concept of art activities with children is still prevalent by instructing them what and how to draw or paint, with the art product becoming more important than the art process. In order to be able to gain authentic experiences through their own activities and spontaneous play, children should be involved in the so-called *work on a project*, i.e. activities through which children study a topic or a problem more deeply, with an emphasis on the purposefulness of the activity, and less on its outcome. Working through project activities enables preschool teachers to develop depth and breadth of understanding in children; it also enables developing of children's learning, their ability to apply knowledge in practice, their independent problem solving, a self-regulation of their learning, and harmonization of the topic choice with children's developmental needs and differences of (Slunjski, 2013).

Conclusion

The use of artworks as a stimulus for artistic expression of preschool children is still an insufficiently analyzed, but also a challenging area of research. In order to determine some of the ways in which artwork could be used as a stimulus for preschool-aged children's artistic activities, qualitative research was carried out, which examined how the artwork of Vjekoslav Vojo Radočić can influence the development of artistic creativity and motivation for artistic creation in children. The results of this research have shown that artwork as a stimulus for preschool-aged children's artistic activities has a positive impact on the development of artistic creativity and motivation for artistic creation in preschool-aged children. By analyzing the collected data, certain qualitative changes have been identified in children's artistic work, as well as in their socio-emotional development. They are manifested in the self-initiated children's artistic activities in which some children demonstrated new painting skills. The influence of the artist's artwork was evident in two-dimensional as well as in three-dimensional children's work. It was found that the children used more color tones and stronger colors than they used to use before, and that they paid more attention to details – they become as important as any other element of their artworks. The research also indicated that the children had unusual ideas for painting and modelling after observing Radočić's artworks and talking about them, which resulted in unusual and original forms and compositions. Positive socio-emotional changes in children were visible in children's mutual co-operation as well as in a more frequent presentation of their own thoughts and ideas. Further research in this area can go in various directions: it would be interesting, for example, to explore in which way observed artworks influence the choice of colors, shapes or motifs in children's artistic expression, and how artistic appreciation can influence the development of creative and critical opinions as well as emotional competencies in children. Research can also go in the direction of designing and implementing project activities within which various, not only artistic areas, will be integrated, with an aim of ensuring situations in which learning is connected with a meaningful context, i.e. a real life. The conducted research can inspire preschool teachers to include artists and their artworks more often in their educational work, especially as a stimulus for

new ways of work and expression that will influence the overall children's development in an innovative and creative way.

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Karen Woodall i Nick Woodall: Razumijevanje otuđenja od roditelja – učenje suočavanja, pomoć cijeljenju: Priručnik za roditelje, socijalne radnike, psihologe, psihijatre, suce i odvjetnike.

Geromar, Sveta Nedjelja, 2018., 280 str.

„Razumijevanje otuđenja od roditelja” priručnik je koji su napisali Karen i Nick Woodall. Oboje autora eksperti su na području terapijskog rada s obiteljima, osobito s problematikom otuđenja djece od roditelja. Karen Woodall smatra se jednom od najistaknutijih stručnjakinja u ovom području, dok je Nick Woodall terapeut i sudski vještak na sudovima Ujedinjenog Kraljevstva. Oboje su 2010. osnovali Kliniku za razdvojene obitelji (eng. *Family Separation Clinic*) u kojima rade s obiteljima u kojima je prisutan problem otuđenja od roditelja. Njihov rad, znanje i iskustvo u radu Klinike i izvan nje prožimaju čitav priručnik.

Jasna je činjenica da „za djecu čiji se roditelji razvedu život više nikad nije isti“ (str. 99). Ona je zasigurno jedno od temeljnih polazišta ovog priručnika. Njegov sadržaj ne stavlja samo djecu u središte svog diskursa, već uz njih postavlja i roditelje. Tako postaje priručnikom za roditelje koji se nose s posljedicama razvoda, posebice fenomena otuđenja djece. Na samom početku autori navode jedan paradoks u otuđenju od roditelja koji leži u istodobnom prihvaćanju razumijevanja reakcija djeteta na razvod roditelja i paralelnog povećanja učestalosti problematičnih reakcija djeteta na razvod. Razvidno je upustiti se u kreiranje jednog ovakvog priručnika koji će nastojati pomiriti taj jaz i biti pri ruci kao pomoć i smjerokaz. Zato u podnaslovu knjige i stoji napomena o ciljanoj skupini, a to su roditelji, socijalni radnici, psiholozi, psihijatri, suci i odvjetnici. Tomu se mogu i trebaju dodati pedagozi, učitelji i odgojitelji, ali i svi oni koji na bilo koji način posredno i neposredno rade s djecom ili roditeljima koji su uključeni ne samo u proces otuđenja već i razdvajanja ili razvoda braka.

Priručnik je podijeljen na tri cjeline: *Razumijevanje, Suočavanje i Cijeljenje*. Takva podjela ujedno odgovara realnom slijedu rada s problemom otuđenja koji prvo traži razumijevanje, zatim suočavanje, da bi završio cijeljenjem. Autori već u predgovoru najavljuju kako prvi dio priručnika jest onaj teorijski, dok je drugi praktično-iskustveni. Knjiga je sistematizirana i podijeljena u devet poglavlja s manjim tematskim jedinicama. Temeljito raščlanjivanje teme i analiza

sadržaja omogućuju čitatelju lakše praćenje teksta, kao i pronalazak potrebnih tematskih područja i sadržaja, što odgovara formi priručnika.

Uvod definira jednu od najjednostavnijih definicija otuđenja od roditelja. Ono predstavlja priklanjanje djeteta jednom roditelju uz potpuno odbacivanje drugog prilikom razdvajanja obitelji. Tako se problem otuđenja od roditelja postavlja na mjesto rizičnih ponašanja, a otuđena djeca postaju dio onih u riziku. Sva poglavlja usmjerena su osvještavanju problematike otuđenja koja je duboko skrivena u djeci, ali i u društvenom sustavu.

U *Prvom dijelu – Razumijevanju* autori čitatelje ukratko upoznaju sa samim konceptom te radom Richarda Gardnera koji je 1985. godine bio prvi zagovornik ovog fenomena koji su kasnije razvijali i drugi znanstvenici, praktičari i istraživači među kojima svoj značajan obol ugrađuju i autori ovog priručnika. Prvi dio (cjelina) podijeljen je na četiri poglavlja: *Od otuđenja do roditelja, Diferencijaciju, Dublje razumijevanje i Most prijelaza*. Na početku se susrećemo s terminologijom vezanom uz otuđenje od roditelja, koja ne prati samo čitavu knjigu, već i cjelokupni proces u stvarnosti. Čitatelja se upoznaje s pojmovima: *splitting, stopljenost djeteta, parentifikacija, partnerizacija, most prijelaza* i sl. Mnogi od tih spominjanih termina i koncepata svojevrstni su neologizmi autora koji su svoja znanja, iskustva i terapijski rad u Klinici implementirali u nove konstrukte. Jasno je naglašeno da otuđenje predstavlja vrlo dugotrajan, težak i bolan proces. U razumijevanju otuđenja od roditelja nedovoljno je kvalificiranih stručnjaka koji mogu objektivno i stručno prepoznati te pristupiti problemu, a da pritom razumiju i roditelje i dijete. Uz to, evidentna je doza kontroverze koju ovaj fenomen sadrži jer vladaju „strah i zamrznuta uvjerenja među stručnjacima da je *ako se nešto učini* gore nego *ako se ne učini ništa*“ (str. 45), što nije ispravno. U priručniku važno mjesto zauzima proces *diferencijacije* kao načina razmatranja reakcija djeteta s otuđujućim ponašanjima roditelja. Ovaj je proces spomenut u brojnim poglavljima predstavljajući važnost u razumijevanju i radu s problemom otuđenja. Autori ovdje navode *stupnjeve otuđenja* (blage, umjerene i teške reakcije) te *njegove kategorije* (opravdano odbacivanje roditelja, hibridno otuđenje i čisto otuđenje). Navedeni termini važni su u kategorizaciji i određivanju vrste i stupnja otuđenja te se prema njima formiraju različiti oblici intervencija i stručne pomoći. Pritom, „čisto je otuđenje često

tako ozbiljno da je ono zlostavljanje djeteta“ (str. 67). Da bi se problem dublje razumio, potrebno je *analizirati dinamiku moći i kontrole* pa autori predstavljaju korake i načine kako to učiniti. Tu se susrećemo s terminima *moć nad djetetom, transgeneracijski prijenos traume, obiteljsko stablo, psihogenealogija* i dr. Jedno od ključnih poglavlja u dijelu o razumijevanju zauzima tzv. *most prijelaza* – konstrukt autora priručnika i realitet s kojim se suočavaju djeca. Bazu tog konstrukta donosi teorija privrženosti s pripadajućim problemom privrženosti djece i roditelja. Upravo „razdvajanje obitelji neizbježno stvara poremećaj obrasca privrženosti djeteta“ (str. 103). Most prijelaza stoga je put kojim dijete prelazi od majke do oca nakon razdvajanja roditelja i pri kojem ono prekida svoju privrženost s jednim roditeljem dok odlazi drugom (patricija) i tako svaki put dok se ne dogodi tzv. *točka preokreta*. Njome dijete odbacuje jednog roditelja ako dođe do problema otuđenja. Prvi dio priručnika donosi vrlo iscrpan terminološki i stručno-teorijski opus koji služi kao temelj razumijevanja fenomena otuđenja. Svi kasniji dijelovi uključuju iskustvenu razradu i stručno produblјivanje.

Drugi dio – *Suočavanje* predstavlja osnovne strategije suočavanja, metode suočavanja i analize slučajeva iz prakse prema kojima se mogu identificirati roditelji i stručnjaci koji se susreću s otuđenjem. Podijeljen je na sljedeća poglavlja: *Razvijanje strategija suočavanja, Analizu vašeg slučaja, Poduzimanje akcije* i *Predstavljanje svojeg slučaja na sudu*. Ovdje se produblјuje razumijevanje prirode otuđenja stvarajući naglasak na činjenicu da dijete nije odgovorno za otuđenje, kao što ni roditelji nisu krivi, već trebaju razumjeti sebe kao roditelja. U procesu otuđenja javljaju se brojna psihološka i psihopatološka stanja koja osim promjena raspoloženja, izlјeva ljutnje i bijesa te epizoda anksioznosti mogu biti praćena teškim psihičkim stanjima poput poremećaja ličnosti ili sindroma PTSP-a. Autori ovdje svim roditeljima apostrofiraju: „Vašem je djetetu potrebno da živite!“ (str. 128). Suočavanje uključuje empatično slušanje i odgovore, korištenje SMART ciljeva i sl. Da bi se suočilo s problemom otuđenja, potrebno je razumjeti dijete i njegovo psihološko biće. U procesu analize vlastitog slučaja otuđenja operacionalizirane su neke metode i termini poput: *preoblikovanja stajališta, inventara ponašanja, mapiranje puta u otuđenje, izrade vremenika* i *analize plesa obitelji*. Bitno je naglasiti da su neki od konstrukata svojevrsni patent u radu s otuđenom djecom, koji su razvili sami

autori. Uz neke ranije navedene, značajno mjesto zauzima i spomenuti *ples obitelji*. Njime se zamišlja partnera i obitelj u zajedničkom plesu u kojem svatko ima svoju ulogu. U toj dinamici pojedinac je dio popisa glavnih plesača odraslih i djece (vođa, sljedbenik, zamjenik, ekipa, buntovnik itd.). Prije nego što se odluče za sudsko rješavanje problema otuđenja, važno je da roditelji shvate prirodnost stanja u kojem se nalaze. Ono iziskuje svjesnost polariteta između borbe za pravdu i borbe za održavanjem odnosa s djetetom. Autori tumače da je zato važno *postaviti granice, analizirati polje sila, analizirati rizike u odnosu na roditelje i shvatiti da je roditelj ljudsko biće*, a potom detaljno opisuju kako to učiniti. Ako se roditelj odluči za sudsko rješavanje problematike otuđenja, primaran cilj postupka treba biti pomoć otuđenom djetetu da zaštiti odnos roditelj – dijete. Sudski postupak uključuje *pripremu kronologije, pripremu izjava uz dokaze, tzv. elevator pitch* i dr. Autori ovom koraku pristupaju s dozom opreza. Nerijetko sudovi stavljaju dijete u središte problema, a odvjetnicima je glavni cilj dobivanje slučaja, što može predstavljati problem sudu pri rješavanju složene problematike otuđenja.

Treći dio – Cijeljenje jest posljednji dio priručnika, ujedno i najkraći. Sadrži jedno poglavlje koje obuhvaća tri temeljna procesa cijeljenja – *razdvajanje, reunifikaciju i cijeljenje*. Poglavlje obuhvaća neke osnovne strategije za rad na sebi i nošenje s dugotrajnim i bolnim procesom otuđenja. Ovaj dio ima najizraženiju terapijsku podlogu. U njemu se predstavljaju smjerokazi, oblici pomoći i samopomoći roditeljima, što uključuje liječenje frustracija, depresivnih, anksioznih stanja i sl. Temelj jest prihvaćanje onoga što se događa kao pokretača buduće promjene. Nakon usmjerenosti roditelju prelazi se na dio reunifikacije – cijeljenje djeteta. Detaljno se opisuje nekoliko oblika reunifikacije – *spontana, potpomognuta, prisilna i reunifikacija nakon izdvajanja djeteta od roditelja*. Na samom kraju daju se jasne upute u obliku zadataka za djecu za cijeljenje odnosa s roditeljem i samima sobom.

U priručniku se prepoznaje stručna, ali i ljudska namjera da se uistinu pomogne djeci i roditeljima koji su otuđeni. Autori na mnogo mjesta i na više načina iznose svoja iskustva i vrlo jasne tvrdnje o tome što je ispravno, a što nije. Vrlo su oštri u kritikama na račun određenih psihosocijalnih metoda i terapijskih pravaca ili pak sudskih postupaka. Nastoje svojim izjavama dati iskustvenu

protutežu kojom se umanjuje kritičan stav, ali daje jasna poruka što bi trebalo biti bolje. U tome se čitatelju nudi procjena hoće li se prikloniti iskustvenim, odnosno isprobanim postupcima i instancama koje nude autori.

Unutar nekih dijelova priručnika brojni se sadržaji i koncepti produbljuju, ali često uz ponavljanje ranije objašnjenog terminološkog dijela s početka. To se može opravdati činjenicom da je riječ o priručniku, a da je glavni čitatelj roditelj. U skladu s time prilagođen je stil pisanja. Iako se pozivaju na stručnu literaturu i osobna znanja i iskustva, autori na jednostavan i vrlo sistematičan način analiziraju sadržaj implementirajući znanstvene i stručne spoznaje u cjelovit tekst. Pomoću brojnih podnaslova i manjih tematskih jedinica čitatelj se može brzo i jednostavno usmjeriti na ono što ga zanima.

Priručnik, osim bogatog iskustva autora o problematici otuđenja od roditelja, sadrži brojne elemente njihova psihoterapijskog rada. Vidljivo je da autori uključuju hodograme, naznake samopomoći, psihoterapijske metode i načine nošenja sa stresom u kriznim situacijama. Zanimljiva je terminologija koja je prilagođena isključivo ovom fenomenu, što priručniku daje autentičnost. Brojni od tih modela mogu se primijeniti i u drugim oblicima savjetovanja. Metodički gledano, sadržaj je vrlo jednostavno koncipiran i obrađen kao priručnik, a preglednije bi ga bilo prikazati u obliku metodičkog priručnika s još većim brojem dijagrama, tablica, slikovnih prikaza ili hodograma.

Iako je dijete ono koje se otuđuje i autori precizno ulaze u djetetovo unutarnje biće razumjevši ga, ova knjiga ipak je najviše namijenjena roditeljima. Upravo su oni ciljana skupina, zatim stručnjaci i dijete. Podnaslov i gradiranje sudionika procesa (izuzevši dijete) argumentirana su najava onog što se nalazi u priručniku. Implicitan je i epilog knjige u kojem se otuđeni roditelj obraća moleći čitatelja i stručnjake za svoju djecu: „Dok ulaze na vrata, pomози mi da se smiješim i raširim ruke“ (str. 268).

Nesumnjivo, sadržaj priručnika svojom tematikom i načinom prikaza problema te različitih izazova s područja razmatranja razumijevanja otuđenja od roditelja pruža novu prizmu na proces rastave braka i razdvajanja obitelji. Danas je prisutna nemala stopa rastavljenih brakova. Jednako tako prisutni su razni oblici savjetovanja i podrške djeci i roditeljima. Fenomen otuđenja od roditelja rijetko se spominje, a često dolazi kao posljedica razvoda. Problem

otuđenja povezan je s brojnim drugim procesima koji su opisani u ovom priručniku, a zasigurno se s barem nekima od njih susreću djeca i roditelji, kao i stručnjaci koji su uključeni u rad s takvim obiteljima. Upravo ta slojevitost problema otuđenja koji opisuju autori daje ovom priručniku osobitu važnost, često zaboravljenu i nedovoljno istraženu. Jest da svaka rastava ne mora i neće uroditi čistim otuđenjem, ali mehanizmi koje prolaze djeca i roditelji imaju mnogo poveznica. Djeci i roditeljima nije nimalo lako prolaziti kroz posljedice razvoda, a posebice otuđenja. Čitajući ovaj priručnik, na tren se može osjetiti makar mali dio ozbiljnosti i boli koji dolaze s otuđenjem. Na tom putu djeci i roditeljima potrebna je svestrana podrška. Takvu podršku uistinu nudi ovaj priručnik koji si je to postavio kao zadatak. Djeca i roditelji dio su vrtića, škole, fakulteta, svijeta rada, sustava zdravlja i zaštite, društva u cjelini. Oni su članovi šire obitelji, kruga prijatelja, kolega, susjedstva. Upravo je zato bitno upoznati ovaj fenomen, ući dublje u njegovo razumijevanje i rješavanje kako na laičkoj tako i na stručnoj razini. Na taj način šira će zajednica moći uočiti ne samo dijete u riziku već i njegova roditelja.

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