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Dokončevanje – pomembna posredna karakteristika matematičnih domačih nalog

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KLJUČNE BESEDE: domače naloge, matematika, osnovna šola, učitelji, starši

POVZETEK – Pri proučevanju matematičnih (in drugih) domačih nalog naletimo na zelo veliko število spremenljivk oziroma karakteristik, ki so povezane z učinki domače naloge. Tudi zaradi tega prihaja do različnih napačnih interpretacij učinkov domačih nalog. Ena izmed (naj)pomembnejših karakteristik je delež domačih nalog, ki jih učenci dokončajo (opravijo, naredijo do konca). Temeljni namen prispevka je zato zaznati tiste karakteristike domačih nalog pri matematiki, ki so pomembne za to, da učenci domačo nalogo dokončajo v čim višjem deležu. V prispevku so predstavljeni rezultati dveh raziskav; vzorec prve sestavlja namenski vzorec učencev prvega triletja (N = 192), v drugi raziskavi pa je bil zajet slučajnostni vzorec učencev zadnjega triletja (N = 192) slovenskega osnovnošolskega izobraževanja. Izpostavljene so tiste karakteristike matematičnih domačih nalog, ki so statistično značilno (pozitivno ali negativno) povezane z dokončevanjem naloge, prav tako pa so navedene karakteristike, ki na osnovi rezultatov raziskave z deležem dokončanih matematičnih domačih nalog niso povezane. Na podlagi rezultatov so podani tudi napotki za šolsko prakso in napotki za vključevanje staršev v otrokovo opravljanje domačih nalog.

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KEYWORDS: homework, mathematics, primary school, teachers, parents

ABSTRACT – When examining mathematics homework (and homework in other subjects), we encounter a large number of variables or characteristics related to the effects of homework. This has led to misinterpretations of the effects of homework. Among the most important is the proportion of homework that students actually complete (homework completion). The main purpose of the paper is therefore to identify those characteristics of mathematics homework that are important to ensure that students complete their homework optimally. The paper presents the results of two studies; the first sample consists of a convenience sample from the first three years in Slovenian primary school (N = 192), while the second study includes a random sample of the last three years (N = 417) of Slovenian primary school. The characteristics of mathematical homework that are related in a statistically significant way (either positive or negative) to the completion of the task are highlighted, as well as characteristics that are unrelated to the proportion of mathematical homework completed based on the research results. The results also provide guidance for school practice and guidance on how to involve parents in their child's homework.

1 Uvod

Ob prebiranju časopisov, brskanju po spletu in raznih pogovorih lahko hitro ugotovimo, da ne obstaja enoznačno mnenje družbe glede domačih nalog. Hitri in morda laični sklepi nakažejo naslednje. Učitelji se pritožujejo, ker učenci domačih nalog ne opravljajo, učenci so nesrečni, ker domače naloge kratijo čas bolj prijetnim dejavnostim, starši pa se pritožujejo zaradi družinskega stresa, ki ga povzročajo nesoglasja o tem, kdaj, kako in če sploh narediti domačo nalogo. Tudi Cooper, eden izmed vodilnih raziskovalcev na področju domačih nalog, zapiše, da "domača naloga povzroča več trenj med šolo in domom kot katerikoli drug vidik izobraževanja ter postane glavno bo-

jišče, ko šole, družine in skupnost drug drugega vidijo kot nasprotnika" (Cooper, 2015, str. 4). Po drugi strani pa obstaja tudi veliko učiteljev, staršev in učencev, ki menijo, da domača naloga predstavlja dragoceno pot do kakovostnega in trajnega znanja, kar je morda posledica dolgoletne tradicije domačih nalog.

V tem prispevku bomo izraz domača naloga razumeli glede na opredelitev, povzeto po Čagranu, ki zapiše, da je "domača naloga pisna, ustna ali praktična oblika učenčevega dela, ki jo posreduje učitelj učencem, in je neposredno povezana s poukom ter jo učenci opravljajo praviloma *samostojno* po rednem šolskem delu" (Čagran, 1993, str. 144). Sledili bomo Cooperjevemu 3-stopenjskemu modelu domačih nalog, ki vsebuje tri medsebojno povezane faze domačih nalog:

- oblikovanje domače naloge,
- opravljanje domače naloge in
- odzivi na domačo nalogo (Cooper, 2015).

Medtem ko sta prva in zadnja faza običajno v domeni šolskega okolja, v drugi fazi pomembno vlogo igra tudi učenčevo domače okolje.

Matematika je eden izmed temeljnih šolskih predmetov, v okviru katerega se v slovenskih šolah v zadnjem času vedno bolj poudarja reševanje problemov kot "pomembno veščino, neobhodno v vsakdanjem življenju" (Žakelj, Cotič in Felda, 2018, str. 5). Z vidika oblikovanja, snovanja domačih nalog učitelji med drugim določajo pogostost in obsežnost le-teh. Raziskave kažejo, da so domače naloge pri pouku matematike precej pogoste (Podgoršek, Ferme in Lipovec, 2017; Murillo in Martínez-Garrido, 2013; Trautwein, 2007; De Jong, Westerhof in Creemers, 2000), a v Sloveniji relativno kratke (Podgoršek, Ferme in Lipovec, 2017; Ferme in Lipovec, 2019). Medtem raziskave ne kažejo zveze med pogostostjo domačih nalog in akademskimi dosežki učencev ali pa nakazujejo pozitivno povezanost teh spremenljivk (Fernández-Alonso, Suárez-Álvarez in Muñiz, 2015; Podgoršek, Ferme in Lipovec, 2017; Murillo in Martínez-Garrido, 2013; De Jong, Westerhof in Creemers, 2000), več raziskav pa nakazuje, da so količinsko obsežne domače naloge v negativni povezavi z dosežki učencev ali pa povezave med spremenljivkama ne zaznavajo (Podgoršek, Ferme in Lipovec, 2017; De Jong, Westerhof in Creemers, 2000; Trautwein, 2007).

Empirične raziskave, ki se dotikajo druge faze, torej opravljanja oziroma dokončevanja domačih nalog, kažejo, da je ta karakteristika pozitivno povezana z dosežki učencev (Núñez, Suárez, Rosário, Vallejo in sod., 2015; Núñez, Suárez, Rosário, Valle in sod., 2015; Cooper in sod., 1998; Ferme in Lipovec, 2019). Dodatno je bilo ugotovljeno, da so domače naloge, ki jih učenci dokončajo samostojno, bolj učinkovite kot tiste domače naloge, ki jih učenci dokončajo s podporo drugih, npr. staršev (Fernández - Alonso, Suárez – Álvarez in Muñiz, 2015). Starši igrajo pri izobraževanju ključno vlogo (Berčnik in Devjak, 2018, str. 66), čeprav še vedno ni doseženo učinkovito sodelovanje med šolo in družino znotraj partnerskega modela (Klemenčič Rozman, Poljšak Škraban, 2020, str. 89). Z vidika starševske vključenosti v otrokovo opravljanje domačih nalog Núñez s sodelavci (Núñez, Suárez, Rosário, Valle in sod., 2015) poroča, da sta otrokova zaznava starševske kontrole (npr. preverjanje, če je domača naloga opravljena; kaznovanje, če naloga ni opravljanja) in matematični dosežki negativno povezani spremenljivki, medtem ko otrokova zaznava podpore opravljanju nalog (npr. nudenje pomoči in odziv na otrokovo potrebo po pomoči, ustrezna pomoč) in njegovi

dosežki pozitivno povezani spremenljivki. Vendar so tudi na tem področju rezultati nekonsistentni, saj na primer Dumont, Trautwein, Lüdtke, Neumann in sod. (2012) pišejo o škodljivosti starševske vključenosti v primerih, ko je ta nezaželena s strani otrok in pri njih vzpodbuja negativna čustva. Mnoge raziskave so proučevale tudi karakteristike domačih nalog, ki so značilne za drugo fazo in so povezane z (osebnostnimi) lastnostmi učencev. Med pomembnejšimi je gotovo sposobnost upravljanja s časom, ki ga učenci porabijo za opravljanje domače naloge (optimizacija časa opravljanja domače naloge). Slednja vključuje regulacijo motečih dejavnikov oz. osredotočenost učencev na potrebe določene naloge oziroma na opravljanje dela. Glede na ugotovitve raziskav je optimizacija časa v pozitivni korelaciji z dokončevanjem nalog (Núñez, Suárez, Rosário, Vallejo in sod., 2015; Núñez, Suárez, Rosário, Valle in sod., 2015; Xu, 2011; Ferme in Lipovec, 2019) in prav tako z dosežki učencev (Núñez, Suárez, Rosário, Vallejo in sod., 2015; Núñez, Suárez, Rosário, Valle in sod., 2015; Ferme in Lipovec, 2019).

Tretja faza domačih nalog zajema odzive, predvsem učiteljeve, na domače naloge. Rezultati raziskav med drugim kažejo, da je učiteljevo preverjanje, ali je domača naloga narejena, negativno povezano z dosežki učencev (De Jong, Westerhof in Creemers, 2000). Po drugi strani pa Núñez in soavtorji (Núñez, Suárez, Rosário, Vallejo in sod., 2015) pišejo o pozitivni zvezi med učiteljevimi odzivi na domačo nalogo, zaznanimi s strani učencev, ter deležem dokončane domače naloge in kakovostjo optimizacije časa.

Novejših raziskav, ki preučujejo zvezo med matematičnimi domačimi nalogami (oziroma karakteristikami le-teh) in akademskimi dosežki učencev pri matematiki ter so vezane na šolski sistem Slovenije, je, po našem vedenju, malo. Avtorice Podgoršek, Ferme in Lipovec (2017) so na podlagi rezultatov raziskave TIMSS 2015 ugotovile, da je za četrtošolce možno najti le neznatne, šibke povezave med karakteristikami domačih nalog in dosežki učencev v omenjeni raziskavi. Podobno Lipnik (2015), ki je v dveh srednješolskih oddelkih sistematično spremljal matematične domače naloge in odzive nanje zapiše, da vpliva domače naloge na oceno skoraj ni zaznati. Slovenske raziskave sicer nekoliko več pozornosti namenjajo odnosu, motivaciji za opravljanje domačih nalog pri matematiki (npr. Slatenšek, 2016; Habjan, 2017; Gracej, 2018), poglobljeno pa se posvečajo tudi nekaterim posamičnim karakteristikam, kot je npr. povratna informacija učno šibkejšim učencem (npr. Žitko, 2018).

2 Metodologija

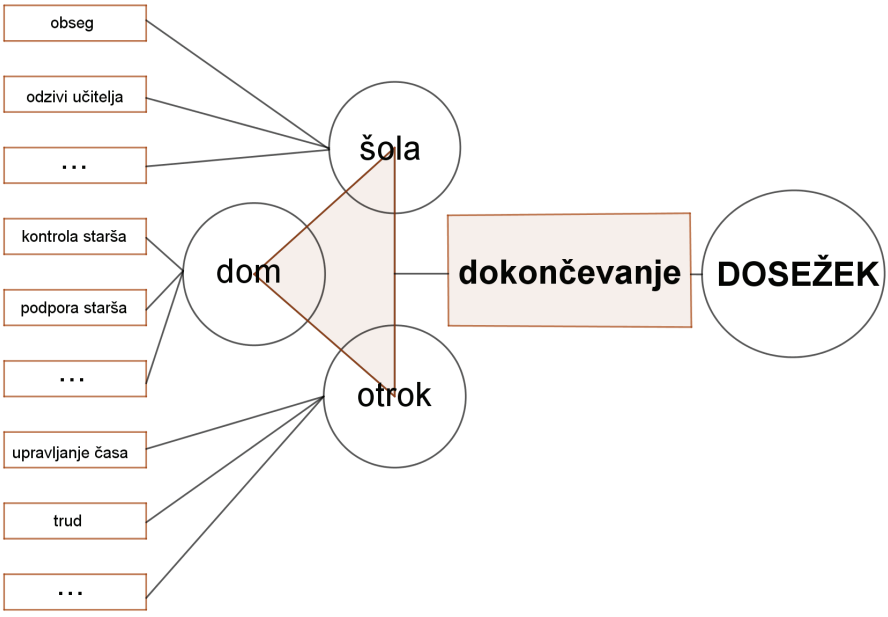
2.1 Problem in cilji raziskave

Kot smo omenili, je področje raziskovanja domačih nalog sicer močno zastopano v literaturi, a raziskave so premalo fokusirane na specifike predmeta (v našem primeru na matematiko) in specifike šolskega sistema (v našem primeru na Slovenijo). Zato v nadaljevanju predstavljamo nekatere ugotovitve dveh raziskav o matematičnih domačih nalogah, izvedenih na populaciji slovenskih učencev. Delno so osnovni rezultati teh raziskav že predstavljeni v raziskavah in člankih avtoric članka v letih 2018 in 2019.

2.2 Raziskovalna hipoteza

Poleg navedenega smo ob pregledu literature ugotovili, da večina raziskav s področja domačih nalog proučuje povezavo med (primarnimi) karakteristikami domačih nalog (npr. pogostost, starševska podpora) in dosežki učencev. Slabost tega pristopa vidimo v tem, da na dosežke učencev vpliva izjemno mnogo faktorjev in ne kontroliramo tega, ali učenci nalogo tudi dokončajo, opravijo. Glede na rezultate številnih raziskav pa je, kot smo že zapisali, ravno dokončevanje domače naloge tista karakteristika, ki je pozitivno povezana z dosežki učencev. Dokončevanje je z dosežki povezano neposredno, preko nekaterih drugih karakteristik pa tudi posredno – na primer preko optimizacije časa (Ferme in Lipovec, 2019; Núñez, Suárez, Rosário, Vallejo in sod., 2015). Menimo, da dokončevanje nalog ni povezano le s šolskim ali domačim okoljem učenca, prav tako pa ni le odraz osebnostnih lastnosti učenca. Na podlagi napisanega bi lahko rekli, da je dokončevanje nalog pomembna posredna/sekundarna karakteristika domačih nalog, na katero bi lahko vplivali številni dejavniki: tako učitelji (npr. z zastavljanjem nalog ustrezne težavnosti) kot tudi starši (npr. s spodbujanjem otroka k dokončevanju naloge), pa tudi učenec sam (npr. s trudom, ki ga vloži v delo). Opisano situacijo predstavljamo na sliki 1. V tem prispevku se bomo zato posebej osredotočili na povezave med (primarnimi) karakteristikami domačih nalog pri matematiki in deležem dokončanih domačih nalog s strani učencev.

Slika 1: Dokončevanje kot posredna karakteristika matematičnih domačih nalog



Menimo torej, da bo možno zaznati karakteristike domačih nalog, ki se statistično značilno povezujejo z dokončevanjem matematičnih nalog.

2.3 Metoda

Metodi kvantitativnega empiričnega pedagoškega raziskovanja, ki smo ju uporabili, sta deskriptivna in kavzalno neeksperimentalna metoda. Raziskava je bila izvedena na podlagi vodenega izpolnjevanja vprašalnikov. Anketiranje je potekalo v letih 2017, 2018 in 2019. Vzorec iz konkretne populacije je bil za zadnje triletje slučajnostni, za prvo triletje pa namenski.

Pridobljene podatke smo analizirali s statističnim programom IBM SPSS Statistics 25. Uporabili smo naslednja dva statistična testa za preučevanje korelacij med spremenljivkami: hi-kvadrat test in Spearmanov korelacijski koeficient. Povezavo med dvema spremenljivkama bomo v prispevku poimenovali *neznatna*, če je $0{,}01 \leq |\rho| \leq 0{,}19$; *šibka*, če je $0{,}20 \leq |\rho| \leq 0{,}39$; in *zmerna*, če je $0{,}40 \leq |\rho| \leq 0{,}69$. Opomnimo, da povezave (korelacije) ne govorijo o vzročno-posledičnih zvezah (povezanima spremenljivkama ne moremo dodeliti vloge vzroka oziroma posledice).

2.4 Instrumentarij

Anonimni spletni (za učence 3. triletja) oziroma klasični (za učence 1. triletja) anketni vprašalnik je poleg vprašanj o osnovnih podatkih učencev (razred, spol) vključeval vprašanja o njihovem matematičnem znanju ter vprašanja, ki se navezujejo na posamezne karakteristike (matematičnih) domačih nalog. Veljavnost vprašalnika smo zagotavljali s pilotnim preizkusom, izvedenim v letu 2017. Za potrditev zanesljivosti vprašalnika pri vprašanjih, kjer so učenci izražali raven strinjanja z zapisanimi trditvami, smo izračunali Cronbachov Alfa koeficient. Za sklop trditev, ki se navezujejo na učiteljevo odzivanje glede domačih nalog, je $\alpha = 0{,}841$; za sklop trditev, ki se navezujejo na starševsko vključenost, pa je $\alpha = 0{,}873$.

2.5 Vzorec

V raziskavi je sodelovalo 192 učencev (41,7 % dečkov in 58,3 % deklic), ki so vključeni v prvo triletje, in 417 učencev (45,6 % dečkov in 54,4 % deklic), ki so vključeni v tretje triletje osnovnošolskega izobraževanja. Porazdelitev glede na razred prikazuje Tabela 1.

Tabela 1: Struktura vzorca

		1. triletje		*3. triletje*	
		f	*f%*	*f*	*f%*
Razred	1./7.	35	18,2	138	33,1
	2./8.	63	32,8	143	34,3
	3./9.	91	47,4	136	32,6

Matematične dosežke učencev smo zaradi specifike ocenjevanja v vsakem izmed triletij merili na dva različna načina. V prvem triletju smo tako učencem zastavili naslednja vprašanja:

- *Kako dobro znaš matematiko?,*
- *Kakšna je/bi bila po tvojem mnenju tvoja ocena pri matematiki?,*
- *Oceni svoje znanje z oceno od 1 do 5.*

Za zadnje triletje pa smo raven matematičnega znanja učencev določili s pomočjo njihove končne ocene pri matematiki v preteklem šolskem letu ter zadnje pisno pridobljene ocene pri matematiki. Delež učencev prvega triletja, ki so svoj dosežek ocenili z oceno nižjo od 5, je 41,7 %, 51,3 % učencev pa je poročalo, da njihovemu znanju ustreza ocena 5. V zadnjem triletju je bila povprečna končna ocena udeležencev pri matematiki (s standardnim odklonom) 3,56 (1,069), povprečna zadnja pisno pridobljena ocena pa 3,23 (1,218). Poudarjamo, da matematičnih dosežkov oz. dosežkov nasploh ne gre enačiti z matematičnim znanjem (Jurman, 1989, str. 91).

3 Rezultati

V nadaljevanju prispevka bomo uporabljali kratico DNm s pomenom "domača naloga pri matematiki".

Kot smo napovedali, se bomo pri poročanju rezultatov osredotočili na karakteristiko dokončevanja domače naloge. Vprašanje glede te karakteristike, ki smo ga zastavili učencem, in njihovi odzivi nanj so predstavljeni v Tabela 2. Zapisani so tudi indeksi dokončevanja DNm, izračunani kot povprečja (s standardnimi odkloni) deležev dokončanih nalog, kjer smo z 1 označili nič ali skoraj nič opravljenih nalog in s 3 vse ali skoraj vse opravljene naloge.

Tabela 2: Dokončevanje DNm

Koliko nalog, ki jih dobiš za domačo nalogo pri matematiki, običajno tudi dokončaš (narediš do konca)?	*1. triletje*		*3. triletje*	
	f	*f%*	*f*	*f%*
Nobene ali skoraj nobene.	3	1,6	22	5,3
Nekaj jih dokončam, nekaj ne.	33	17,2	129	30,9
Vse ali skoraj vse.	156	81,3	266	63,8
Indeks dokončevanja	2,8	0,441	2,59	0,591

V nadaljevanju nas je zanimala potencialna korelacija med spremenljivkama dokončevanje DNm in matematični dosežki učenca. Ugotovili smo, da sta omenjeni spremenljivki povezani na delnem vzorcu učencev prvega triletja ($P = 0{,}003$, $\chi^2_{(lr)} = 11{,}880$) in tudi na delnem vzorcu učencev tretjega triletja ($P = 0{,}003$, $\chi^2_{(lr)} = 87{,}405$). Dodatno je bilo ugotovljeno, da gre v primeru učencev prvega triletja za šibko pozitivno povezanost ($P = 0{,}003$, $\rho = 0{,}228$), v primeru učencev tretjega triletja pa za zmerno pozitivno povezanost ($P = 0{,}003$, $\rho = 0{,}228$) omenjenih spremenljivk. Rezultati iz tabele 3 ome-

njeno potrjujejo, saj kažejo na to, da imajo učenci z višjimi matematičnimi dosežki višje indekse dokončevanja DNm.

Tabela 3: Indeksi dokončevanja DNm glede na matematične dosežke učencev

	Matematični dosežki učencev	*Indeksi dokončevanja DNm*
1. triletje	Učenci s samooceno 4 ali manj	2,69 (0,542)
	Učenci s samooceno 5	2,90 (0,305)
3. triletje	Učenci s končno oceno 1 ali 2	2,21 (0,586)
	Učenci s končno oceno 3	2,48 (0,610)
	Učenci s končno oceno 4	2,75 (0,491)
	Učenci s končno oceno 5	2,82 (0,498)

Preučevali smo tudi razloge, zaradi katerih učenci ne dokončajo vseh DNm. Ugotavljamo, da so ti podobni za učence prvega in zadnjega triletja. Najpogostejši razlog nedokončevanja DNm za učence prvega in tudi tretjega triletja je, da naloge ne znajo rešiti. V prvem triletju je ta razlog navedlo 21,9 % učencev, v zadnjem triletju pa kar 64,5 % učencev. Pogosta razloga nedokončevanja DNm pri učencih prvega triletja sta še naslednja: "*Zaradi drugih aktivnosti nimam dovolj časa*." (16,7 %) in "*Nalogo pozabim dokončati*." (16,7 %). V tretjem triletju pa sta se kot pogosta razloga izkazala še: "*Nalogo pozabim dokončati*." (36,0 %) in "*Naloge ne dokončam, ker sem preveč utrujen*." (31,2 %).

V nadaljevanju podajamo rezultate glede različnih karakteristik DNm, ki bi lahko vplivale na deleže dokončanih nalog.

Tabela 4: Pogostost in časovna obsežnost DNm

		1. triletje		*3. triletje*	
		f	*f%*	*f*	*f%*
Pogostost	Ne dobivamo DNm.	0	0,0	1	0,2
	Manj kot enkrat na teden.	13	6,8	1	0,2
	Enkrat do dvakrat na teden.	47	24,5	6	1,4
	Trikrat na teden.	76	39,6	130	31,2
	Vsak dan/vsakič, ko imamo matematiko.	55	28,6	279	66,9
	Indeks pogostosti DNm	3,9		4,6	
Časovna obsežnost	15 minut ali manj.	88	45,9	87	20,9
	Več kot 15 minut, a manj kot eno uro.*	93	48,4	–	–
	16–30 minut.*	–	–	215	51,7
	30–60 minut.*	–	–	78	18,7
	Več kot eno uro.	10	5,2	7	1,7
	Ne vem, ker naloge ne opravljam.	1	0,5	29	7,0
	Indeks časovne obsežnosti DNm	1,6		1,8	

Opomba: * Časovne postavke so bile prilagojene glede na udeležence.

Pričenjamo s karakteristikami, ki sodijo v fazo oblikovanja domačih nalog. V tabeli 4 tako predstavljamo rezultate o pogostosti in časovnem obsegu DNm. Na podlagi pridobljenih podatkov smo izračunali tudi indeks pogostosti domačih nalog, tj. povprečje pogostosti, kjer smo z 1 označili odsotnost matematičnih domačih nalog, s 5 pa vsakodnevne domače naloge pri matematiki. Na podoben način smo izračunali tudi ostale indekse, o katerih poročamo v nadaljevanju.

Pri določanju korelacij spremenljivk pogostost DNm oziroma časovna obsežnost le-te s spremenljivko dokončevanje DNm ugotovimo, da pogostost DNm in dokončevanje DNm nista povezani spremenljivki (niti pri učencih 1. triletja niti pri učencih 3. triletja). Po drugi strani pa se je izkazalo, da je časovna obsežnost DNm z dokončevanjem povezana samo v primeru učencev 1. triletja, kjer gre za šibko negativno zvezo ($P = 0{,}000$, $\rho = -0{,}291$).

Z vidika opravljanja oziroma dokončevanja DNm smo preučevali naslednji dve spremenljivki: vključenost staršev v otrokovo opravljanje DNm (starševska pomoč in kontrola) ter optimizacija časa opravljanja DNm.

Vključenost staršev v otrokovo opravljanje DNm smo določili na podlagi ravni strinjanja učencev s trditvami iz tabele 5, ki so povzete po prispevku avtorjev Núñez, Suárez, Rosário, Valle in sod. (2015). Raven strinjanja z zapisanimi trditvami so učenci izrazili na petstopenjski lestvici, kjer je 1 pomenilo popolno nestrinjanje, 5 pa popolno strinjanje s posamezno trditvijo. V tabeli 5 so prikazane povprečne vrednosti (s standardnimi odkloni) ravni strinjanja učencev s posameznimi trditvami.

Tabela 5: Starševska vključenost v opravljanje DNm

V kolikšni meri so resnične spodaj navedene trditve?	*1. triletje*		*3. triletje*	
	$\bar{x}$	*SO*	$\bar{x}$	*SO*
Moje opravljanje domačih nalog je za moje starše zelo pomembno.	4,55	0,948	3,73	1,241
Moji starši vedo, ali sem zaključil vso domačo nalogo.	4,51	0,898	2,87	1,332
Preden se ukvarjam z obšolskimi dejavnostmi (na primer plavam, igram nogomet itd.), moji starši preverijo, če sem naredil vso domačo nalogo.	4,08	1,193	2,46	1,369
Moji starši mi ne dovolijo gledati televizije, druženja s prijatelji, dokler ne zaključim domače naloge.	4,04	1,248	2,46	1,422
Moji starši me okregajo in me kaznujejo, če ne naredim vse domače naloge.	3,12	1,447	2,32	1,291
Indeks kontrole	4,06		2,80	
Običajno me starši vprašajo, če imam vprašanja glede DNm ali potrebujem pomoč.	4,22	1,177	2,98	1,397
Ko moram narediti DNm, so razlage mojih staršev zelo uporabne.	4,45	0,867	3,43	1,301
Starši mi pomagajo pri DNm, če jih prosim za pomoč.	4,86	0,437	3,93	1,319
Indeks podpore	4,51		3,46	

Kot je razvidno iz tabele 5, učenci prvega triletja v primerjavi z učenci tretjega triletja v večji meri zaznavajo vključenost staršev (kontrolo in podporo) v njihovo opravljanje DNm. Podpora staršev je tako v prvem triletju ($P = 0{,}017$, $\rho = 0{,}173$) kot v zadnjem triletju ($P = 0{,}020$, $\rho = 0{,}114$) le neznatno povezana z deležem dokončanih DNm. Statistično značilna, a neznatna je tudi povezava med starševsko kontrolo in dokončanimi DNm (za prvo triletje $P = 0{,}026$, $\rho = 0{,}161$, za tretje triletje $P = 0{,}000$, $\rho = 0{,}194$).

Preučevali smo tudi, kako učenci optimizirajo čas opravljanja DNm (se osredotočajo na delo). To karakteristiko smo merili preko odgovorov učencev na vprašanji:

- *Ali te, ko delaš domačo nalogo za matematiko, motijo druge stvari (na primer mobilni telefon, govorjenje drugih ljudi, televizija)?,*
- *Ali medtem ko delaš domačo nalogo za matematiko, razmišljaš o drugih stvareh?*

Vprašanji sta povzeti po avtorjih Núñez, Suárez, Rosário, Valle in sod. (2015), rezultate pa predstavljamo v tabeli 6.

Tabela 6: Optimizacija časa opravljanja DNm in dokončevanje DNm

	1. triletje		*3. triletje*		*1. triletje*	*3. triletje*
	f	*f%*	*f*	*f%*	*indeks dokončevanja (1–3)*	*indeks dokončevanja (1–3)*
Naloge ne delam.	1	0,5	20	4,8	–	–
Vedno me motijo druge stvari ali razmišljam o drugih stvareh.	19	9,9	37	8,9	2,42	2,27
Včasih me motijo druge stvari ali razmišljam o drugih stvareh.	95	49,5	300	71,9	2,77	2,66
Ko delam domačo nalogo za matematiko, razmišljam le o nalogi. Nič me ne moti.	77	40,1	60	14,4	2,94	2,83

Kot lahko vidimo, 40,1 % učencev iz prvih treh razredov in le 14,4 % učencev iz zadnjih treh razredov osnovne šole med opravljanjem DNm razmišlja le o matematični domači nalogi in jih nič ne moti. Dodatno, skoraj 10 % učencev prvega oziroma zadnjega triletja izraža nizko raven optimizacije časa opravljanja DNm. Ti učenci namreč poročajo, da jih med opravljanjem DNm vedno motijo druge stvari in vedno razmišljajo o drugih zadevah.

Statistični testi kažejo, da sta spremenljivki optimizacija časa opravljanja DNm (za učence, ki DNm opravljajo) in delež dokončanih nalog povezani ($P = 0{,}000$, $\chi^2_{(lr)} = 21{,}176$ za učence prvega triletja; $P = 0{,}000$, $\chi^2_{(lr)} = 34{,}468$ za učence tretjega triletja). V primeru učencev prvega triletja gre za šibko pozitivno ($P = 0{,}000$, $\rho = 0{,}304$), v primeru učencev tretjega triletja pa za zmerno pozitivno korelacijo ($P = 0{,}000$, $\rho = 0{,}426$) omenjenih spremenljivk.

Tretja faza domačih nalog se nanaša na podajanje povratnih informacij glede opravljene domače naloge. Učiteljeve odzive glede DNm, kakor jih zaznavajo učenci, smo določili na podlagi ravni strinjanja učencev s trditvami iz tabele 7, ki so povzete po avtorjih Núñez, Suárez, Rosário, Vallejo in sod. (2015). Učenci so stopnjo strinjanja s

posamezno trditvijo izrazili s pomočjo petstopenjske lestvice, kjer je 1 pomenilo, da se s trditvijo sploh ne strinjajo, 5 pa, da se s trditvijo popolnoma strinjajo.

Tabela 7: Učiteljevi odzivi glede DNm

Trditev	1. triletje		3. triletje	
	f	*f%*	*f*	*f%*
Učitelj preveri, ali si naredil DNm.	4,60	0,695	4,35	0,996
V razredu DNm pregledamo in popravimo napake.	4,35	0,967	4,30	0,902
Učitelj da pozitivno povratno informacijo, če si naredil DNm.	4,23	1,114	3,48	1,406
Učitelj upošteva DNm pri končni oceni.	–	–	3,98	1,199
Učitelj večkrat reče, da je pomembno, da DNm naredimo v celoti.	4,56	0,814	3,24	1,316
Indeks učiteljevega odzivanja	4,4		3,9	

Rezultati kažejo, da slovenski učenci zaznavajo visoko raven učiteljevih odzivov glede DNm. Po pričakovanjih učenci prvega triletja zaznavajo učiteljeve odzive v večji meri kot učenci tretjega triletja.

Analiza rezultatov je pokazala, da je povezava med indeksom učiteljevega odzivanja in dokončevanjem DNm šibko pozitivna tako za prvo triletje ($P = 0{,}001$, $\rho = 0{,}235$) kot tudi za zadnje triletje osnovnošolskega izobraževanja ($P = 0{,}000$, $\rho = 0{,}192$).

4 Diskusija

V raziskavi smo se osredotočili na karakteristiko dokončevanje matematičnih domačih nalog. Rezultati kažejo, da obstaja statistično značilna pozitivna povezava med matematičnimi dosežki učencev in dokončevanjem DNm (za učence prvega triletja; za učence tretjega triletja), kar je v skladu z ugotovitvami drugih raziskav (Núñez, Suárez, Rosário, Vallejo in sod., 2015; Núñez, Suárez, Rosário, Valle in sod., 2015; Cooper in sod., 1998; Ferme in Lipovec, 2019). Ugotovili smo tudi, da vse ali skoraj vse DNm dokonča več kot 80 % učencev prvega triletja in manj kot 64 % učencev zadnjega triletja. Z zvišanjem deleža dokončanih nalog, predvsem v zadnjem triletju, kjer je ta delež nižji, bi lahko morda, glede na naše rezultate, pozitivno vplivali na matematične dosežke učencev. Seveda pa bo treba domačim nalogam zato, da jih bodo učenci dokončevali, dvigniti kakovost v več karakteristikah, ki jih posamično opišemo v nadaljevanju.

Pričenjamo s karakteristikama pogostost in časovni obseg DNm. Na osnovi naših rezultatov ugotavljamo, da pogostost ni povezana z dokončevanjem DNm, a treba je omeniti, da je slovenska raziskava na vzorcu četrtošolcev zaznala šibko pozitivno povezavo med pogostostjo DNm in matematičnimi dosežki učencev (Podgoršek, Ferme in Lipovec, 2017). O negativni korelaciji med časom, ki ga učenci porabijo za opravljanje domačih nalog, ter njihovimi dosežki poročajo nekateri raziskovalci (Podgoršek, Ferme in Lipovec, 2017; De Jong, Westerhof in Creemers, 2000). Tako naša ugotovitev

glede negativne povezave med časovno obsežnostjo DNm in dokončevanjem DNm (za učence prvega triletja) kaže na to, da je časovna obsežnost DNm ena izmed pomembnih karakteristik, ki so neposredno in posredno povezane z akademskimi dosežki učencev.

Kot eno od najpomembnejših ugotovitev te raziskave navajamo šibko oziroma zmerno pozitivno povezanost optimizacije časa opravljanja DNm in deleža dokončane DNm. Ugotovitev velja tako za prvo kot tudi za tretje triletje osnovnošolskega izobraževanja in je skladna z drugimi raziskavami (Núñez, Suárez, Rosário, Vallejo in sod., 2015; Núñez, Suárez, Rosário, Valle in sod., 2015; Xu, 2011). Dodatno raziskave kažejo na direktno pozitivno povezanost spremenljivk optimizacija časa opravljanja domače naloge in akademski dosežki učencev (Núñez, Suárez, Rosário, Vallejo in sod., 2015; Núñez, Suárez, Rosário, Valle in sod., 2015). Na podlagi navedenega tako ugotavljamo, da je optimizacija časa opravljanja DNm pomembna neposredna in posredna karakteristika DNm. To implicira potrebo po izboljšanju kakovosti optimizacije časa opravljanja DNm s strani učencev. Ker je domača naloga zadeva, ki jo učenci izvršujejo doma, in je, dodatno, naša raziskava nakazala pozitivno (sicer neznatno oziroma šibko) zvezo med dokončevanjem nalog in vključenostjo staršev v opravljanje le-te, bi morda lahko h kakovostnejši optimizaciji časa opravljanja domače naloge pripomogli tudi starši.

Z vidika karakteristik zadnje faze opravljanja domače naloge ugotavljamo, da slovenski učenci zaznavajo visoko raven učiteljevih odzivov glede DNm. Primerjava, ki je bila narejena med slovenskimi, slovaškimi in hrvaškimi učenci zadnjega triletja, kaže, da slovenski učenci zaznavajo učiteljeve odzive v večji meri kot pa hrvaški ali slovaški učenci (Lipovec in Ferme, 2018). Naši rezultati sicer kažejo pozitivno povezavo med indeksom učiteljevega odzivanja in dokončevanjem DNm, kar je skladno z raziskavo, ki so jo izvedli Núñez, Suárez, Rosário, Vallejo in sod. (2015).

5 Sklep

Številnost in vzajemna povezanost karakteristik domačih nalog, navedenih v predhodnih poglavjih, potrjujeta, da so domače naloge "komplicirana stvar" (Corno, 1996). Najprej se je treba zavedati, da obstajajo karakteristike domačih nalog, ki z dokončevanjem DNm niso povezane ali pa so povezane zelo šibko, ter takšne karakteristike, ki so z dokončevanjem v pozitivni oziroma negativni zvezi. Več pozornosti je treba nameniti zadnjim: okrepiti vlogo karakteristik, ki so pozitivno povezane z dokončevanjem, ter upoštevati karakteristike, ki so negativno povezane z dokončevanjem DNm.

Učitelji moramo biti pozorni na to, da DNm niso preveč časovno obsežne. Če upoštevamo, da učencem vzame DNm od ene do dve petini vsega časa, ki je namenjen domačim nalogam (v Xu, 2015), in da celotna domača naloga (matematika in ostali predmeti) učencem naj ne bi vzela več kot 10 minut, pomnoženo z razredom, dnevno (Cooper, 2015), je napotek za časovno obsežnost matematične domače naloge (čas reševanja s strani učenca) naslednji: približno 3 minute, pomnoženo z razredom, na dan (to pomeni: v 3. razredu približno 9 minut, v 9. razredu približno 27 minut). Zavedamo se, da je, posebej na predmetni stopnji, usklajevanje časovne obsežnosti domače naloge med predmeti za učitelja lahko naporno, zato s tega vidika prepoznavamo timsko kulturo kot pomemben del učinkovite šole (Javornik Krečič, 2006, str. 17).

Starši se moramo zavedati, da ne neposredna kontrola in ne podpora otrokovemu opravljanju DNm na delež dokončanih nalog ne bosta imeli tako močnega vpliva kot razvijanje otrokove sposobnosti upravljanja s časom (optimizacije časa). Potencialna načina za zvišanje kakovostne optimizacije časa opravljanja domačih nalog sta vsaj dva: umik motečih dejavnikov in učenje otrok uspešnega spopadanja z njimi. Moteče dejavnike iz okolja lahko umaknemo na način, da zagotovimo ustrezno, mirno okolje za opravljanje domače naloge (npr. otroku vzamemo mobilni telefon, ugasnemo televizijo, se umaknemo iz prostora). Učenje uspešnega spopadanja z motečimi dejavniki pa lahko na primer poteka preko dobrega zgleda osredotočanja na delo. S tem ne mislimo le na zgled pri opravljanju zadev, vezanih na šolsko ali službeno delo, temveč pri več opravilih ne dovolimo, da nas moteči dejavniki zmotijo na tak način, da popolnoma preusmerimo svojo pozornost in prekinemo z opravilom (na primer, pomivanja posode ne prekinemo v trenutku, ko dobimo sporočilo na mobilni napravi). Tudi Xu (2015) ponudi nekaj načinov, kako se spopasti z "motilci", še posebej v primeru tehnoloških zadev (npr. spletnih omrežij, video iger). Na osnovi rezultatov, pridobljenih v dveh raziskavah, meni, da je nujno razvijati vrstniško normo, znotraj katere učence spodbujamo, da razpravljajo, opredeljujejo in delijo med seboj uspešne strategije premagovanja tehnoloških "motilcev" pri opravljanju domačih nalog. Menimo, da bi takšen pristop lahko deloval tudi pri učencih tretjega triletja v Sloveniji. Jasno pa je, da za razvijanje take navade ne morejo biti odgovorni le učitelji matematike, nujno potrebna bo tudi pomoč svetovalnih delavcev, kar pa zopet nakazuje na nujnost timske kulture.

Menimo, da predstavljeni rezultati ponujajo učiteljem, staršem in odločevalcem v šolskem prostoru dragocene informacije, ki bodo služile razkritju zapletene mreže povezav med DNm in (matematičnimi) dosežki učencev. Kljub temu pa bo zaradi kompleksnosti fenomena domačih nalog potrebnih še več raziskav, ki bodo zajele širši spekter dejavnikov, ki na učinke DNm lahko vplivajo.

Alenka Lipovec, PhD, Jasmina Ferme

Completion: An Essential Characteristic of Mathematics Homework

"Homework is a written, oral or practical form of student work which the teacher assigns to the students and which is directly related to the lessons and the students perform it independently after regular schoolwork" (Čagran 1993, p. 144). Cooper, a leading homework researcher, writes: "Homework causes more friction between school and home than any other aspect of education and becomes a major battlefield when schools, families and the community see each other as adversaries" (Cooper, 2015, p. 4).

Research focusing on comparing those students who do homework and those who do not has shown that there is a positive relationship between the completion of homework and students' academic performance (Cooper, Robinson & Patall, 2006; Fan et al., 2017). Homework is quite common in mathematics lessons (e.g. Trautwein et al., 2006). Frequent, short and purposeful tasks are positively related to a student's effort in doing homework, to positive emotions when completing homework, and to academic/math achievement (e.g. Fan et al., 2017). On the other hand, overly extensive home-

work or homework that contains repetitive tasks is negatively correlated with student achievement (e.g. Trautwein, 2007). However, in a sample of more than 5,000 students from several Latin American countries, Murillo and Martínez-Garrido (2013) found that neither the frequency, type nor time of homework completion had any influence on students' academic achievement.

Empirical research finds that homework completed by students themselves (the second stage) is more effective than homework completed by students with the help of others, e.g. parents (Fernández-Alonso et al., 2015). Núñez et al. (2015) report that children's perception of parental control (e.g. checking whether homework has been completed; punishment for not completing tasks) and mathematical achievement are negatively correlated; the child's perception of parental support (e.g. provision of assistance, the response to the child's need for help, and appropriate assistance) and his or her achievement are positively correlated variables. However, the results are inconsistent in this area, as well. For example, Dumont et al. (2012) report on the negative effects of parental involvement in cases where, for example, the help is not in line with teachers' expectations or is accompanied by negative parental emotions. Studies have also examined the characteristics of homework that are related to the (personal) characteristics of the students. Most important is the ability to deal with time, which includes regulating disruptive factors (Xu, 2013).

Teachers' practice of homework verification is positively related to the mathematical performance of students (e.g. Rosário et al., 2019). To our knowledge, few recent studies have dealt with the relation between homework in mathematics and the academic performance of students in mathematics within the Slovenian school system. Podgoršek, Ferme and Lipovec (2017) find that, among 10-year-olds, there are only negligible correlations between homework characteristics and student performance on TIMSS 2015. Lipnik (2015) systematically monitored homework in mathematics in two secondary school departments, identifying almost no noticeable impact on students' math achievements. Although Slovenian studies pay somewhat more attention to the motivation to do homework in mathematics (e.g. Habjan, 2017; Gracej, 2018), they also attend to individual characteristics, such as feedback for weaker students (e.g. Žitko, 2018).

The field of homework research is strongly represented in the literature. Nevertheless, the results are not sufficiently focused on specific subjects (in our case mathematics) and specific school systems (e.g. Slovenia). Therefore, in the following text, we present some findings from two studies of mathematical homework, both carried out on a population of Slovenian pupils. Some of the basic results of these studies have already been presented in Lipovec and Ferme (2018), Lipovec and Ferme (2019) for the last three years, and in Ferme and Lipovec (2019) for the first three years. Most research in this area examines the relation between the (primary) characteristics of homework (e.g. frequency, parental support) and student achievement. Since student performance is influenced by many factors, and we do not control whether students complete the task, the findings could be misleading. According to recent research findings (Xu et al., 2019), completing homework is an important (but indirect) characteristic that is positively related to student achievement. This characteristic is probably not derived from the school environment alone, or from the home environment by itself; it is also not a simple reflection of student personality traits. It could, therefore, be said that completing tasks is the most essential indirect/secondary characteristic. Completion can be influenced

by both teachers (e.g. by assigning tasks of appropriate difficulty) and parents (e.g. by encouraging the child to complete the task), and by the learner (e.g. by the effort he/she puts into the work).

The methods of quantitative empirical pedagogical research we used are descriptive and causal non-experimental methods. The survey was carried out based on guided questionnaires. The sample from the actual population was random among pupils in the last three years of school and random for pupils in the first three years. The survey included 192 pupils enrolled in the first three years and 417 pupils enrolled in the final three years of primary education. The results show that there is a statistically significant correlation between mathematical achievement and the completion of mathematical homework. Large amounts of homework, or almost all mathematics homework is completed by more than 80% of first-year pupils and by less than 67% of final-year pupils. By increasing the proportion of tasks completed in the last three years, our results suggest that we could improve mathematical achievement. Frequency is unrelated to the completion of mathematics homework, and there is a negative, statistically significant correlation between time extensiveness and task completion. We note that Slovenian mathematics teachers do check and correct mathematics homework, emphasize its importance to students, and encourage students to do their homework. Our results show a positive relation between the teacher response index and the degree of completion of mathematics homework.

As one of the most important findings of this research, we established a moderate correlation between time-management skills for mathematics homework and the proportion of mathematics homework. The connection applies to both the first and second trimester. Other research has also shown that the ability to optimize homework time is positively related to the proportion of homework completed by students (e.g. Xu, 2010). The wealth and interconnectedness of the results confirm that homework is a "complicated thing" (Corno, 1996). Based on our findings, we would advise teachers and parents to prioritise mathematics homework as effectively as possible by offering various forms of encouragement, direct or indirect, to help ensure that students' mathematics homework is completed to the greatest possible extent.

Many characteristics of mathematics homework (e.g. frequency, parental support) may not be related to or only weakly associated with students' mathematical achievement. We believe that teachers and other stakeholders should be aware of this. Knowledge of the characteristics that might affect students' academic performance (e.g. time extensiveness) is also essential. Mathematics homework occupies one- to two-fifths of students' homework time (Xu, 2015). Total homework time (mathematics and other subjects) should not exceed 10 minutes per class (Cooper, 2015). Therefore, the math homework rule is about 3 minutes per class (i.e. 9 minutes in 3rd grade, 27 minutes in 9th grade). We are aware that it can be difficult, especially in the last years of primary education, to balance homework time between subjects, so we recognise team culture as an essential part of the contemporary school (Javornik Krečič, 2006) in the area of homework. Parents should be aware that neither controlling nor supporting the proportion of tasks completed has as strong an impact as developing time-management skills. Parents can begin when their children are in the lower grades to help their children with recognising the factors that can disrupt homework activity. When the children are smaller, this implies more conventional "disruptive factors" (e.g. the baby playing while we visit our neighbours). Later, parents might have to pay more attention

to disruptive technological factors (e.g. what to do if I receive a message over social networks while studying).

We believe that the results of this study will provide teachers, parents and decision-makers in the school sector with valuable information that can be used to unravel the complex web of relationships between mathematics homework and mathematical achievement. However, owing to the complexity of the homework phenomenon, more research will be needed to cover a broader range of factors that could influence the impact of mathematics homework. One way of increasing the proportion of completed mathematics homework from the teachers' point of view is to adapt the maths homework to students' abilities.

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Characteristics of Effective Teaching of Mathematics

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KLJUČNE BESEDE: matematika, učinkovit pouk, prepričanja učiteljev, uspešnost učencev

POVZETEK – Sinonimi dobrega ali kakovostnega poučevanja se pogosto uporabljajo, ko govorimo o učinkovitem pouku matematike. Ni univerzalne definicije dobrega ali učinkovitega poučevanja matematike in pogledi na te koncepte so v veliki meri odvisni od izobraževalnih tradicij in vrednot v različnih državah, pa tudi od prepričanj učiteljev matematike. Pojem učinkovitega poučevanja je pomemben, saj pomembno vpliva na izobraževalne politike in oblikovalske odločitve. Namen tega prispevka je problematizirati vprašanje učinkovitega pouka matematike, določiti značilnosti učinkovitega pouka matematike in opredeliti, kako učitelji dojemajo učinkovito poučevanje matematike. Način poučevanja, ki ga uporablja učitelj matematike, je pokazatelj tistega, kar se mu zdi najpomembnejše. Učitelji so ključni pri učnem in izobraževalnem napredku učencev, zato jih je treba usposobiti za kakovostno in učinkovito poučevanje. Pouk matematike je učinkovit, ko čim bolj spodbuja uspešnost učencev. Kulturne norme vplivajo na izvajanje učinkovitega poučevanja.

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ABSTRACT – When referring to effective mathematics teaching, the terms good teaching and quality teaching are often used. There is no universal definition of what constitutes good or effective teaching of mathematics, and views on these concepts are largely dependent on the educational traditions and values in different countries, as well as on the beliefs of mathematics teachers. The notion of effective teaching is important because it significantly influences educational policies and teaching design decisions. The aim of this paper is to problematize the issue of effective mathematics teaching, to determine the features of effective mathematics teaching and how teachers perceive effective mathematics teaching. The way a mathematics teacher teaches is an indication of what he or she considers to be most important. Teachers are critical determinants of students' learning and educational progress, so they must be trained to deliver quality and effective lessons. Mathematics teaching is effective when it promotes students' performance as best as possible. Nevertheless, cultural norms influence the way effective features are implemented.

1 Introduction

In light of the increasing importance of international comparative studies such as TIMSS and PISA, mathematics teachers' knowledge and the impact it has on the development of student knowledge have become of particular interest. Thus, students' achievement in mathematics has become the focus of educational policies in countries around the world that use PISA and TIMSS results to identify problems in the education system and improve the quality of teaching. The mathematical literacy of the individual, examined by PISA, can serve as a starting point for reflecting on the quality of mathematics teaching. *Mathematical literacy* is the students' ability to analyze, logically infer, and effectively convey their ideas as they formulate, solve, and interpret

solutions to mathematical problems in different situations (OECD, 2013). But critics of this understanding of mathematics teaching outcomes argue that mathematics teaching should provide students more than what is examined by PISA. The focus of PISA is not the successful adoption of a particular subject, but the students' ability to function as individuals and engaged citizens in the real world after compulsory education (Niss, 2015). Moreover, the concept of mathematical literacy focuses on mathematics as a tool for solving non-mathematical issues, while the concept of mathematical proficiency is much broader – it focuses on what it means to master mathematics in general, including the ability to solve both mathematical and non-mathematical problems (Jablonka & Niss, 2014). The concept of mathematical proficiency includes five interlocking parts of knowledge and personal characteristics of the individual: conceptual understanding, procedural knowledge, strategic competence, adaptive reasoning and productive character. Mathematical proficiency goes beyond mastering mathematics (Kilpatrick, Swafford & Findell, 2001); this conceptualization seeks to encompass what is required to learn mathematics, and what characterizes the individual who has been able to learn it. Effective mathematics teaching should enable students to work successfully in purely mathematical structures, for example studying mathematical phenomena such as the irrationality of numbers, and, at a higher level, to understand the role of definitions and theorems in mathematics (Niss, 2015). In this way, mathematical literacy becomes an integral part of mathematical proficiency. Therefore, one can observe the existing teaching through the prism of mathematical proficiency and identify the parts of teaching which need to be improved in order for students to develop mathematical proficiency.

When referring to effective mathematics teaching, the terms *good teaching* and *quality teaching* are often used. There is no universal definition of good or effective teaching of mathematics, and views on these concepts are mainly dependent on educational traditions and values in different countries, as well as on the beliefs of mathematics teachers (e.g. Cai et al. 2009; Jaworski, 1999). Therefore, there is no straightforward answer to the question *What is effective teaching of mathematics?* The response will also depend on the person being asked the question; teachers, scientists, politicians, parents, all have their own vision of what good mathematics teaching is and what it is not. However, the notion of quality teaching is important because it significantly influences educational policies, teaching design decisions, and research on student learning.

The aim of this paper is to problematize the issue of effective mathematics teaching and by reviewing the relevant and available literature, to answer the following research questions: How do teachers perceive effective mathematics teaching? What are the features of effective mathematics teaching? Do the existing features of effective teaching overlap with teachers' beliefs about effective mathematics teaching?

The countries analyzed in this paper were selected because of their differences in size, geographical location, economic and technological progress, and also their differing educational performance in PISA and TIMSS surveys. An additional criterion was the availability of existing literature (limited to English, German and Croatian).

2 Teachers' attitudes and influence on mathematics teaching

The way a teacher understands and experiences mathematics influences his or her teaching of mathematics (Ernest, 1989). Specifically, this understanding has an influence on two other closely related beliefs – how mathematics should be taught and how mathematics should be learned. There exists evidence showing a significant correlation between these two beliefs about the learning and teaching of mathematics (e.g. Speer, 2005). A teacher who perceives mathematics as a set of procedures and rules to follow, teaches students algorithms and emphasizes practicing similar tasks until students become proficient in performing operations. A teacher who perceives mathematics as an interconnected network of concepts, properties, and relationships among these concepts, encourages students to use different strategies to solve the problems, explain and interpret those results, and make their own conclusions. The first conception of mathematics denotes the traditional view of mathematics, while the second conception denotes the modern view of mathematics. However, the research also shows that some teachers experience a dichotomy between understanding mathematics and teaching mathematics (e.g. Speer, 2005; Raymond, 1997). For instance, in the qualitative research of Croatian mathematics teachers, Jukić Matić and Glasnović Gracin (2017) found that some teachers with a modern approach to mathematics used traditional ways of teaching.

2.1 Effective teaching from a cultural standpoint

Cai & Wang (2010) emphasize the importance of a cultural context that gives the teacher the tools to work with, and creates habits and assumptions about teaching mathematics effectively. Therefore, to determine what effective teaching involves, and how teachers envision it, one also needs to look at the cultural context from which the teacher comes. The idea that teachers' beliefs and their understanding of effective teaching have an influence on the teaching practice is not new (Cai, 2005; Miao & Reynolds, 2018; Perry, Wong & Howard, 2006; Stigler & Hiebert, 1999). Teachers draw on their cultural beliefs as a normative framework of values and goals that guide teaching (Rogoff, 2003). The way a mathematics teacher teaches is an indication of what he or she considers to be most important, influencing how students learn mathematics (e.g. Cai, 2004).

The following text examines teachers from different parts of the world and their understanding of what constitutes effective teaching of mathematics. The term *East Asia* refers to countries or education systems such as China, Hong Kong, Japan, Korea, Taiwan and Singapore, while the *West* relates to countries in North America, Europe and Australia. Various researchers claim that East and West are cultural, not geographical, boundaries with the Confucian tradition in the East and the Greek/Latin/Christian culture in the West (e.g. Leung, Park, Shimizu & Xu, 2015). Although this separation is not entirely justified, it is useful in the context of this study. For example, the Confucian tradition holds the belief that learning is hard work and that learning should not be fun (Leung, Park, Shimizu & Xu, 2015). The main characteristic of the Confucian tradition is a social orientation, opposed to an individual orientation, which is usually found in Western societies. Teaching a whole class, where the teacher has a dominant

role, is considered very important in East Asian countries, unlike the individualization present in Western countries, which emphasizes independence and individualism in learning (Leung, 2001). The difference is also notable when one looks at how teachers view mathematics. For Chinese teachers, the real beauty of mathematics lies in the possibilities of generalization and logical connection, so any solution that does not lead to generality should be rejected. American teachers emphasize the pragmatic side of mathematics: as long as something works, students can choose all kinds of representations of mathematical objects and all strategies (Cai & Wang, 2010).

Furthermore, research on European traditions of education emphasizes the diversity of approaches to mathematics education within Europe. There is a significant difference between approaches coming from the UK on the one hand, and Scandinavian countries and continental Europe on the other (Kaiser & Blömeke, 2013). Differences are evident in the type of mathematical knowledge a student needs to acquire, the role of argumentation and proof in mathematics teaching, and the expected interactions among students during mathematical activities. Although there are differences, the approach to students is similar, so it is justified to place them in the same category – the category of Western countries (Kaiser & Blömeke, 2013).

On the other hand, Russia, Lithuania and Estonia are singled out because of the great influence of the Russian mathematical school on Lithuania and Estonia throughout history. Karp & Zvavich (2011) state that within the Russian mathematical school, the individual work of students with theoretical textbook materials was highly valued, and this was one of the most important goals of the teaching practice – to help the student develop the skills necessary for working with the textbook. The authors also state that the teaching of mathematics had to be constructed in such a way that the work of the class as a whole would help individual understanding.

2.1.1 The United States of America

Teachers in the US encourage a mathematical understanding that is focused on connecting and applying mathematical knowledge in real contexts (Cai & Wang, 2010). For US teachers, memory can only come after understanding. They believe that students should be encouraged to explore the relationships between mathematics and their own life experiences by providing extensive real-life examples and tactile teaching experiences. The focus is on student engagement by listening to students carefully and creating group discussions frequently. In general, US teachers see effective teaching as a process of creating challenges and guiding students to explore, create their own knowledge, and use it independently.

2.1.2 Australia

In a survey conducted in Australia, the sample consisted of teachers who were characterized as effective teachers in the education system (Perry, 2007). Teachers emphasized challenges in mathematics teaching and topics relevant to students as important features of effective teaching. According to their understanding, an effective math teacher is well-prepared in terms of what students want to learn, but also allows students to explore when opportunities arise. The teachers also emphasized the importance of structuring lessons and establishing routines because students need routines. The im-

pact of productive pedagogy is evident in teachers' comments about explicit teaching, children's awareness of what is expected of them and what they will learn, and the importance of a meaningful inquiry.

2.1.3 European countries

The study conducted by Kaiser & Vollstedt (2007) found that many German teachers believe that students should memorize basic algorithms, such as calculating percentages or applying formulas to solve equations. However, they also emphasize the importance of both the understanding of formulas and the ability of students to derive formulas themselves.

Teachers in England believe that effective mathematics teaching should be real-life related, differentiated and focused primarily on the student (Miao & Reynolds, 2018). The central question of the teaching process is *what to teach* and *what to teach to whom*. Thus, teachers seek to differentiate tasks, adapt them to students' abilities, and utilize several differentiation strategies, such as self-differentiation or pre-assessment.

In France, teachers often emphasize the importance of reasoning and mind coaching in teaching mathematics (Pepin, 1999; Kaiser & Vollstedt, 2007). They believe that definitions, theorems and formulas must be used visibly so the theoretical aspect of mathematics is evident. Teachers emphasize that adherence to strictly prescribed procedures and routines is important, but this is not always sufficient to solve complex problems (Kaiser, Hino & Knipping, 2006). Teachers find teaching effective if it provides students with the skills needed for precise performance and enables them to discover mathematical concepts themselves (Kaiser & Vollstedt, 2007).

Swedish teachers view effective mathematics teaching as an individual interaction with students, which builds on students' interests and on mathematics from everyday situations. Teachers emphasize the significant role of adaptation to the students and their needs. This means they need to be able to follow each student's learning path and help the individual move forward in content (Hemmi & Ryve, 2014).

Finnish teachers view mathematics teaching as whole-class teaching that must include activities that are constantly repeated, such as mental arithmetic and homework on a daily basis (Hemmi & Ryve, 2014). In particular, Finnish teachers are considered to be proactive classroom leaders who clarify the goals of the lesson, value formative assessment, and take differences among students into consideration. Effective teaching, according to Finnish teachers, is characterized by well-designed lesson planning with clearly defined goals and precise instruction.

2.1.4 Baltic countries and Russia

A study by Kardanova, Ponomaryova, Safuanov and Osin (2014) examined how teachers in Russia, Latvia and Estonia perceive effective and high-quality mathematics teaching. Russian teachers either prefer a modern understanding of mathematics teaching, where students actively build their knowledge, or combine the features of traditional and contemporary mathematics teaching. Estonian teachers' beliefs of good teaching combine an understanding of teaching as an active creation of knowledge and as a transfer of knowledge, i.e. a modern and traditional approach to teaching. These approaches, i.e. traditional and modern constructivist, are seen as complementary rather

than opposing. But there are some aspects of these approaches that Estonian teachers do not find effective. For example, teachers do not advocate the memorizing of rules and specific task-solving procedures, and are not keen on open learning, discussions with students, or working in small groups. The results of the above study showed that although Latvian teachers support a modern understanding of mathematics teaching, their orientation toward teaching itself is more traditional than modern. In their teaching practice, they often use traditional approaches to learning (Šapkova, 2014).

2.1.5 East Asian countries

Teachers in China encourage the development of mathematical understanding by linking abstract parts of knowledge (Cai & Wang, 2010). They believe that memorization can come before or after understanding. Moreover, memorization before understanding can serve as an indirect step towards conceptual knowledge. Chinese teachers see effective teaching as teacher-led, with a clear and coherent structure, where the existing knowledge should be transferred accurately. The teachers see the teaching of the whole class as their main goal, whereby they provide equal opportunities for every student (Miao & Reynolds, 2018).

Teachers in Hong Kong consider mathematics a practical, logical, useful, and thought-provoking subject (Wong, 2007). Abstract thinking is considered to be one of the major goals of learning mathematics, and the teacher is the one who builds a path for students to move from concrete to abstract thinking. Learning and teaching for understanding are valuable, but teachers also see the role of remembering, practicing, and using concrete experiences in enhancing mathematics understanding. Teachers believe that a good relationship with students is also an indicator of effective teaching.

South Korean teachers believe that effective mathematics teaching incorporates lessons based on basic mathematical concepts and their connections (Pang, 2009). Korean teachers often focus on the meaningful development of mathematical content, rather than on adapting their approach to students (Pang, 2012). Highly individualized forms of teaching are less valued. One of the main features of effective teaching is a teacher with a high-quality knowledge of mathematics (Pang, 2009). When given a list of effective teaching features, elementary school teachers chose building curricula by selecting content as the most important feature.

According to Hsieh, Wang and Chen (2020), several different curriculum reforms have influenced the beliefs of Taiwanese mathematics teachers. Nowadays, teachers consider that effective teaching encourages the utilization of concrete materials and situations related to everyday life. Although formalism, symbolic representation, quick challenges and demands for a quality performance are still present, the emphasis on these factors has been significantly reduced.

Kaur (2009) investigated the characteristics of good mathematics teaching in Singapore and found that teaching is focused on both the teacher and the students. The teacher leads the teaching, but the emphasis is on the students' understanding of mathematics. Teachers believe that careful selection of examples that vary in complexity, from low to high, is a very important aspect of teaching, as well as supervising students' understanding. The students' knowledge of mathematics is enhanced and deepened by a thorough examination of their individual work (e.g. homework). The teachers also

highlight summarization of the key parts of a topic as being an important feature of effective teaching.

Japanese mathematics teachers form their teaching around problem-solving, where the main output is the mathematical concept or procedure (Corey, Peterson, Lewis & Bukarau, 2010). The teachers value detailed lesson planning as a key feature of effective mathematics teaching. The planning involves a thorough and detailed lesson flow, with clear goals (not just one, but several), the development of the lesson according to the overall learning path for a particular topic, the intellectual engagement of the students, and the adaptation of the lesson to the students' needs. Moreover, Japanese teachers consider that an effective teacher continuously reassesses enacted lessons and reflects on possible improvements.

3 Effective teacher – effective teaching of mathematics?

Teacher effectiveness is often measured by students' achievement on standardized tests. However, Knight et al. (2015) state that this perspective limits the qualities of effective teachers to skills that can be measured by achievement tests. Their recommendation is to define quality in terms of cognitive resources and performance, and to focus on the *quality of teaching*. These considerations place the focus on student performance, rather than on the characteristics of the teacher himself or herself. In describing the characteristics of effective teachers, Knight et al. (2015) suggest that the focus should be on the affective components of the teacher. An effective teacher would, therefore, show compassion, honesty and respect, enthusiasm, motivation, the right attitude toward teaching, would interact with students in and out of the classroom, and reflect on their teaching.

On the other hand, a teacher's effectiveness can also be assessed in the light of the expectations held by students. Martin and Rimm-Kaufman (2015) point out that ideal mathematics learning is not a passive process of remembering and using standard algorithms. Instead, students engage in reasoning, problem-solving, mathematical discussions with the teacher and other students to explore mathematical problems. A study by Rivkin, Hanushek & Kain (2005) found that students who are exposed to high-quality teaching have more significant and continuous achievement than their peers who are exposed to lower-quality teaching. Cruickshank and Haefele (2001) noted that good teachers, at various moments, were called ideal, analytical, dedicated, competent, professional, thoughtful, and respected.

If we view cognitive resources as indicators of quality, then it makes sense to focus on the teacher's knowledge. Research has shown that there exists a relation between a teacher's knowledge and students' mathematical achievement (e.g. Ball et al., 2008; Baumert et al., 2010; Hattie, 2003). Teachers need to know the mathematical content they teach from a more advanced perspective. Then, they need to know how the material connects to other mathematical domains that precede and follow the level at which they teach. Teachers who have a greater and deeper mathematical knowledge are more effective in teaching than those with superficial knowledge (Marshall & Sorto, 2012). More often such teachers encourage students to make inferences, assumptions and solve

problems, while at the same time they can diagnose misconceptions and errors more accurately and correct them more successfully (Kilpatrick et al. 2001).

The knowledge for teaching mathematics differs significantly from the mathematical knowledge possessed by experts in other disciplines related to mathematics (Hill, Ball & Schilling, 2008). This knowledge is called *mathematical knowledge for teaching* (Hill & Ball, 2004) or *mathematics teacher's specialized knowledge* (Carrillo-Yañez et al., 2016). The knowledge which an effective mathematics teacher possesses consists of several interconnected subdomains: knowledge of mathematical topics, knowledge of the structure of mathematics, knowledge of mathematical practices, knowledge of mathematics teaching, knowledge of features of mathematics learning and knowledge of mathematical learning standards (Carrillo-Yañez et al., 2016).

In other words, mathematics teachers need to integrate pedagogical and mathematical knowledge into a meaningful whole. They need to know not only the content they are supposed to teach, but also how students learn, develop their mathematical knowledge and how their knowledge is structured; how to relate different representations of mathematical concepts; how to make students' understanding of mathematics visible; how to diagnose student errors and misconceptions; how to develop procedural knowledge from a conceptual knowledge of mathematics (Hill, Ball & Schilling, 2008). Moreover, the teachers need to evaluate which curricular resources are useful for teaching mathematical concepts, what metaphors and scenarios are appropriate, and how to use mathematical language appropriately.

However, knowledge alone is not enough for effective performance. Possessing specialized knowledge for teaching is in some ways static, which is why Brown (2009) proposed a dynamic construct – pedagogical design capacity. Brown perceives pedagogical design capacity as a skill necessary to identify and mobilize existing resources to craft effective teaching episodes. Pedagogical design capacity contains the specialized knowledge of mathematics teachers within itself. This construct is useful for evaluating a teacher's performance; not just whether the teacher has specialized knowledge for teaching mathematics, but also how he or she uses it in teaching.

How can the quality of mathematics teachers be viewed in the context of East and West? The Eastern approach puts teaching practice at the forefront and views the teacher's knowledge as a part of integrated expertise, therefore in a holistic way. Cai et al. (2009) point out that Asian teachers are oriented toward a thorough understanding of mathematical content and planning a well-structured lesson. In Western countries, the teacher's knowledge is an important part of teacher competence, but it is viewed as a stand-alone component of teacher expertise (Kaiser & Li, 2011). Other components of teacher expertise are beliefs and teacher performance. Thus, teachers from the US and Europe tend to be more oriented toward students as individuals, placing them in the center of the teacher's actions; student learning is viewed individually and is a major goal of classroom activities.

4 Features of effective teaching

It has long been debated whether teaching should be entirely teacher-centered or student-centered. There is evidence that both approaches are effective in achieving some outcomes of mathematics teaching (e.g. teacher progress in classroom discussions, achievement of mathematical norms in the classroom, learning of specific topics). However, high-quality research does not support the exclusive use of any approach, that is, that teaching should be entirely student- or teacher-focused (e.g. Clarke, 2006; Kilpatrick et al., 2001; Wong, 2004). For example, Gersten et al. (2009) recommend a 10-minute direct teaching of elementary school students so they can quickly arrive at arithmetic facts, but the authors also propose that teachers allow students to solve problems in a group, to collaborate and create joint problem-solving strategies.

Anthony and Walshaw (2009) point out that effective teaching of mathematics implies the belief that all students, regardless of age, can develop positive mathematical identities and become successful in mathematics. They also believe that effective teaching is based on interpersonal respect and empathy and that such teaching responds to the multiplicity of cultural heritage, thought processes and realities found in classrooms. Further, they claim that effective teaching is focused on optimizing desirable learning outcomes, like mathematical proficiency, and is committed to enhancing a range of social outcomes within the mathematics classroom, such as contributing to the holistic development of students for productive citizenship.

However, Krainer (2005) points out that teaching is a complex process. The different stakeholders in education, from students to policy makers, should be co-constructors of the norms that determine quality mathematics teaching. Krainer also believes that norm-building should not be based only on teachers' beliefs, or rigorously imposed by researchers, but the result of negotiation and decision-making – in the classroom, development teams, teacher education programs, publications that describe the vision and goals of teaching. Researchers' suggestions should include norms for quality mathematics teaching that have emerged from research and are supported by evidence. But the standards created must serve as a starting point for discussion and agreement between scholars, teachers, and policy makers.

Country-specific organizations, associations and institutions (e.g. Australia (Sullivan, 2011), USA (NCTM, 2014), Singapore (MOE, 2019), China (MOEPRC, 2011; Huang & Li, 2014), Germany (MSW, 2008), UK (NCETM, 2007), Canada (Sinay & Nahornick, 2016)) have produced documents that contain lists of features of effective mathematics teaching.

Although the documents do not have exactly the same number of features, the descriptions reveal common ideas, based on theoretical assumptions and the long-term results of qualitative and quantitative research among mathematics teachers and students in elementary and high schools. In this paper, a synthesis of the features of effective mathematics teaching is provided from the above-mentioned documents.

Features of effective mathematics teaching include the following recommendations:

- *Determine the mathematical goals that guide learning.* The mathematics that students learn in school requires clear goals. It is also important to set goals for the whole learning path of a particular topic. Those goals should be used to guide the teaching process.
- *Build on the knowledge that students bring to the classroom*. Effective teachers should assess and use students' prior knowledge and tailor teaching to students' needs. Students' new knowledge needs to be built on prior experience, both mathematically and experientially, by linking to stories that provide context and reason for learning.
- *Implement tasks that promote reasoning and problem-solving*. Students need to be involved in problem-solving and in the discussion of tasks that promote mathematical reasoning, allow multiple entry points and diverse problem-solving strategies. Students should be encouraged to do the activities offering them rich and challenging tasks, which:
    - Enable decision making;
    - Involve students examining assumptions, proving, explaining, reflecting, interpreting;
    - Promote discussion and communication;
    - Encourage originality and discovery;
    - Raise What if? and What if not? questions;
    - Contain an opportunity for surprise.
- *Use and connect mathematical representations*. Teachers should encourage students to represent mathematical content in various ways (words, drawings, diagrams, graphs, lists, tables, numbers, symbols, etc.) and to make connections to deepen their understanding of mathematical concepts and procedures, as well as tools for problem-solving.
- *Facilitate meaningful mathematical discussions*. Classroom discussions on mathematical topics are an important tool for knowledge building and developing understanding. Teachers should facilitate discussion with and among students to build a common understanding of mathematical ideas, analyzing and comparing student approaches and arguments.
- *Expose students to common misconceptions and mistakes*. Learning activities should expose students' current thinking, should make students aware of inconsistencies in their knowledge, and should create opportunities for students to correct misconceptions.
- *Differentiate challenges*. Teachers need to assist those students who need additional support and need to provide challenges to those who are ready for them.
- *Build procedural knowledge from conceptual understanding*. Procedural knowledge needs to be built with conceptual understanding so that over time students become skilled and flexible in using procedures and algorithms while solving contextual and mathematical problems. Procedural knowledge can be developed by the short daily practice of mental processes and, through practice, the transfer of learned skills can be strengthened and encouraged.

- *Encourage collaboration*. The teacher should encourage collaboration among students. Effective teachers use collaborative work in small groups to help students discuss important ideas. This has positive effects on learning, social skills and self-esteem.
- *Use technology*. Effective teachers use technology to present mathematical concepts in dynamic, visually appealing ways that motivate students and encourage them to work. Technology is also useful for collaborative learning.

Unlike in documents originating from Western countries, for example, the US or the UK, the term direct teaching is highlighted in the Singapore Mathematics Curriculum (MOE, 2019), which explicitly states that: "The engagement phase can include one or more of the following: activity-based learning; inquiry-based learning; direct instruction." (p. 37). A typical and socially accepted feature of Chinese mathematics teaching today is teacher-centered and student-focused teaching, which is under the control of the teacher most of the time, and in which a significant amount of time is spent on teacher-student interaction and students' independent work (Cao, Dong & Li, 2018).

Therefore, one may ask what the basis of the judgment of good or efficient mathematics teaching is. This question was raised by Jaworski (1999), who asked in what ways forms of teaching practice, recognized as good or effective, reflect the theoretical propositions suggested by researchers. Furthermore, Jaworski points out that a too narrow understanding of theoretical perspectives results in "ridiculous stances, such as, for example, the so-called 'constructivist' pedagogy in which the teacher never engages in explanation or exposition because it would be understood as 'transmission teaching'" (p. 200). Moreover, Hiebert and Grouws (2007) reviewed research evidence on the impact of some teaching forms and strategies on student learning conducted in the United States since the 1930s. They found that learning features that include basic skills development and conceptual understanding do not fit neatly into categories such as exposure or discovery, direct teaching versus research-based teaching, student or teacher-focused teaching, traditional teaching versus reform-based teaching. In fact, the effectiveness or inefficiency of specific methods and strategies depend on what the learning goals are (McNaught & Grouws, 2007).

Kaasila & Pehkoken (2009) note that when talking about effective mathematics learning, it is reasonable to separate the development of basic skills from problem-solving competencies because those types of knowledge are developed in different ways; one is practiced to the level of automation, and the other rests on connecting conceptual knowledge. Moreover, the authors offer a definition of effective mathematics teaching: mathematics teaching is effective when it promotes students' performance as best as possible, i.e. when students' basic skills and conceptual understanding are optimally developed.

5 Conclusion

The aim of this paper was to provide an overview of effective mathematics teaching and its features as well as teacher beliefs of what constitutes effective teaching. The literature review shows that despite the fact that features of effective teaching have

been identified, it is not possible for mathematics lessons in different countries to be the same. Lessons have the cultural characteristics of the country in which they are taught. Teachers' beliefs on effective mathematics teaching also provide similar evidence. For example, in China and Hong Kong, teachers emphasize the importance of building an abstract mathematical knowledge in their teaching, while US and Australian teachers see mathematics as a useful tool for solving everyday problems. In three European countries, teachers' attitudes are completely different: French teachers' beliefs are similar to those of East Asian teachers, English teachers promote an understanding of mathematics in line with Australian and American teachers, and teachers' beliefs in Germany are somewhere in the middle. Authors of studies from the East highlight the emerging influence of the constructivist paradigm on Eastern mathematics teaching. Moreover, the constructivist paradigm of teaching changes Eastern teachers' perspectives on effective and quality teaching (e.g. Pang, 2012; Hsieh, Wang & Chen, 2020; Miao & Reynolds, 2018). Studies examining how teachers in Russia, Latvia, and Estonia perceive effective teaching have also indicated a change in their paradigm of teaching toward constructivist teaching (Kardanova et al., 2014; Šapkova, 2014). The results of this review indicate that the cultural context plays an important role in shaping effective teaching. Teachers, if they accept the constructivist paradigm, continue to design teaching in accordance with the norms of the culture in which they are located.

The characteristics of effective mathematics teaching are, to a certain extent, consistent with teachers' beliefs about what constitutes quality teaching. But the way these features are intertwined and achieved in a classroom is also conditioned by the cultural context. For example, students in East Asia are extremely successful in international mathematics studies such as TIMSS and PISA, and, on the other hand, various studies show that teaching mathematics in these countries is quite traditional (Leung, Park, Shimizu & Xu, 2015). Problem-solving stands out as a feature of effective teaching across cultures, but in East Asian countries, problem-solving takes a completely different form than problem-solving in, for example, the United States and Australia. In Western countries, when solving problems, the emphasis is on processes, while in East Asian countries, the emphasis is on the product of that solution (Corey, Peterson, Lewis & Bukarau, 2010).

Effective teaching requires a quality teacher with a high level of pedagogical design capacity to implement the features of effective teaching adequately. Also, the results of this paper can serve as a starting point for reforms and changes in mathematics teaching. The reform and improvement of teaching practice should take into account the impact of historical heritage and cultural beliefs. Teachers' beliefs about mathematics, the teaching and learning of mathematics are crucial for achieving quality teaching, so their beliefs are of great importance in reforming the educational process. Therefore, it is desirable to know how mathematics teachers see effective teaching, how it relies on the historical tradition of mathematics teaching, what is useful in that tradition, how it can be preserved, and how to fix what does not work. This approach does not impose strategies that conflict with the cultural heritage of a certain country nor does it determine specific strategies that must be used to improve mathematics teaching.

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Značilnosti učinkovitega poučevanja matematike

Zaradi vse večjega pomena mednarodnih primerjalnih študij, kot sta TIMSS ali PISA, sta znanje učiteljev matematike in njihov vpliv na razvoj znanja učencev postala še posebej zanimiva. Tako dosežki učencev iz matematike postajajo tema izobraževalnih politik v državah po vsem svetu, ki rezultate PISA in TIMSS uporabljajo bolj ali manj učinkovito za prepoznavanje težav v izobraževalnem sistemu in za izboljšanje kakovosti poučevanja. Koncept znanja matematike lahko služi kot izhodišče za razmislek o kakovosti pouka matematike. Z opazovanjem je mogoče evalvirati obstoječe poučevanje in določiti, katere dele pouka je treba izboljšati, da lahko učenci razvijejo matematično znanje.

Za učinkovito poučevanje matematike se pogosto uporabljajo sinonimi dober pouk ali kakovostno poučevanje. Univerzalne definicije dobrega ali učinkovitega poučevanja matematike ni. Pogledi na te koncepte so v veliki meri odvisni od izobraževalnih tradicij in vrednot v različnih državah, pa tudi od prepričanj učiteljev matematike (npr. Cai in sod., 2009; Jaworski, 1999). Zato odgovor na vprašanje "Kaj je učinkovito poučevanje matematike?" ni enostaven. Odvisno je tudi od osebe, na katero je naslovljeno vprašanje. Učitelji, znanstveniki, politiki, starši, vsi imajo svojo vizijo, kaj je dobro poučevanje matematike in kaj ne. Kljub temu je pojem kakovostnega poučevanja pomemben, saj pomembno vpliva na izobraževalne politike, oblikovalske odločitve in raziskave o učenju.

Učiteljeva prepričanja, znanje, mnenja in odločitve pomembno vplivajo na dogajanje v učilnici (Peterson in sod., 1989). Način, kako učitelj razume in doživlja matematiko, vpliva na njegovo poučevanje matematike (Ernest, 1989).

Cai & Wang (2010) poudarjata pomen kulturnega konteksta, ki omogoča razvoj navad in oblikovanje predpostavk o učinkovitem poučevanju matematike. Zato je treba ugotoviti, kaj vključuje učinkovito poučevanje in kako si ga učitelji predstavljajo, smiselno je proučiti tudi kulturni kontekst, iz katerega učitelj prihaja. Ideja, da prepričanja učiteljev in njihovo razumevanje vpliva na učiteljsko prakso, ni nova (Cai, 2005; Miao in Reynolds, 2018; Perry, Wong in Howard, 2006; Stigler in Hiebert, 1999). Dejansko učitelji svoje kulturno prepričanje vidijo kot normativni okvir vrednot in ciljev, ki vodijo poučevanje (Rogoff, 2003).

Izraz Vzhodna Azija se nanaša na države ali izobraževalne sisteme, kot so Kitajska, Hong Kong, Japonska, Koreja, Tajvan in Singapur, medtem ko se Zahod nanaša na države Severne Amerike, Evrope in Avstralije. Različni raziskovalci označujejo, da Vzhod in Zahod predstavljata kulturno in ne geografsko mejo, s konfucijsko tradicijo na Vzhodu in grško/latinsko/krščansko kulturo na Zahodu (npr. Leung in sod., 2015). Čeprav ta ločitev ni povsem upravičena, je uporabna v okviru te študije. Konfucijanski pristop na primer verjame, da je učenje trdo delo in da učenje ne sme biti zabavno (Leungin sod., 2015). Glavna značilnost konfucijanskega pristopa je družbena usmerjenost, ki je nasprotna individualni usmeritvi, ki jo običajno najdemo v zahodnih družbah. Poučevanje celega razreda, kjer ima učitelj prevladujočo vlogo, se v vzhodnoazijskih državah šteje za zelo pomembno, za razliko od individualizacije, ki je prisotna v zahodnih državah in poudarja neodvisnost ter individualizem pri učenju (Leung, 2001). Razlika je opazna tudi, če pogledamo, kako učitelji gledajo na matematiko. Za kitajske učitelje je resnična lepota

matematike v možnostih posploševanja in logične povezanosti, zato je treba zavrniti vsako rešitev, ki ne vodi do splošnosti. Ameriški učitelji poudarjajo pragmatično plat matematike: dokler nekaj deluje, lahko učenci izberejo vse vrste predstavitev matematičnih konceptov in vse strategije (Cai in Wang, 2010).

Ko gre za učinkovitost učitelja, se ta lastnost pogosto meri z dosežkom učencev na standardiziranih testih. Vendar pa Knight in sod. (2015) navajajo, da takšna perspektiva omejuje lastnosti učinkovitih učiteljev samo na veščine, ki jih je mogoče meriti s preizkusi znanja. Njihovo priporočilo je, da se določi kakovost v smislu kognitivnih virov in uspešnosti ter se osredotoči na kakovost poučevanja, ki je povezana z učenjem učencev, ne pa na lastnosti učitelja samega. Kako si lahko ilustrirate kakovost učiteljev matematike v kontekstu Vzhoda in Zahoda? Vzhodni pristop v ospredje postavlja učiteljsko prakso in učiteljevo znanje obravnava kot del celostnega strokovnega znanja, torej na celovit način. Cai in sod. (2009) poudarjajo, da so azijski učitelji usmerjeni k temeljitemu razumevanju matematičnih vsebin in načrtovanju dobro strukturiranega pouka. V zahodnih državah je znanje učitelja pomemben del učiteljeve kompetence, vendar ga obravnavamo kot samostojno komponento strokovnega znanja učiteljev (Kaiser in Li, 2011). Druge komponente strokovnega znanja učiteljev so prepričanja in uspešnost učiteljev. Tako so učitelji iz ZDA in Evrope bolj usmerjeni k učencem kot posameznikom, zato jih postavljajo v središče učiteljevega delovanja; učenje učencev se obravnava individualno in je glavni cilj dejavnosti v učilnici.

Zelo dolgo se je razpravljalo o tem, ali naj bo poučevanje v celoti usmerjeno v učitelje ali učence. Za vsak pristop poučevanja matematike obstajajo dokazi o njegovi učinkovitosti (npr. napredek učitelja v razpravah v učilnici, doseganje matematičnih norm v učilnici, učenje določenih tem). Raziskovalci ne podpirajo izključne uporabe posameznega pristopa, tj. da mora biti poučevanje v celoti usmerjeno v učence ali učitelje (npr. Clarke, 2006; Kilpatrick in sod., 2001; Wong, 2004). Anthony in Walshaw (2009) poudarjata, da učinkovito poučevanje matematike pomeni, da lahko vsi učenci, ne glede na starost, razvijejo pozitivno matematično identiteto in postanejo uspešni pri matematiki. Prav tako verjameta, da učinkovito poučevanje temelji na medosebnem spoštovanju in empatiji ter vključuje množico kulturne dediščine, miselnih procesov in realnosti, ki obstajajo v učilnici.

Organizacije, združenja in ustanove so za posamezne države pripravile dokumente, ki vsebujejo sezname značilnosti učinkovitega poučevanja matematike. V tem prispevku ponujamo sintezo značilnosti učinkovitega pouka matematike iz strokovnih dokumentov:

- *Določitev matematičnih ciljev, ki vodijo učenje: Matematika, ki se jo učenci učijo v šoli, zahteva jasne cilje. Pomembno je tudi izbrati cilje iz učnega načrta za celotno učno pot določene teme. Te cilje je treba uporabiti za vodenje učnega procesa.*
- *Nadgradnja znanja, ki ga učenci prinesejo v učilnico: Učinkoviti učitelji bi morali oceniti in uporabiti predhodno znanje učencev in prilagajati pouk njihovim potrebam. Novo znanje učencev je treba graditi na predhodnih izkušnjah, tako matematično kot izkustveno, s povezovanjem z zgodbami, ki zagotavljajo kontekst in razlog za učenje.*
- *Izvajanje nalog, ki spodbujajo sklepanje in reševanje problemov: Učenci morajo biti vključeni v reševanje problemov in diskusijo o nalogah, ki spodbujajo matematično sklepanje in omogočajo raznolike strategije reševanja problemov. Učence je treba spodbujati k izvajanju dejavnosti in jim ponujati raznolike in zahtevne naloge, ki omogočajo odločanje, vključujejo učence v preučevanje predpostavk, dokazovanje, razla-*

go, razmišljanje, razlago, spodbujajo razpravo in komunikacijo, spodbujajo izvirnost in odkritje, zastavljajo vprašanja "Kaj če?" in "Kaj če ne?", vsebujejo priložnost za nepredvideno rešitev.

- *Uporabljanje in povezovanje matematičnih predstavitev: Učitelji naj učence spodbujajo k raznolikemu predstavljanju matematičnih vsebin (besede, risbe, diagrami, grafi, seznami, tabele, številke, simboli itd.) in k povezovanju znanja s ciljem poglabljanja razumevanja matematičnih konceptov in postopkov ter orodij za reševanje problema.*
- *Olajševanje smiselnih matematičnih razprav: Razprave v učilnici o matematičnih temah so pomembno orodje za gradnjo znanja in razvijanje razumevanja. Učitelji bi morali olajšati razpravo z učenci in razpravo med njimi, da bi zgradili skupno razumevanje matematičnih idej, analizirali in primerjali učenčeve pristope in argumente.*
- *Opozarjanje učencev na pogoste napake: Učne dejavnosti bi morale v ospredje postaviti razmišljanje učencev, učence soočiti s pomanjkljivostmi v njihovem znanju in ustvarjati priložnosti za odpravo napačnih predstav.*
- *Razlikovanje izzivov: Učitelji morajo pomagati tistim učencem, ki potrebujejo dodatno podporo, in izzive ponuditi tistim učencem, ki so na to pripravljeni.*
- *Gradnja postopkovnega znanja iz konceptualnega razumevanja: Proceduralno znanje je treba graditi s konceptualnim razumevanjem, tako da bodo učenci sčasoma postali usposobljeni za uporabo postopkov in algoritmov pri reševanju kontekstualnih in matematičnih problemov. Proceduralno znanje lahko razvijemo s kratko dnevno vadbo miselnih procesov, s pomočjo prakse pa lahko okrepimo in spodbudimo prenos naučenih veščin.*
- *Spodbujanje sodelovanja: Učitelj naj spodbuja sodelovanje med učenci. Učinkoviti učitelji načrtujejo delo učencev v majhnih skupinah, da jim pomagajo razpravljati o pomembnih idejah. To ima pozitivne učinke na učenje, socialne veščine in samozavest.*
- *Uporaba tehnologije: Učinkoviti učitelji uporabljajo tehnologijo za predstavitev matematičnih konceptov na dinamične, vizualno privlačne načine, ki motivirajo učence in jih spodbujajo k delu. Tehnologija je uporabna tudi za sodelovalno učenje.*

Značilnosti učinkovitega pouka matematike so do neke mere skladne s prepričanjem učiteljev o tem, kaj je kakovostno poučevanje. Toda način, kako se te lastnosti prepletajo in dosegajo v učilnici, je pogojen tudi s kulturnim kontekstom. Študenti v Vzhodni Aziji so na primer izjemno uspešni v mednarodnih študijah matematike, kot sta TIMSS in PISA, po drugi strani pa razne študije kažejo, da je poučevanje matematike v teh državah precej tradicionalno (Leung in sod., 2015). Reševanje problemov je značilno za učinkovito poučevanje med kulturami, v vzhodnoazijskih državah ima reševanje problemov popolnoma drugačno obliko kot reševanje problemov na primer v ZDA in Avstraliji. V zahodnih državah je poudarek na procesih pri reševanju problemov, medtem ko je v vzhodnoazijskih državah poudarek na izdelku te rešitve (Corey in sod., 2010).

Za učinkovito poučevanje je potreben kakovosten učitelj z visoko stopnjo pedagoškega znanja, da lahko ustrezno izvaja pouk z značilnostmi učinkovitega poučevanja. Tudi rezultati tega prispevka lahko služijo kot izhodišče za reforme in spremembe pri pouku matematike. Pri reformi in izboljšanju učne prakse bi bilo treba upoštevati vpliv zgodovinske dediščine in kulturnih prepričanj. Stališča učiteljev o matematiki, poučevanju in učenju matematike so ključnega pomena za doseganje kakovostnega pouka, zato je njihovo prepričanje zelo pomembno pri oblikovanju smernic za reforme izobraževal-

nega procesa. Zato je zaželeno vedeti, kako učitelji matematike pojmujejo učinkovito poučevanje, kako se opirajo na zgodovinsko tradicijo pouka matematike, kaj je koristno v tej tradiciji, kako jo lahko ohranimo in kako lahko popravimo tisto, kar ne deluje.

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Raznolikost relacij na jezikovnih repertoarjih petošolcev

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KLJUČNE BESEDE: jezikovni portreti, večjezičnost, prvi in drugi jezik, tuji jeziki, kvalitativna analiza

POVZETEK – Prispevek predstavlja kvalitativno analizo komentarjev jezikovnih portretov petošolcev. Rezultati analize kažejo, da učenci v komentarjih izpostavljajo jezike (J1, J2 ali TJ), s katerimi se identificirajo, jih zelo dobro obvladajo in jih povezujejo s pozitivnimi konotacijami ter čustvenimi relacijami, pogosto povezanimi s svojim poreklom. Učenci znajo oceniti pomen obvladanja jezikovnih spretnosti v svojem vsakdanjiku, kar tudi problematizirajo skozi perspektivo lastnega (ne)uspeha pri usvajanju in učenju nekega jezika, lahko po posameznih jezikovnih spretnostih. O jezikih reflektirajo metajezikovno s stališča podobnosti, glasoslovja in družbene vloge jezika, izražajo pa tudi svoje želje, kar zadeva učenje jezikov. Rezultati analize kažejo tudi osebne, kulturne ali geografske izvenjezikovne dejavnike, ki utemeljujejo, spodbujajo ali pogojujejo želje po učenju jezikov. Učenci vidijo svet jezikov kot odprt prostor, v njem izražajo svoje želje, zavedajo se svojih jezikovnih kompetenc. To odprto gledanje je lahko izhodišče za jezikovno in šolsko politiko, kar zadeva izbor jezikov. Učenci nam z jezikovnimi portreti sporočajo, kaj je v njihovem jezikovnem življenju pomembno.

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ABSTRACT – In this article we present a qualitative research of language portraits' comments from fifth grade students. Results show that students cite languages with which they identify, which they master, and which they connect with positive connotations and emotional relations, often in connection with their ethnic origin. The students assess their language skills in everyday life, which they also problematize from the perspective of their own success in acquiring or learning a language, as well as regarding their individual language skills. They reflect metalinguistically on the languages from the perspectives of similarities, phonology and the social role of languages, and they also express their wishes regarding the choice of languages to be learned. The results also show personal, cultural or geographical non-linguistic factors which justify, encourage or condition the desire to learn languages. The students see the world of languages as an open space, in which they express their wishes and are aware of their language skills. This open view can be a starting point for language and school policy concerned with the choice of languages. The analyzed language portraits tell us what is important in the students' world of languages.

1 Uvod

V članku predstavljamo rezultate analize jezikovnih portretov, orodja, ki ga lahko uporabimo, če želimo ugotavljati različne relacije neke ciljne skupine do jezikov v njihovem življenju. Članek je del raziskav v okviru projekta "Jeziki štejejo" (OP20.01463, 2017–2022), kar je pogojevalo izbor osnovnih šol. Zaradi primerljivosti so v vseh udeleženih OŠ svoje jezikovne portrete izdelovali učenci petih razredov. Osnovna raziskovalna vprašanja analize raziskave so, kako učenci pojmujejo večjezičnost, katere jezike izbirajo, v kakšen odnos jih postavljajo med seboj in kako svoj izbor pojasnjujejo.

Nabor OŠ iz projekta "Jeziki štejejo" obsega šole v več regijah Slovenije, tudi nekatere iz obeh narodnostno mešanih območij. V pričujočem prispevku predstavljamo kvalitativno analizo jezikovnih portretov, in sicer komentarjev jezikovnih portretov, kot so jih zapisali petošolci. Ob tem bomo nekatere ugotovitve primerjali tudi s kvantitativno analizo, predstavljeno v Tibaut in Lipavic Oštir (2020), osredotočeno na primerjavo med jezikovnimi portreti učencev iz narodnostno mešanih območij in drugimi.

2 Jezikovni portreti – preprosto in zapleteno raziskovalno orodje

Jezikovni portreti so na prvi pogled preprosto raziskovalno orodje. Gre za list papirja, na katerem je skicirana silhueta človeškega telesa, desno od nje pa so prazni okvirčki za legendo. Navodila za izdelavo jezikovnega portreta nakazujejo zapletenost uporabe, saj določajo dve pravili (izdelaj svoj jezikovni portret tako, da dele telesa različno obarvaš, pri tem vsaka barva predstavlja en jezik, kar zapišeš ob legendi), obenem pa odpirajo odprt prostor (svoj izbor lahko pojasniš). Odprtost koncepta predstavljajo tako simbolni pomeni določenih delov telesa kot tudi zaporedje navedenih jezikov v legendi. Kakšen je namen tega raziskovalnega orodja?

Ideja o jezikovnih portretih je bila razvita z namenom raziskovanja in praktičnega dela z otroki migrantov v nemško govorečih deželah, predvsem zato, da bi spodbujali jezikovno zavedanje (Neumann, 1991; Krumm in Jenkins, 2001), kar je izhodišče za to, da začnemo razvijati pozitivne podobe jezikov teh otrok in s tem izboljšamo njihov položaj v skupinah. Ozadje tega je dejstvo, da se usvajanje jezikov in jezikovna raba odvijata vedno v konkretnih socialnih in zgodovinsko-biografskih situacijah. To pomeni, da gre za menjavanje individualnih, pogosto čustveno določenih ravnanj in družbenih struktur, ki taka jezikovna ravnanja podpirajo ali pa otežujejo (Krumm, 2010), pri čemer so ta razmerja še posebej zapletena pri tistih skupinah, ki se soočajo z dnevnim menjavanjem jezikovnega koda. Če se navežemo na model jezikovnega kapitala (Brizić, 2007), lahko opozorimo na to, da jezikovna praksa staršev, ki jo negujejo z otroki, vpliva na otrokovo jezikovno izhodišče in identiteto. S tem, ko otroci iz družin migrantov večkrat menjavajo med različnimi komunikacijskimi prostori (družinski jeziki, jeziki okolja, učni jeziki idr.), se razvijajo v izredno različne in dinamične večjezične individuume (Krumm, 2010). Posamezni jeziki se torej povezujejo z različnimi komunikacijskimi prostori, kar ugotavlja tudi Franceschini (2001), ki razlikuje med centralnimi jeziki in jeziki periferije. Centralni jeziki so tisti jeziki, s katerimi se otroci najbolj identificirajo, jeziki periferije pa so jeziki, ki sicer igrajo neko vlogo v njihovem vsakdanu (npr. tuji jeziki, ki se jih učijo), ampak zanje niso centralni. V samem učnem procesu jeziki periferije zavzamejo centralno pozicijo, tako da imajo jeziki periferije spreminjajočo se vlogo v otrokovem vsakdanu.

V raziskovanju večjezičnosti poznamo več različnih orodij in med najpogosteje uporabljenimi so jezikovne biografije, ki pa kot take niso primerne za vse starostne skupine, npr. za otroke. Ravno zato predstavljajo jezikovni portreti nekakšno pot do jezikovnih biografij, saj lahko z njimi otroci spontano izrazijo svoj odnos do jezikov v njihovem življenju. S pomočjo jezikovnih portretov se otrokom tako omogoči, da v raziskavi zavzamejo aktivno vlogo; tradicionalno so namreč otroci in mladostniki v

raziskavah v bolj pasivni vlogi (Štemberger, 2019, str. 5). Jezikovni portreti na ta način služijo "kot konstruktivistično orodje, ki pomaga vključenim pri opisovanju in analizi svojih izkušenj in pripisovanju pomena (prav tam, str. 8)". Razen tega imajo še druge prednosti, tudi to, da jih je možno uporabiti kot izhodišče za vrsto didaktičnega gradiva za delo v razredu (prim. Galling, 2011). Dosedanje analize jezikovnih portretov obsegajo določanje tipov portretov (Krumm, 2003, 2010) ali pa interpretacije komentarjev, ki jih učenci ob portretih zapišejo. Do danes ne poznamo kvalitativne analize jezikovnih portretov, ki bi vsebovala vsebinsko kodiranje ali katero drugo metodo, uveljavljeno v kvalitativnem raziskovanju. Jezikovni portreti se uporabljajo tudi izven nemško govorečega prostora (projekti, izobraževanja, delavnice v Skandinaviji, Kanadi, Avstraliji, prim. Busch, 2011), in to pogosto na šolah, kjer je delež otrok iz družin migrantov sorazmerno velik. Kot raziskovalno orodje, ki predstavlja samostojen pristop v raziskovanju jezikovnih biografij, so jezikovni portreti uporabni ne samo v teh, ampak v vseh okoljih, kadar želimo raziskovati odnos do jezikov in spodbujati zavedanje o jezikih.

3 Podatki o raziskavi in raziskovalna vprašanja

V raziskavo so bili vključeni petošolci naslednjih osnovnih šol: DOŠ Dobrovnik, DOŠ Lendava, OŠ Fokovci, OŠ Franca Rozmana Staneta Maribor, OŠ Janka Padežnika Maribor, OŠ ob Dravinji (Slovenske Konjice), OŠ Ivana Cankarja Trbovlje, OŠ Milana Šuštaršiča (Ljubljana), OŠ Ivana Groharja (Škofja Loka), OŠ Draga Bajca Vipava, OŠ Koper, OŠ Dante Alighieri Izola. Jezikovni portreti so bili izdelani pri pouku različnih predmetov. Učiteljice so učencem izročile liste z obrisom telesa, sicer pa jim niso posredovale nobenih dodatnih navodil oz. jim karkoli predlagale. Število vseh jezikovnih portretov je 542, od tega je 89 učencev in učenk (16,52 %) ob portretu napisalo tudi komentar, v katerem pojasnjujejo svoje odločitve. Vsi jezikovni portreti so bili kvantitativno analizirani (gl. Tibaut in Lipavic Oštir, 2020) z uporabo statističnega programskega paketa SPSS.

V nadaljevanju predstavljamo vsebinsko kodiranje zapisov učencev ob jezikovnih portretih, kar pa deloma dopolnjujemo s kvantitativnimi podatki iz analize avtorjev Tibaut in Lipavic Oštir (2020). Metodološko izhajamo iz študije primerov in kot metodo obdelave podatkov izberemo kvalitativno vsebinsko analizo. Za metodo študije primerov je izbrana, ker je ta posebej uporabna, kadar raziskujemo določeni fenomen in kontekst, v katerem se ta fenomen pojavlja (Yin, 2014). Uporabili bomo študijo več primerov, saj želimo raziskati stališča učencev. Kvalitativna vsebinska analiza je dobro uveljavljena raziskovalna metoda ter primerna za analizo večje količine kvalitativnih podatkov, ki smo jih v našem primeru pridobili iz komentarjev jezikovnih portretov. V komentarjih smo s sistematičnim procesom kodiranja enot gradiva iskali značilne kode, ki ilustrirajo proučevani fenomen, ter jih nato povezali med seboj in oblikovali teoretične pojasnitve (Zhang in Wildemuth, 2009). Kodiranje gradiva je bil osrednji del kvalitativne vsebinske analize, med kodiranjem smo določali pomen posameznim delom besedila v komentarjih. Osnovni namen iskanja kod ni bil v preštevanju števila pojavitev ene kode. Kode smo po načelu podobnosti združili v kategorije, kategorije pa v teme. Pri procesu kodiranja smo uporabili induktivni pristop, kar pomeni, da si pred samim

kodiranjem nismo pripravili seznama kod, temveč smo kode izpeljali neposredno iz podatkov med analizo besedila. Induktivni pristop je primeren za proučevanje fenomena, ki še ni bil predhodno dobro raziskan (Vogrinc, 2008). Med postopkom kodiranja so se oblikovali natančni kriteriji za pripadnost kodi, kategoriji oz. temi. Za ojačenje veljavnosti in zanesljivosti rezultatov smo izbrali navajanje konkretnih izjav udeležencev, kar je tudi sicer običajna praksa v tovrstnih raziskavah (Hesse-Biber, 2004).

Raziskovalna vprašanja kvalitativne analize utemeljujemo z naslednjimi raziskavami: kvantitativna analiza istih jezikovnih portretov (Tibaut in Lipavic Oštir, 2020), izsledki analize jezikovnih kart, narejenih na srednjih šolah v okviru projekta "Jeziki štejejo" (Lipavic Oštir in Gartner, 2019), in razumevanje identificiranja z jeziki v sodobnem jezikoslovju. Med raziskavami do sedaj nismo zasledili kvalitativnih analiz jezikovnih portretov z metodo vsebinskega kodiranja.

Zastavljamo si naslednja raziskovalna vprašanja:

- Kako se kaže identifikacija z jezikom(-i)?
- V kakšni korelaciji so učenje jezikov, njihova raba oz. uporabnost ter nejezikovni dejavniki?
- Katere kriterije uporabljajo učenci za izbor barv za posamezne jezike in kako so s tem povezani deli telesa?

V nadaljevanju predstavljamo rezultate kvalitativne analize, nato sledi diskusija glede na raziskovalna vprašanja.

4 Rezultati kvalitativne analize

Po navodilih za izdelavo jezikovnih portretov je bilo učencem prepuščeno, ali bodo dodali komentar. Za to se je odločilo sorazmerno malo učencev (89 oz. 16,52 %) in distribucija teh komentarjev je glede na posamezne osnovne šole zelo različna – tako ne moremo ugotavljati, da so učenci določenih šol zapisali komentarje, drugi pa ne.

Vsi komentarji so bili vsebinsko kodirani, pri tem je bilo označenih 85 kodov, ki smo jih združili v kategorije (13). Vsako kategorijo smo vsebinsko opisali in izbrali navedbe iz komentarjev jezikovnih portretov, ki jo ustrezno ilustrirajo. Navedbe so izbrane glede na vsebinsko kodiranje, deloma pa tudi glede na zastopanost jezikov, saj kljub temu, da se posamezni jeziki pojavljajo različno intenzivno, raznolikosti nabora ne moremo prezreti. Navedb nismo jezikovno spreminjali, tudi lektorirane niso. Vsebinsko kodiranje izbora barv za določene jezike, tudi v povezavi z deli telesa, je predstavljeno posebej.

K1: jezik identifikacije

J1 je večinoma poimenovan kot materni jezik in njegov izbor, delež pobarvanega telesa ter povezavo s srcem spremljajo navedbe, da učenci ta jezik dobro obvladajo in ga tudi imajo radi. Kot nakazuje Klinar (2010), je v osnovne šole v Sloveniji vključenih 5,2 % otrok, katerih materni jezik ni slovenščina. Sinjur (2018, str. 120) opozarja, da kljub temu šole ob vpisu ne dokumentirajo J1 priseljenskih učencev. Dokumentacijo J1 otrok naj bi onemogočal strog režim varovanja osebnih podatkov, kar "otežuje pre-

verjanje nepravičnosti sistema do jezikovnih manjšin (prav tam, str. 120–121; prim. Knaflič 2010)". Navezujoč se na pridobljene podatke pa je prav J1 ključnega pomena pri identifikaciji osnovnošolcev:

- *Slovenščino sem dala največ ker mi je pri srcu oz. je moj materni jezik.*
- *Bosanščina je moj materni jezik in drugi jezik ki ga najbolj uporabljam.*
- *Albanščina je moj materni jezik zato sem ga narisal zraven srca.*
- *Materni jezik – všeč mi je zato ker mi je lep (ruš.).*
- *Ker je madžarščina moj materni jezik.*

K2: jezik pogoste rabe in dobro razvitih spretnosti

J1, J2 ali kateri od tujih jezikov (TJ) je lahko tisti, v katerem imajo učenci dobro razvite spretnosti, ga pogosto uporabljajo v vsakdanjiku in se ga v nekaterih primerih že dlje časa učijo:

- *Ker znam slovenski jezik.*
- *Ker velikokrat razmišljam v angleščini in govorim angleško.*
- *Jezik zelo dobro poznam, ker gledam italijanske programe. Naučim se veliko novih italijanskih besed in tudi malo težje.*
- *Uporabljam pri pouku in v državi jezika (madž.).*

K3: pozitivno konotiran jezik ali zvrst (estetsko, čustveno)

Ne glede na status jezika (J1, J2, TJ) je nek jezik zanimiv, zabaven, lep, najlepši, učenci ga imajo radi, nekatere pobarvajo okrog srca, narišejo srce in pojasnijo simbolni pomen srca v povezavi s tem jezikom:

- *Španski jezik (vodi me srce).*
- *Obožujem jo (ang.).*
- *Francija ima zelo lep jezik in zato sem jo postavila sem.*
- *Rada se igram z nemščino.*
- *Italijanščino sem dala tretjo zaradi tega ker je fajn in lep jezik.*
- *Turščina je eden mojih najljubših jezikov.*
- *Vipavsko narečje – ker mi je tako všeč.*

K4: želje in namere glede učenja jezikov

Učenci izražajo želje in namere po učenju določenega jezika, pri tem nekatere utemeljujejo z zahtevnostjo jezika, druge z izvenjezikovnimi dejavniki:

- *Rad bi se naučil, se lotim z levo roko (hrv.).*
- *Nič ne znam vsaj živjo bi se naučila (madž.).*
- *Malo že znam rada bi se naučila do konca. (ang.).*
- *Rad bi vedel nemški jezik.*
- *... zelo rad bi se ga naučil da bi lahko hodil na potovanja v tujino (ang.).*

K5: vloga izvenjezikovnih dejavnikov

Vlogo jezika v svojem življenju, odnos do jezika in želje učenci utemeljujejo z naslednjimi izvenjezikovnimi dejavniki: počitnice (morje), kraj bivanja, prijatelji, sose-

dnja država, televizija (serije), moj idol, geografska lega, šport, turistične znamenitosti, kulturni simboli, družina, asociacije na jezik in kulturo:

- *Hodim tja na morje in se učim tega jezika. (hrv.).*
- *Govorijo moji prijatelji (ita.).*
- *Ker je naša sosednja država (nem.).*
- *Sem izbrala, ker znam nekaj iz španskih serij (špa.).*
- *Tam je moj idol (port.).*
- *Ker je proti vrhu Slovenije (narečje).*
- *Ker je v Sloveniji možno izvesti veliko športov sem pobarvala noge (slov.).*

K6: problematiziranje učenja jezika in negativna ocena jezika kot sistema

Učenci ocenjujejo, da nekega jezika ne znajo dobro, ali pa ocenjujejo, da je jezik težak za učenje:

- *Ne znam tako dobro (ang.).*
- *Je težek jezik (nem.).*
- *Ker jo poznam in se mi zdi zapletena (ang.).*
- *Zelo dolgo rabiš, da se tega jezika naučiš, prej postaneš star (taj.).*

K7: jezik kot drugi jezik učencev

Učenci določene jezike poimenujejo kot J2, pri čemer gre lahko za J2 ali pa TJ:

- *Je moj drugi jezik (hrv.).*
- *Slovenščina jezik, ki sem se ga kot drugega naučil.*
- *Moj drugi jezik (ang.).*

K8: zelo slabo razvite jezikovne spretnosti

Zelo slabo razvite jezikovne spretnosti so ocenjene na splošno ali pa je podana ocena po posameznih jezikovnih spretnosti oz. glede na jezikovno rabo:

- *Ta jezik malo znam govoriti in ga uporabljam le ob nujnih priložnostih (hrv.).*
- *Nemščino pa neznam prav dobro, a vseeno znam nekaj povedati.*
- *Znam eno besedo (ita.).*
- *Turški jezik sem izbral, ker sem gledal nadaljevanke in se naučil nekaj besed.*
- *Znam nekaj od sošolcev (bos.).*
- *Poznam čisto malo besed (ruš.).*

K9: metajezikovna, sociolingvistična in pragmalingvistična opažanja o jeziku

Učenci ocenjujejo podobnosti med jeziki, navajajo opažanja glede fonološke podobe, družbene vloge jezika ter jezik reflektirajo metaforično:

- *Bosanščina je isto kot hrvaščina.*
- *Podoben je slovenščini (hrv.).*
- *Je kar pomemben za cel svet (ang.).*
- *Pri njem mi je všeč poudarek na naglas (nem.).*
- *Ko greš na Dunaj, pusti trebuh zunaj (nem.).*

- *Latinščine ne znam veliko, a poznam imena metuljev in kakšne druge živali. Ker so mi metulji lepe in zanimive živali, sem izbral zato vijolično barvo, ker mi je ta barva najlepša.*

K10: razvoj posameznih jezikovnih spretnosti, ilustriran tudi s primeri besedišča

Učenci navajajo posamezne jezikovne spretnosti, z njimi utemeljujejo izbor dela telesa ali pa navajajo posamezne besede in besedna polja, ki jih obvladajo receptivno in/ali produktivno:

- *Slovenščina je na roki, ker veliko pišemo.*
- *Angleško sem izbral ker znam le malo govoriti angleško pisati in brati pa ne znam.*
- *Nemščino sem izbral ker je moj prvi tuji jezik v šoli izbral sem tako malo ker ne znam veliko besed in pisati tudi ne znam tako dobro.*
- *Ne znam veliko, vem, kaj mi kdo reče, samo ne znam odgovoriti (hrv.).*
- *Znam šteti (jap.).*
- *Poznam kar nekaj besed. Nero, bianco, si, no (ita.).*

K11: vloga porekla, družine, povezana z usvajanjem jezika

Jezik je povezan s poreklom učencev, kar utemeljuje njihov izbor. Učenje jezika izven šole je povezano z družinskimi člani ali prijatelji:

- *Iz hrvaške prihaja moj pokojni nono ki sem ga mela zelo zelo zelo zelo rada (hrv.).*
- *Materni jezik moje mame (srb.).*
- *Bosanščino sem izbral zato ker sem iz Bosne.*
- *Saj sestrična iz Nemčije ima nogometno žogo vedno s sabo (nem.).*
- *Z nono in nonotom govorimo Bosansko, tudi z mami malo govorim Bosansko. Malo poslušam tudi bosanske pesmi.*

K12: nevtralna navedba tujih jezikov v šoli

Izbor jezika na portretu utemeljuje dejstvo, da gre za TJ v šoli. Dodana sta lahko tudi ocena uspešnosti in sodelovanje v družini:

- *Nemščino in angleščino znam približno enako.*
- *Ker se ga učim (ang.).*
- *Se jo učimo (nem.).*
- *Učim se jo v šoli in mami, ko se z njo učim, izvem tudi kaj drugega. Mami je všeč italijanščina (ita.).*

K13: komentar celotnega jezikovnega portreta

Učenci celotni jezikovni portret poimenujejo, komentirajo izbor barv, število jezikov, izbor jezikov in velikosti pobarvanih delov po všečnosti in znanju:

- *Jaz sem 16 % madžar in 50 % slovenec in 80 % anglež.*
- *Jezikovna nevihta.*

- *Izabral sem te barve, ker so mi zanimive. Ti jeziki so mi zelo všeč, ker se spoznajem.*
- *Jezike sem razvrstila po svojih najljubših barvah. Govorim pa jih tolko kot je prostor prikazan na človeku.*

Pri združevanju kategorij v teme nastane naslednjih pet tem:

T1: jezikovna identifikacija, vezana tudi na poreklo, čustveno konotacijo in zaporedje v usvajanju

Jezik identifikacije je lahko J1, pri čemer njegov izbor in delež pobarvanega telesa ter povezavo s srcem spremljajo navedbe, da učenci ta jezik dobro obvladajo in ga tudi imajo radi. Tak jezik je povezan s poreklom učencev, kar utemeljuje njihov izbor. Jezik identifikacije je lahko tudi J2 ali pa kateri od TJ – značilno za tak jezik je, da je zanimiv, zabaven, lep, najlepši, učenci ga imajo radi, nekatere pobarvajo okrog srca, narišejo srce in pojasnijo simbolni pomen srca v povezavi z jezikom.

T2: (ne)uspeh v usvajanju jezika in želje glede učenja jezikov

J1, J2 ali kateri od TJ je lahko tisti, v katerem imajo učenci dobro razvite spretnosti, ga pogosto uporabljajo v vsakdanjiku in se ga v nekaterih primerih že dlje časa učijo. Za nekatere od TJ učenci ugotavljajo, da jih ne znajo dobro, ali pa ocenjujejo, da so težki za učenje. Slabo obvladovanje določenega jezika je ocenjeno na splošno ali pa po posameznih jezikovnih spretnostih, pri čemer učenci izhajajo iz jezikovne rabe. Razvitost posamezne jezikovne spretnosti je na portretu lahko povezana z določenim delom telesa. Povezano z jezikovnimi spretnostmi so lahko navedene tudi posamezne besede ali pa besedna polja. Učenci tudi na splošno reflektirajo oceno uspešnosti pri pouku TJ in nakazujejo sodelovanje v družini. Učenje jezika izven šole je običajno povezano z družinskimi člani ali prijatelji. Učenci izražajo želje in namere po učenju določenega jezika, pri tem nekatere utemeljujejo z zahtevnostjo jezika, druge z izvenjezikovnimi dejavniki.

T3: izvenjezikovni dejavnik kot utemeljitev vloge jezika

Vlogo jezika v svojem življenju, odnos do jezika in želje učenci utemeljujejo z naslednjimi izvenjezikovnimi dejavniki: počitnice (morje), kraj bivanja, prijatelji, sosednja država, televizija (serije), moj idol, geografska lega, šport, turistične znamenitosti, kulturni simboli, družina, asociacije na jezik in kulturo.

T4: opažanja glede jezikovnega sistema in jezikovne rabe

Učenci ocenjujejo podobnosti med jeziki, navajajo opažanja glede fonološke podobe in glede družbene vloge jezika. Opis jezika lahko predstavlja pregovor, metaforični opis ali neko osebno doživetje.

T5: komentar celotnega portreta

Učenci celotni jezikovni portret poimenujejo, komentirajo izbor barv, število jezikov, izbor jezikov in velikosti pobarvanih delov po všečnosti in znanju.

Učenci v komentarjih pojasnjujejo, zakaj so za določen jezik izbrali neko barvo, deloma to povezujejo tudi z deli telesa. Busch (2013) opozarja pred posplošenimi inter-

pretacijami izbora barv na jezikovnih portretih (npr. rdeča kot barva čustev). Barva je v semiotiki izrazno najmočnejši modus za izražanje diskurzivnih pomenov (Kress in van Leeuwen, 2001, str. 29, gl. Busch, 2013, str. 38), kljub temu pa ne obstajajo nevtralne, vedno veljavne določitve za neko barvo, ampak samo določitve za barvne situacije (Gekeler, 2004, str. 51, gl. Busch, 2013, str. 38).

Novejše študije (npr. Heller, 2004, gl. Busch, 2013, str. 38) kažejo, da pomenov barv tudi ne moremo pripisovati posameznim kulturam, saj niso odvisne samo od konvencij, ampak tudi od mode in specifičnih situacij. Z ozirom na te ugotovitve se postavlja pod vprašaj smiselnost vsebinskega kodiranja tistega dela komentarjev jezikovnih portretov, ki se nanaša na izbor barv. Ker pa bomo analizirali izključno izbor barv, kot so ga sami učenci opisali, in ker pri tem ne bomo iskali korelacij s kulturnimi ali socialnimi elementi, je analiza smiselna. Podobno zagovarjata Koletzko in Trautmann (2019) z interpretacijo izbora barv na jezikovnem portretu učenca, pri čemer se ne poslužita vsebinskega kodiranja.

Vsebinsko kodiranje teh delov komentarjev je pokazalo, da se razlogi v veliki meri prekrivajo ne glede na barve, deloma so pa tudi različni.

Najpogosteje se kot razlog pojavlja (ne)naklonjenost do jezika, izenačena z barvo (zelena, modra, črna, rdeča, vijolična, roza):

- *Ker imam nemščino rada tako kot modro barvo. Hlače pa ker smo južno od Avstrije.*
- *Izberem črno barvo, ker mi jezik ni všeč (ang.).*
- *Lila sem izbrala zato, ker je najboljši jezik in imam lila barvo zelo rada (slov.).*

Pogosto se kot razlog pojavljajo zastave (zelena, modra, rdeča), kar pomeni, da se posamezni jezik enači z državo:

- *Za italijanščino sem izbrala zeleno, ker je zelena del njene zastave.*
- *Za albanščino sem izbrala rdečo, ker je del njene zastave.*

Učenci sami zapišejo, da je izbor barve naključen (rdeča, turkizna, rumena, rjava):

- *Turkizna ker mi je barva padla v oči (ang.).*
- *Rjavo za hrvaščino ker mi je zmanjkalo drugih barv.*

Izbor lahko pogojujejo tudi dogodki, povezani z državo, kjer se jezik po dojemanju učencev govori, ali pa z vlogo jezika v učenčevem življenju oz. predstavami o jeziku in kulturi (rdeča, rumena, roza, oranžna):

- *Rdeča, ker me poleti na Hrvaškem sonce malo opeče (hrv.).*
- *Za francoščino sem izbrala roza ker je zelo kulturna.*
- *Za turščino sem izbrala oranžno ker me mesto spominja na oranžno barvo.*

Drugi razlogi so še slabo ali dobro razvite spretnosti v določenem jeziku in vsakdanji predmeti, ki dobivajo simbolne vloge zaradi pomembnosti v življenju učenca, npr. dresi športnikov: pobarvam z zeleno, ker največ znam in me spominja na dres športnikov (slov.).

5 Diskusija rezultatov

Diskusija sledi raziskovalnim vprašanjem.

Kako se kaže identifikacija z jezikom(-i)?

Učenci izpostavljajo jezike, s katerimi se identificirajo, in jih povežejo s pozitivnimi konotacijami ter čustvenimi relacijami, kar recimo kaže pozicioniranje v bližino srca. Te jezike običajno dobro obvladajo in jih pogosto povežejo s svojim poreklom ali državo. Jezik identifikacije ni nujno vedno J1 učenca, lahko gre tudi za TJ. Kar identifikacijo določa, je izjemno pozitiven odnos, ki je izražen na različne načine, in dobro obvladanje jezika. Kvantitativna analiza (Tibaut in Lipavic Oštir, 2020) je pokazala lestvico jezikov po pogostnosti pojavljanja na portretih, kjer je na vrhu angleščina (94,5 % učencev), sledijo slovenščina (93,2 %), hrvaščina (60,5 %), nemščina (58,1 %), italijanščina (47 %) in drugi. Podatki kažejo, da tvorita slovenščina in angleščina posebno skupino, sledijo trije jeziki sosedov. To kaže po eni strani na zavedanje učencev o jezikovnem okolju in njihovo učvrščenost v njem, kar podkrepi tudi 9,8 % učencev, ki so na portretih označili tudi svoje narečje, po drugi strani pa kaže na globalizacijski trend z izjemno dominantno vlogo angleščine kot "lingue france". To globalizacijsko komponento kaže tudi raznolikost več kot 15 jezikov, ki se pojavljajo na portretih. Sodobne raziskave o identiteti in jezikih se sprašujejo o tem, ali je jezik permanentno sestavni del osebne identitete ali samo spremljajoči dejavnik, ki v določenih okoliščinah dobi posebni fokus (prim. Thim-Mabrey, 2003). Analiza jezikovnih portretov petošolcev kaže na sestavni del osebne identitete, saj je jezik identitete vezan na zelo dobre jezikovne spretnosti, poreklo in kraj bivanja. Kot tak tvori stalnico v učenčevem zavedanju in to tudi pri tistih, ki jih zaznamuje migracija. Seveda pa je treba pri tem poudariti, da gre za ciljno skupino, ki odrašča. Vprašanje osebne identitete, ki se kaže skozi komentarje jezikovnih portretov, je treba v nadaljnjem raziskovanju postaviti v kontekst jezikovne politike v Sloveniji, za katero raziskave ugotavljajo, da nima razvitih strategij za učenje in poučevanje jezikov skupin migracije (Sinjur, Devjak, Blažič, Krajnčan, 2012, str. 181).

V kakšni korelaciji so učenje jezikov, njihova raba oz. uporabnost ter nejezikovni dejavniki?

Učenci izhajajo iz svojega vsakdanjika in znajo navesti in tudi že oceniti pomen obvladovanja nekih jezikovnih spretnosti v svojem življenju. Le-te tudi problematizirajo skozi perspektivo lastnega (ne)uspeha pri usvajanju in učenju nekega jezika, kar v nekaterih primerih opišejo tudi glede na posamezne jezikovne spretnosti. Take navedbe znajo tudi ustrezno ilustrirati, vendar samo s področja besedišča in ne posameznih jezikovnih ravni. Kljub temu pa o jezikih reflektirajo tudi metajezikovno s stališča podobnosti, glasoslovja in družbene vloge jezika. Prav tako izrazijo tudi svoje želje, kar zadeva učenje določenih jezikov, pri čemer znajo tudi opisno približno določiti raven, ki bi jo radi usvojili. V svojih odgovorih navajajo paleto izvenjezikovnih dejavnikov, ki utemeljujejo, spodbujajo ali pa pogojujejo želje po učenju jezikov. Ti dejavniki so osebni (družinsko okolje, poreklo), kulturni ali pa geografski. V kvantitativni analizi (Tibaut in Lipavic Oštir, 2020) ugotavljamo, da učenci v povprečju na svojih portretih navajajo 4–7 jezikov, nekateri celo 8 ali več. Te številke so sorazmerno visoke, če upoštevamo, da pričakovani repertoar učencev v petem razredu osnovne šole sestavljajo J1, TJ1 in

(izbirno) TJ2. Pričakujemo lahko, da je število višje pri otrocih iz migrantskih družin, pri tistih z narodnostno mešanega področja in pri nekaterih posameznikih. Vendar pa primerjava, v kateri smo posebej obravnavali portrete iz obeh narodnostno mešanih območij, pokaže, da po številu jezikov ni signifikantnih razlik med temi portreti in tistimi z drugih delov Slovenije (prim. npr. Žbogar (2012, str. 75) in pomen individualne vpletenosti in vzgoje za strpnost). Učenci vidijo svet jezikov kot odprt prostor, v njem izražajo svoje želje in se ob refleksiji, kot je jezikovni portret, zavedo vseh svojih jezikovnih kompetenc, pa naj bodo še tako slabo razvite. To odprto gledanje je gotovo dobro izhodišče za smiselno jezikovno in šolsko politiko, kar zadeva izbor jezikov. Učenci nam z jezikovnimi portreti sporočajo, kaj je v njihovem jezikovnem življenju pomembno (Žbogar, 2012, str. 72).

Katere kriterije uporabljajo učenci za izbor barv za posamezne jezike in kako so s tem povezani deli telesa?

Izhajamo iz tega, da se omejujemo od možnih kulturnih interpretacij barv v življenju učencev, na kar kažejo tudi sami komentarji učencev. Le-ti namreč identične utemeljitve za izbor barv pripisujejo različnim barvam. Torej ne moremo reči, da so vzpostavili kriterije ločevanja med barvami. Ne nazadnje lahko izbor določene barve določa tudi dejstvo, katere barvice je imel učenec pri roki oz. so bile uporabne. V utemeljitvah izbora barv učenci najpogosteje izpostavljajo (ne)naklonjenost do neke barve, kar se navezuje na izražanje naklonjenosti do posameznih jezikov, povezane tudi z identifikacijo. V kvantitativni analizi (Tibaut in Lipavic Oštir, 2020) ugotavljamo korelacije med posameznimi jeziki in deli telesa. Jeziki identifikacije so pogosto povezani z glavo, vendar pa lahko tudi z gibljivimi deli telesa. Žal učenci izbor delov telesa v komentarjih redko pojasnjujejo, sklepamo lahko, da se jim to ni zdelo potrebno, saj sami portreti te povezave nakazujejo. V tem pogledu torej odgovore daje kvantitativna analiza, medtem ko iz kvalitativne analize na odgovor lahko sklepamo samo deloma.

Alja Lipavic Oštir, PhD, Katarina Tibaut

Diversity of Relations on the Language Portraits of Fifth Grade Students

In this article, we present a qualitative research of comments on language portraits provided by 5th grade students. Language portraits are a research tool, in which the shapes of human body parts are colored differently, with each color representing one particular language. The concept of such portraits was developed for research purposes and for practical work with migrant children with the focus on promoting language awareness (Neumann, 1991, Krumm & Jenkins, 2001). Language acquisition and use always occurs in concrete social and historical-biographical situations. It is both supported and impeded by changes in individual, often emotionally determined procedures and social structures (Krumm, 2010). Previous analyses of language portraits include identifying the types of portraits (Krumm, 2003, 2010) and interpretations of comments regarding language portraits provided by students. No qualitative studies of language

portraits based on content analysis or any other similar method have been conducted until now.

Our study is based on 542 language portraits and features a content analysis of comments provided by participating students on each of them. Qualitative content analysis was applied as the main research method (Zhang & Wildemuth, 2009). The codes were organized in categories according to similarity. The categories were further divided into themes. Each category is illustrated with concrete statements provided by students for which the inductive access was used (Hesse-Biber, 2004).

Research questions:

- *How is the identification with the language(s) expressed?*
- *What is the correlation between language learning, language use, and non-linguistic factors?*
- *Which criteria were used by students when choosing colors for individual languages and how did they connect them with body parts?*

The students were asked to write comments for each language portrait they were presented with. 89 (16.5%) of the total of 542 comments were based on a vastly different distribution regarding language use among individual schools. The results of the content analysis are represented by 85 codes, distributed throughout 13 categories.

C1. Language of identification: L1 is mostly called the mother tongue. Its choice, proportion of the colored body, and the connection with the heart are explained with the fact that students master this language very well and are emotionally attached to it (I mainly chose Slovene because I am fond of it and it is my mother tongue. / Bosnian is my mother tongue and the second most frequently used language for me. / Albanian is my mother tongue, so I drew it next to the heart.)

C2. Frequently used language: L1, L2 or FL can be a language which the students master very well; a language used fairly frequently by the students; and, in some cases, a language that the students had been learning for a longer period of time (Because I can speak Slovene. / Because I often think in English and I can speak English.)

C3. Positively connoted language or variety (esthetic, emotional): Regardless of its status (L1, L2, FL), an individual language can be interesting, funny, beautiful, most beautiful, … Affinity towards the language can also be expressed by assigning it a color to, for example, mark the heart with in a language portrait, where the symbolic meaning of the heart is explained (Spanish (it guides my heart). / I like to play with German. / The Vipava dialect – because I like it that much.).

C4. Wishes and intentions regarding language learning: Students express their wish/intention to learn a certain language. Some of them are determined to learn a particular language based on the level of difficulty; some of them based on non-linguistic factors (I would like to learn it, it's really not that difficult. (CRO) / I don't know anything. I want to learn "hi" at least. (HUN) / I want to learn German. / … I would like to learn it very much so that I could travel abroad. (ENG)).

C5. Role of non-linguistic factors: The role of language in the everyday lives of the students is justified by non-linguistic factors: holidays (sea); place of residence; friends; neighboring country; television (TV series); geographical location; sports; tourist attractions; cultural symbols; family; perception of language and culture (I reg-

ularly travel to the coastal region of that country and so I learned the language. (CRO) / My friends speak it. (ITA) / Because it's our neighboring country. (GER) / I chose it, because I know some of it from Spanish telenovelas. (SPA)).

C6. Problems during language learning and negative rating of a particular language as a system: the students are either evaluating their language skills or the general process of learning an individual language (It's a difficult language. (GER) / Because I know it and it seems complicated. (ENG) / It takes you way too much time to learn. You get old before you succeed. (THA)).

C7. L2: Certain languages are listed as L2, but they could also be listed as FL (It's my second language. (CRO) / My second language [that I speak]. (ENG)).

C8. Poorly developed language skills: They can be evaluated in general, through individual language skills, or through language use (I don't speak this language well and use it only when absolutely necessary. (CRO) / I don't know German well, but I can say some things. / I know one word. (ITA)).

C9. Metalinguistic, sociolinguistic und pragmalinguistic observations of language: Students rate the similarities between languages, observe the phonology and the social roles, and they reflect on languages through metalinguistics (Bosnian is the same as Croatian. / It's quite important for the whole world. (ENG) / I don't know much Latin, but I do know the names of butterflies and some other animals. Because I think butterflies are pretty and interesting animals, I chose purple – my favorite color.).

C10. Development of individual language skills: Students rate individual languages and use them to justify their choice of marking body parts and/or rate single words or word-fields, which they mastered receptively and/or productively (I placed Slovene on the arm, because we write a lot. / I chose German because it is my first foreign language in school. I chose to mark little of the body, because I don't know many words and I also don't write it well. / I don't know much. I understand when someone says something to me, but I can't answer [them]. (CRO)).

C11. The connection of origin and family to language acquisition: Individual languages are connected to the origins of students, which justifies their choice. Language learning outside the school is connected to family members or friends (My late grandpa, whom I loved very, very, very, very much, was from Croatia. (CRO) / It's the mother tongue of my mom. (SRB) / I chose Bosnian because I'm from Bosnia.).

C12. Neutral information about FL in school: Learning the language as an FL in school was used to justify its choice (I speak German and English equally well. / I learn it in school and with my mom, where I also learn new things. My mom likes Italian. (ITA))

C13. Comments about the entire portrait: Students name their language portraits; they comment on the choice of colors, the number, the choice of languages, and the sizes of painted parts (areas) according to their liking and knowledge (I am 16% Hungarian, 50% Slovene and 80% English. / "Language Storm").

The categories can be divided into five themes:

- *Language identification, bound to origin, emotional connotation, and sequence of language acquisition;*
- *Success at language acquisition and wishes/intentions regarding language learning;*
- *Non-linguistic factors as a justification of the role of individual languages;*

- *Observations of language as a system and language use; and*
- *Comments on the entire portrait.*

In their comments, the students explained why they assigned a certain color to a certain language, partially connected to the selected body parts. The content analysis shows that the reasons for the choices made by the students are overlapping regardless of color. The most frequent reason is a lack of affection for a language, which is expressed with a certain color (I chose black, because I don't like this language. (ENG)). A language is often associated with a country and its symbols (I chose red for Albanian, because it is a part of their flag.). Several students also stated that their choice of color was accidental or arbitrary (I chose brown for Croatian, because I ran out of other colors.). The choice of color was also determined by certain events, connected with the country where the language is spoken, with the role of that language in the students' lives, and/or based on the students' perception of that language and its culture (I chose pink for French, because it is very culturally aware.). Other reasons that influenced the students' color-related choices include: differences in the levels of developed language skills and connecting the languages to everyday objects – such as sports attire – that contain symbolism due to their importance in the students' lives (I painted it green, because I know it best and it reminds me of the athletes' shirts. (SLO)).

The discussion of the results reveals the following: Students emphasize their languages of identification and connect them with positive connotations and emotional relations. They mostly express well-developed skills in such languages and often connect them with their origin or with a particular country. The main language of identification among students is not always L1. This role can also be fulfilled by L2. The identification is expressed in different ways and reinforced with a positive attitude towards the language they assigned this role to. Furthermore, they also demonstrated higher-level skills in this language. The language of identification is a component of personal identity, as it is linked to well-developed skills expressed by students, to their origin, and to their place of residence. It is a constant in the perception of all students, including those with a migrant background. The students are taking their everyday life into account. They can also acknowledge and evaluate the meaning of individual language skills in their life. This can be problematized through the perspective of personal success in acquiring and learning certain languages. The students are able to illustrate their statements. However, they are only capable of this from the perspective of the lexicon and not from the perspective of individual parts of speech. Nevertheless, they are capable or reflecting about languages and their similarities, about their phonology, and about their social roles. The students also expressed their wishes/intentions regarding the learning of particular languages and determined the approximate skill level(s) they wanted to achieve. The comments provided by the students hint at a range of non-linguistic personal (family, origin), cultural, or geographical factors, based on which they either justify, reassure, or condition their aspirations towards learning languages.

The results of the quantitative analysis (Tibaut & Lipavic Oštir 2020) show an average of 4 to 7 languages being assigned to an individual language portrait. Some language portraits also featured 8 languages or more. These numbers are relatively high considering the fact that the language acquisition repertoire of 5th grade students is mostly limited to L1, FL1, and (not obligatory) FL2. The students see the world of languages as an open space, in which they express their wishes/intentions and are

aware of their language skills. This open view can be a starting point for language and school policies, concerned with the choice of languages. The analyzed language portraits provide an insight into what is important in what the students perceive as their world of languages.

In the discussion of the choice of colors for individual languages and its connection with body parts, we abstain from possible cultural interpretations of the meaning of colors in the everyday lives of the students due to a lack of criteria for establishing delimitations between individual colors from the perspective of culture. The choice of body parts is also rarely explained in detail.

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Influence of Factors on the Development of Outstanding Musical Talent – a Case Study

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KLJUČNE BESEDE: nadarjenost, glasbeni talent, dejavniki razvoja glasbenega talenta, orgelski virtuoz, študija primera

POVZETEK – Namen študije je bil raziskati vpliv devetindvajsetih dejavnikov na razvoj glasbenega talenta v različnih življenjskih obdobjih (od 3. do 35. leta) skozi študijo primera. V raziskavi je sodeloval mednarodno priznani glasbenik, orglavec, Aleksey Vylegzhanin. Rezultati kažejo, da je različnost vpliva dejavnikov pogojena z različnimi življenjskimi obdobji razvoja glasbenega talenta ter osebnostnimi lastnostmi. V otroštvu ima med drugimi dejavniki velik vpliv na glasbeni razvoj družina, v kasnejših življenjskih obdobjih pa tudi učitelj inštrumenta, kakovost pouka in osebnostne lastnosti.

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KEYWORDS: giftedness, musical talent, factors of musical talent development, organ virtuoso, case study

ABSTRACT – The purpose of the study was to investigate the influence of twenty-nine factors on the development of musical talent in different stages of life (from 3 to 35 years of age) through a case study of an internationally renowned musician, the organist Aleksey Vylegzhanin. The results show that the diversity of the influence of factors is conditioned by different stages of the development of musical talent and personality traits. In childhood, the family, among other factors, has a great influence on musical development, whereas in later life, the development is influenced also by the music teacher, the quality of lessons and personality traits.

1 Introduction

The organ playing profession in Europe boasts a very rich and varied tradition, enriched by many outstanding organ virtuosos. The latter are usually not only active in concerts, but also establish themselves as organ pedagogues and teach at internationally eminent music universities, academies and conservatories, which offer opportunities for organ education at a high artistic level. Such studies are the so-called crown of music education, but the earlier stages of life and the beginnings of musical development play a key role and can later lead to the emergence of an organ virtuoso. Systems of formal music education at the primary and secondary level (up to about the age of 19) differ throughout Europe. In any case, an entrance exam is mandatory for enrolling in studies in Slovenia and abroad. High-quality music education is one of the key factors in the development of musical talent, which is also influenced by various other factors that will be discussed later in this article. There are many possible factors that can be implicitly or explicitly included in the context of dealing with outstanding musical talent and that can be drawn from developmental models of giftedness. In essence, these are mostly predictors, noncognitive personality characteristics and environmental conditions. Among many others, the Munich Model of Giftedness (Heller et al., 2005)

includes the parental education level, quality instruction, school or class climate, critical life events, intellectual abilities, creative abilities, psycho-motor skills, musicality, learning and working strategies, achievement motivation, coping with stress, control of expectations, assessment-related anxiety, etc. Performance anxiety is also discussed in the literature (Raluca & Ginsborg, 2017; Habe & Kržič, 2017). From Gagné's Differentiated Model of Giftedness and Talent (Gagné, 2005, 2009) we can additionally draw catalyst elements, such as mother, father, family, teachers, peers, motivation, interest, passion, emotions, effort, social abilities, etc. A rich set of many other factors could be placed in the context of the development of musical talent, where it is a matter of multidimensional intertwining and interaction within the dimension of the phenomenon.

In children, playing an instrument is determined by many factors, the most important ones being: the child's expectation and motivation to become competent to play an instrument; the joy of playing an instrument; self-regulatory strategies that the child acquires to improve instrument learning; encouragement and support from family, teachers and peers (Sloboda & Davidson, 1996; McPherson & Zimmerman, 2002).

In her work, B. Bogunović (2008) emphasizes the importance of a stimulating, rich and stable family environment for the realization of talents in the field of music. There is a common but different and independent profile of a father and a mother. The mother's role is more important in the initial period of development, as it primarily encourages early interest and the development of an initial internal motivation for music, while the father's engagement increases with the child's age. Family encouragement is closely related to aspects of motivation, connected with playing an instrument (frequency and length of practice), influenced by the mother's and father's equal involvement in establishing practice habits at home during the first years of learning to play an instrument. It is also extremely important for parents to believe in and support their child's talent, because they believe that the child shows promise and that musical success is important. In this way, the value-motivational model is passed down from generation to generation, while at the same time musical success increases, as the child has greater initial motivation, is more motivated to practice, and consequently achieves higher academic and performance results (public performances, competitions). Parental support is of the greatest importance in the critical periods between the years 4 and 5, and between the years 6 and 7. It promotes the development of abilities and interest in preschool music activities, as well as early recognition of giftedness; it focuses on the child learning an instrument during the period when children are the most susceptible to external stimuli, and have the greatest potential for giftedness.

Mönks's (1992, in Mönks & Katzko, 2005) Multifactorial Model of Giftedness incorporates the social context represented by family, peers, and school. B. Bogunović (2008) changed Mönks's model slightly in the part on musical talent and included the music school as an educational context that creates a developmentally and professionally specific environment. In addition to compulsory primary school, it represents an important factor of development. In this context, the teacher of the main subject (instrument or singing) is a key figure through whom the systemic, school and personal influences are redirected. In one recent study (Peterson, 2018), music students from Switzerland and China confirmed the paramount importance of family and teacher support in developing musical talent, with the teacher experiencing the instrument, not only as a teacher but as a role model, mentor, and friend. Research findings (Bogunović, 2008)

show that the personality traits of teachers who teach musical instruments differ from those of the general population of teachers. Instrument teachers are more open, cooperative and conscientious. The latter features reflect the creative, interactive, and motivational aspects of the instrument teacher's personality that are necessary when dealing with music in an educational context. Also, teachers who are exclusively engaged in pedagogical work are significantly different from those who are at the same time active musicians, so their professional orientations and thus the direction of development are qualitatively different. Certain pedagogical, personal and professional characteristics of a teacher are directly related to different qualitative levels of student performance in the second stage of musical talent development, which is reflected in the commitment to acquiring higher forms of professional knowledge and expertise (Mijanović, 2016, p. 42).

The combined activities and characteristics of the family and the teacher contribute to the student's musical success much more than each of them individually. In her research, B. Bogunović (2004) highlighted the successful, individual and combined work of teachers and parents, and the value of their participation at the beginning of instrumental education, since their combined positive aspects are key to the development of the children's musical talents.

Some factors, such as committed work, perseverance, passion and social skills are important for outstanding achievements (Rinn, 2012, in Worell, Olszewski-Kubilius & Subotnik, 2012). Orlick and Partington (1988, in MacNamara & Collins, 2009) state that the development of excellence includes: goal setting, realistic evaluation of achievements, performance, dedication, exercise quality, coping with stress, and motivation. The results of A. MacNamara and Collins (2009) showed that different combinations of psychological characteristics promote the effectiveness of the development of classical musicians, depending also on the musician's focus, level of development and maturity.

Perseverance is one of the criteria of musical talent (Baum et al., 2004; Haroutounian, 2000a, 2000b). I consider perseverance and effort as an individual's characteristics that are important in dealing with music or being involved in musical activities. This means that the individual, despite his or her efforts, perseveres, works, practices, learns, strives and improves. When playing an instrument, a student can, with persistent practice, achieve a technically perfect and aesthetic performance. Trstenjak (1981) pointed out that in the field of "artistic creativity" (which also includes the field of music), diligence, hard work, perseverance of will and patience are important as abilities and character traits that elevate the individual above the average.

Hidi (2000, in Juriševič, 2012) defines interest in terms of psychological arousal that includes focused attention, increased cognitive functioning, persistence, and emotional involvement. J. Freeman (2000) came to the conclusion that the musical interests of musically talented student instrumentalists are above average. Strong interest and emotional engagement are one of the most common qualities of talented individuals in the fields of music, art, athletics, math and science (Bloom, 1985, in Haroutounian, 2000c). Criteria for musical talent that relate to interest are: curiosity, questioning, and interest (Baum et al., 2004). According to J. F. Foster (2009), curiosity is associated with motivation.

J. F. Foster (2009) stated that motivation is a process that involves initiating, persevering, and guiding one's own, self-oriented behavior. We associate motivation with

expectations of success, the search for pleasure in understanding and mastery, with curiosity, instinct, need. From an educational point of view, motivation is the desire to do something well. It can be internal or external. West (2013) presents a review of the literature of the three main theories related to motivation in music: Distribution Theory or Theory of Imputation, Achievement Goal Theory and Theory of Internal Motivation. Attribution Theory was defined by Urdan and Turner (2007, in West, 2013) as an example of a relationship between the student perception of control and achievement. Research in music education (Asmus, 1986, Austin & Vispoel, 1998, Marlatt, 2004, Dick, 2006, in West, 2013) confirms Wiener's findings (1974, in West, 2013) that students' beliefs are the causes of success or failure. Achievement Goal Theory describes two different orientations: achievement orientation or knowledge orientation (Ames, 1992, Dweck & Elliott, 1983, Nicholls et al., 1990, in West, 2013). Internal motivation is about the personal pleasure and satisfaction that comes from performing music (Barry, 2007, in Burak, 2014). This term can also be described as the feeling that the instrumentalist has when performing music out of pure pleasure (O'Neill & McPherson, 2002, in Burak, 2014). External motivation refers to the interest in music to achieve some goal that is not directly related to musical performance (Burak, 2014). S. A. O'Neill and McPherson (2002, in Burak, 2014) describe external motivation as an external use value or benefit of learning. In the Model of Creative Thinking in Music (Webster, 1996), motivation is one of the conditions for creative thinking. According to Elliott (1995), it is also one of the factors influencing and developing musical creativity, in addition to other factors, such as engaged students, receptive climate, search for musical opportunities, student analysis of achievements and time, as well as motivation. In the literature, there are many points of contact between motivation and creativity.

Numerous studies on the development of musical and dance talent have used the term creativity, which derives from Renzulli's Three-Ring Conception of Giftedness (1977). The latter definition has been redesigned by experts so that it can be used in their own studies. For example, in the research of S. Baum, S. V. Owen and B. A. Oreck (2004), creativity itself is not defined, but it is implied in the concepts of expressiveness/expression, movement qualities and improvisation in dance, and expressiveness and improvisation in music. S. I. Kay and R. F. Subotnik (2004) envisioned creativity as an individual expression and solution to a cooperative problem in music and dance, using the same categories of creativity as S. Baum, S. V. Owen, and B. A. Oreck (2004). Modern psychologists and educators affirm that creativity is a complex process that can be viewed as an interactive system in which the main relationships are between person, process, products, and social and cultural context (Csikszentmihayli, 1996; Sternberg, 1999). Contexts in which students are assessed as creative may vary depending on the environment. From Sternberg's (2001) point of view, intelligence is in a dialectical relationship with creativity, where intelligence is seen as the advancement of social norms, and creativity as opposition to social norms and the promotion of new ones. An individual needs intelligence to be creative, yet not all intelligent people are creative. Gardner (1983) confirmed a positive relationship between artistic, intellectual, and academic abilities, while Sternberg (1985) argued that artistic abilities are not related to intellectual abilities. Winner (1996) held that artistically talented students have abilities that cannot be measured by the traditional IQ test. From this point of view, creativity is

a characteristic of an individual who reacts with one or more systems within a particular social context.

Learning in the field of music is mainly associated with the acquisition of musical theoretical knowledge and/or the acquisition of skills and abilities related to various musical activities. The definition of learning as a process of acquiring conceptual (all implicit and explicit knowledge about a specific concept or idea) and general strategic knowledge (reasoning, problem solving, self-regulatory processes) is close in content (Huang, 2009). McPherson and Zimmerman (2002, in Miksza, 2012) highlighted six dimensions of self-regulation that are important for music learning: motive, methods, behavior, time management, physical environment, and social factors. The motive refers to the students' own beliefs and how they affect or do not affect learning. The method involves task-oriented learning strategies, thought strategies, and other general approaches to self-learning, while behavior involves focus on reflective thinking, metacognition, and students' ability to self-evaluate or control their own learning processes. Time management involves students' ability to focus on tasks and plan their time use. The environment refers to the physical structure in which learning takes place, although this is often beyond the students' control. Social factors refer to the tendency to involve others (e.g. teachers, parents, peers, siblings) in seeking help. The quality of a child's thought strategies helps explain how successful he or she will be in school (Harris & Pressley, 1991, Siegler, 1996, in McPherson, 2005); choosing and applying appropriate strategies helps children learn faster (Bjorklund, 2000, in McPherson, 2005); when students consolidate basic skills in learning to play an instrument, they can achieve a higher level of processing (Cantwell & Millard, 1994, in McPherson, 2005); musically talented students who have learned meta-skills that include thoughtful rehearsal strategies can reach their maximum in a lesser amount of time (Haroutounian, 2000c).

The term hard work indirectly refers to readiness for work. The term readiness (for work, learning) is rarely found in literature related to the field of musical talent. It is included in the definition of giftedness. For example, Corno et al. (2002, in Johnsen, 2009) define giftedness as a willingness to learn and perform well in a particular situation or area. The term "following instructions" is also related to readiness for work, interest, motivation and concentration. In everyday pedagogical practice, in addition to the above-mentioned concepts, following instructions could also be related to diligence, obedience, consistency, steerability, adaptability, accuracy, suitability, adequacy, etc. I have summarized these characteristics in the following instructions as they are, in my opinion, strongly expressed in musically talented students.

J. Haroutounian (2000b) cites perceptual awareness and sensitivity as an important aspect of musical talent. It is about biological endowments, capacities, abilities and inclinations. We recognize perceptual awareness and sensitivity in a child when he or she listens attentively and consciously, and directs concentration. The latter also has an important place among the criteria of musical talent.

Cross (2005) set the basic concept for presenting the empirical findings of various authors who explored the prejudices and stereotypes of the gifted, namely that all gifted children are conscientious, show only their advantages, tend to express unsocial behavior or lack of social or emotional competencies, are physically weak and obsessed with learning outcomes. In such children, negative influences can lead to more serious psychological problems, such as depression, isolation, intense anxiety, low self-esteem,

fear of risk, distorted perception and understanding of their own identity. Every child or student therefore needs to be accepted and encouraged as a unique individual.

There are many other possible factors, such as coping with stress, assessment-related anxiety, control of expectations, psycho-motor skills, critical life events (Heller et al., 2005), intuition, perfectionism, the emotional aspect (Piirto, 2008), performance anxiety (Raluca & Ginsborg, 2017; Habe & Kržič, 2017). A rich set of many other factors could be placed in the context of the development of musical talent, where it is a matter of multidimensional intertwining and interaction within the dimension of the phenomenon.

2 Method

Goals

The purpose of the research is to investigate the influence of the 29 factors of the musical talent development of an outstanding musician in different periods of life. The participant in the case study is a professional organist, Aleksey Vylegzhanin (Russia/Austria), hereinafter A.V.

Research questions

In the exploratory case study, I was interested in

- what influence different external and internal factors had on the development of Aleksey Vylegzhanin's musical talent, and
- whether and how the influence of these factors was changing through different periods in the life of the participant A.V.

Measurement instruments

For the purpose of the research, I developed and used a measurement instrument (a questionnaire). The questionnaire includes a set of 29 factors that influence musical talent development, and for which it is necessary to make a note of the intensity of the influence in different periods of life: early childhood (3–6 years), middle childhood (6–8 years), late childhood (9–11 years), early adolescence (12–14 years), middle adolescence (15–17 years), late adolescence (18–20 years), early adulthood (20–35 years).

The intensity of influence is assessed by periods using a 7-point rating scale containing the following levels: 1. not at all important influence, 2. low influence, 3. slightly important influence, 4. neutral, 5. moderately important influence, 6. very important influence, 7. extremely important influence. Twenty-nine factors are divided into two areas for assessing the influence on the development of musical talent: external factors (9 items) and internal factors (20 items).

Process

The research was conducted remotely, due to the COVID-19 epidemic. Data collection took place in April 2020. A questionnaire was sent to the study participant A.V. in electronic form (in English). The participant sent it back in electronic form after one week. The review of the answers was followed by a consultation conversation with the participant via a videoconference (MS Teams application). A.V. read the case study before publication and approved the publication of the findings.

Participant

Aleksey Vylegzhanin (Russia/Austria, 1987) is an outstanding artist and the prize-winner of many renowned national and international competitions, who has been successfully building his organ career. Apart from the organ, he regularly performs on other keyboard instruments (piano, harpsichord) and actively composes. He gained his first music experiences from his parents – professional musicians (father – opera singer and mother – conductor). At the age of six, he began his formal music education with piano lessons at the Music Lyceum in Novosibirsk (Russia), which specializes in extraordinarily musically talented children. His interest in the organ developed a few years later. After that, A.V. continued his music education at the Novosibirsk M. I. Glinka State Conservatory (Russia), where he studied organ under Prof. Natalya Baginskaya. After his first organ degree in 2010, he continued his organ studies at the University of Music and Performing Arts in Graz (Austria) under Prof. Gunther Rost, where he, in 2018, received his master's degree with honor. At the moment, he is studying church music at the University of Music in Graz. A.V. began performing his first concerts at the age of six, and at the age of nine began to receive numerous awards at national and international competitions. During his music education, he attended several master classes with renowned musicians: D. Roth, Z. Szathmary, L. Lohmann, J. van Oortmerssen, E. Bellotti, W. Porter and N. Hakim. He regularly plays concerts in Russia, Slovenia, Croatia, Germany, Austria, and England, as a solo organist or in collaboration with renowned musicians, choirs, orchestras, and chamber ensembles. Among his most important concerts are the gala concert in the Moscow Cathedral (2009), regular solo concerts in the Cathedral and Church of the Sacred Heart of Jesus in Graz (Austria), several projects in the Mumuth Concert Hall in Graz: *organ@mumuth* (2013), *Petr Eben: Faust* (2014), *Organ on Stage* (2015), *Schlafes Bruder* (2016), projects with the composer Reiko Yamada as a part of the *Orgelfrühling Steiermark festival* (2018 and 2019), collaboration with the internationally renowned ensemble *Klangforum Wien* (2019), and many others. He considers it a special challenge to perform organ works by modern and contemporary composers, as is evident from the CDs that he has recorded: *Klaus Lang – Organ Works Vol. 1* (GOD Records) and *Aleksey Vylegzhanin plays Naji Hakim* (Klangdebüts, Vol. 53). Apart from classical music, he is also active in jazz, collaborating with renowned musicians and ensembles. He has recorded a CD with his own compositions with the Slovenian jazz singer Lina Rahne. Presently, he is working on a new album with his own arrangements of Mozart's opera arias. In addition to giving concerts, he also works as an organist in many churches in Graz and the surrounding

area, where he collaborates with numerous choirs and orchestras, and has a special interest in interdisciplinary performances.

Such a description of the participant was also cited in a study that examined the expression of the characteristics of musical talent in different periods of life (Drovenik Adamec & Kovačič, 2020).

3 Qualitative case study results

External factors

His mother (1) had an extremely important influence throughout A.V.'s childhood. In adolescence (12–17 years of age) it decreased slightly, and in later adolescence and early adulthood (from the age of 18) it became neutral. Furthermore, A.V.'s father (2) had an extremely important influence during his childhood, which decreased slightly in adolescence (12–14 years of age) and became a moderately important influence at the age of 15 (up to the age of 35). Family encouragements (3) through all the studied periods (3–35 years of age) had an extremely important influence on the development of the musical talent of A.V. Parental education (4) had an extremely important influence in all periods of life (3–35 years of age). The music instrument teacher (5) had an extremely important influence until early adulthood. From the age of 20, however, it diminished somewhat, but still had a very important influence on the development of A.V.'s musical talent. The quality of music instruction (6) had an extremely important influence on the musical development of A.V. until early adulthood. Class climate (7) had an extremely important influence throughout childhood and adolescence, which declined to a moderately important influence in early adulthood. The influence of peers (8) was moderately important in all life periods (3–35 years of age) for the musical development of A.V. Critical life events (9) had an extremely important influence in all the periods of life studied.

Internal factors

Motivation (10), interest (11) and passion (12) are factors that, in all life periods (3–35 years of age), were extremely important influences on the musical development of A.V. Moreover, intellectual abilities (13) and creative abilities (14) had an extremely important influence in all periods of life. Emotional intelligence (15) had a very important influence in childhood (3–11 years of age) and early adolescence (12–14 years of age); it increased to an extremely important influence after the age of 15. In early and middle childhood, hard work (16) moderately importantly influenced the musical development of A.V. The influence increased in late childhood and early adolescence to a very important influence and from the age of 15 to an extremely important influence. Perseverance (17) had a moderately important influence on his musical development in childhood and early adolescence; the influence increased slightly from the age of 15 to an extremely important influence. Perfectionism (18) had a moderately important influence in childhood.

In adolescence, it firstly increased to a very important influence (12–17 years of age) and then to an extremely important influence (18–35 years of age). Perception (19) had a moderately important influence in early and middle childhood; its influence increased to an extremely important influence in late childhood, from the age of 9 onwards. Intuition (20) had a moderately important influence in childhood and early adolescence; its influence increased from the age of 15 to an extremely important influence. Throughout childhood, social competencies (21) had moderately important influences, and their influence increased in adolescence (up to the age of 35) to an extremely important influence. Psycho-motor skills (22) have very importantly influenced the development of A.V.'s musical talent in all periods of life (3–35 years of age), likewise musicality (23). Learning and working strategies (24) and achievement motivation (25) had an extremely important influence on the musical development of A.V. in all periods of life (3–35 years of age). Coping with stress (26) had different effects, depending on age. In early childhood, it had a moderately important influence; in middle childhood a very important influence; and in late childhood (9–11 years of age) the influence of coping with stress became extremely important. It still had a very important influence in early adolescence, after which time it decreased. Performance anxiety (27) had various influences, depending on age. In early childhood, it was a moderately important influence; afterwards, it increased to a very important influence at the age of 6, until adolescence when it decreased again to a moderately important influence at the age of 15. In early adulthood, the impact of performance anxiety became neutral. In the studied periods, the influence of assessment-related anxiety (28) decreased with age. In childhood and early adolescence, it had a very important influence, which decreased to a moderately important influence at the age of 15. In late adolescence (18–20 years of age), it became neutral, and in early adulthood it had a low influence. Control of expectations (29) had the greatest influence on the musical development of A.V. in late childhood and adolescence (9–17 years of age). Then the influence decreased slightly to a moderately important influence in late adolescence and early adulthood (18–35 years of age). It also had a moderately important influence in earlier life periods (3–8 years of age).

4 Discussion

External factors

In the earlier periods of life, external factors were at the forefront and had more significant influences. Especially the family, in which both father and mother had, throughout his childhood, an extremely important influence on the musical development of A.V., as they were also professional musicians themselves. The latter confirms the findings of B. Bogunović (2008) that in families, where one or both parents are professional musicians, there is a significantly higher level of encouragement and support from the family. Parents – professional musicians provide significantly higher musical stimulation during the preschool period, in a way that the mother stimulates the child's interest in music, and the father is directly specifically engaged. In this case, the question of the natural and the acquired arises, and I can agree with the research reports

(Bogunović, 2008) that family encouragements and support are crucial, even in families with professional musicians, and that musical ability alone is not decisive for success. In children and adolescents, the level and quality of family encouragements and support play a decisive role in realizing the musical potential. At all ages, including adulthood, encouragement within A.V.'s family was rated with an extremely important influence, as confirmed by the research of Evans, Bickel, and E. D. Pendarvis (2004) that parental integration and support in the child's music education is much more crucial than the innate abilities themselves. The influence of his mother and father decreased through adolescence until adulthood, and I can again refer to the findings of B. Bogunović (2008) that family influence decreases in adolescence. On the other hand, the importance of the competence and professional success of the music instrument teacher, which represents a new development model for personal and professional identification, grows. The latter claims coincide with A.V.'s answers that, until the age of 20, the music instrument teacher had an extremely important influence on the quality of music instruction, which still has a very important influence even in adulthood. I can therefore agree with the findings of S. Petersen (2018) on the importance of the family and teacher as the key external factors in the development of musical talent, as well as the productive partnership between these two factors (Ho & Chong, 2010), which helps establish meaningful connections between development strategies and children's lives.

Throughout childhood and adolescence, class climate also had a very important influence on A.V. In adulthood, its influence decreased slightly to a moderately important influence. At all ages, however, peers also had a moderately important influence on the musical development of A.V. In the musical context, peers mainly represent competition (Bogunović, 2008), which is why they are often used as reference models for assessing one's own results and self-evaluation. From childhood to adulthood, critical life events also had a very important influence on A.V.

Internal factors

At the stage of development, when innate potential and influences from the environment are present, the young gifted student relies primarily on personal strengths and assumes independent management of his personal, musical, professional and social development (Bogunović, 2008). The latter findings support Bloom's Three-Phase Model of Talent Development, in which various environmental factors have their place as key factors in different periods of student development and talent development concepts (Sosniak, 1990, in Subotnik & Jarvin, 2005), which speak not only about environmental and other developmental factors, but also about intrapsychic characteristics and professional competencies. The importance of the influence of several internal factors is constant in A.V. at all ages. Motivation, interest, passion, intellectual abilities, creative abilities, musicality, psycho-motor skills, learning and working strategies, and achievement motivation had very important influences on the development of musical talent in all periods of life. Given the common constant of the latter factors, I can highlight some points of contact. Recent research suggests that internal and external motivation synergistically influence creative achievement (Mumford et al., 2002; Prabhu, Sutton & Sauser, 2008, in Garces-Bascal, 2014). Guilford (1986) states that motivation is

extremely important, because without it, creative abilities cannot be realized. Sternberg and Lubart (1999, in Tafuri, 2006) found that creativity supposedly requires the merging of six different but interrelated areas, which include motivation, in addition to intellectual ability, knowledge, thinking styles, personality, and environment. B. Bogunović (2008) writes about a consistent relationship between motivation and practice. This is especially important for performance, as the length of the exercise is the best "predictor" of instrumental performance. With age, the importance of the influence of hard work, perseverance, perfectionism, perception, emotional intelligence, intuition and social competencies on the participant A.V. increased, whereby hard work and emotional intelligence had an extremely important influence from the age of 15, and perfectionism from the age of 18. Perseverance is associated with effort, strenuous practice and hard work. In Gagné's Differentiated Model of Giftedness and Talent (DMGT) (2005), the internal (intrapersonal) catalyst involves effort, which is one of the factors influencing talent development; high achievements and progress depend on ability and effort (Antaki, 1994, in Evans et al., 2004). J. Haroutounian (2000b) includes persistent and hard practice in describing the characteristics of prodigies. Bloom (1985, in Hartoutounian, 2000c) found that talented individuals in music, art, athletics, math and science show some common qualities, including a willingness to invest the great amount of time and effort required to attain a high level of achievement in the field in which they exhibit talent.

As regards coping with stress and performance anxiety, the influence on A.V. varied at different ages. In both factors, it was a moderately important influence, which increased to a very important influence in early childhood, between the ages of 6 and 8, and to an extremely important influence in late childhood and early adolescence. The influence of both factors declined slightly in adolescence, from the age of 15 onwards, and became neutral in the case of performance anxiety in early adulthood. Similarly, control of expectations had a moderately important influence in early and middle childhood, increasing to a very important influence between the ages of 9 and 17; afterwards, it declined again to a moderately important influence. With age, the influence of assessment-related anxiety decreased; it was very important in childhood and early adolescence, but decreased through adolescence to a moderately important influence and to a neutral one; it decreased further to a low influence in early adulthood. Based on the latter results, I refer to Cross's (2005) claim that gifted and talented students feel pressured by the need for continued success. Katel's (1978) thesis on personality, abilities, and motivation as separate modalities and the complex relationships between them confirms that musical success requires a combination of three factors: internal motivation, abilities, and personality traits. The latter are important for the emergence of a specific quality of talent, which is exhibited in a particular area (Letić, Milutinović & Grandić, 2016). P. Pangrčič and Blažič (2017) wrote that the development of ability or talent is a lifelong process that can be observed in young children when compared to peers, or as an achievement in a particular field. Achievements are associated with high motivation and become the driving force of a child and later of the gifted person.

5 Conclusion

The results of the exploratory case study confirm the findings of previous research (Bogunović, 2008) that the influence of the family on an individual's musical performance decreases with age and is lower in the high school period than in the preschool and elementary school period. In the high school period (in adolescence), autonomy increases and the emphasis shifts to personality characteristics, with all the previous family influences from the previous age periods already being "embedded" in the individual. Another powerful factor in the successful talent development is the music instrument teacher, who often marks a turning point at all levels of formal music education. Internal factors, which can be interconnected, are associated with personality traits. G. Gojkov (2011) emphasized the importance of personality traits through scientific knowledge that students' creativity can be stimulated through various measures and thus form flexible knowledge structures, taking into account the characteristics of the cognitive style. This refers to theories of creativity from the end of the previous century, which also included non-cognitive factors (emotions, interests, point of view, etc.) in order to understand the creative process of learning and problem solving, and led to the conclusion that a creative personality needs to be observed also outside the context of giftedness and the beneficial effects of the environment. In this way, the importance of certain personality traits for activating the creative potential and changing it into an appropriate manifestation was emphasized. Nikolić, Blažič and Kodela (2016) point out that musical potential needs to be recognized in early childhood in order to be able to influence the development of musical talent in a timely and appropriate manner. I conclude that the present research adds to the above-mentioned need for early recognition the promotion of a diverse set of factors influencing the development of musical talent from a very early period (3–5 years of age) onwards.

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Vpliv dejavnikov na razvoj izjemnega glasbenega talenta – študija primera

V članku predstavljamo izsledke raziskave, v kateri smo proučevali vpliv devetindvajsetih dejavnikov razvoja izjemnega glasbenega talenta v različnih življenjskih obdobjih (od 3. do 35. leta) skozi študijo primera. V raziskavi je sodeloval mednarodno priznani glasbenik, orglavec, Aleksey Vylegzhanin (v nadaljevanju A. V.).

Orgelska stroka se lahko v evropskem prostoru pohvali z zelo bogato in pestro tradicijo, ki jo bogatijo mnogi izjemni orgelski virtuozi. Slednji običajno niso samo koncertno dejavni, temveč se uveljavljajo tudi kot orgelski pedagogi in poučujejo na mednarodno priznanih glasbenih univerzah, akademijah in konservatorijih, ki ponujajo možnosti orgelskega izobraževanja na visoki umetniški ravni. Kakovostno glasbeno šolanje je eden izmed ključnih dejavnikov pri razvoju glasbenega talenta, na katerega vplivajo tudi različni drugi dejavniki, ki smo jih obravnavali v pričujočem prispevku.

V študiji primera nas je podrobneje zanimalo, kakšen vpliv so imeli različni zunanji in notranji dejavniki na razvoj izjemnega glasbenega talenta in kako se je vpliv le-teh spreminjal v različnih življenjskih obdobjih A. V.

Za potrebe raziskave smo oblikovali in uporabili vprašalnik, ki zajema devetindvajset dejavnikov, ki vplivajo na razvoj glasbenega talenta in pri katerih je treba označiti intenzivnost vpliva posameznega dejavnika v različnih življenjskih obdobjih: zgodnje otroštvo (3–6 let), srednje otroštvo (6–8 let), pozno otroštvo (9–11 let), zgodnje mladostniško obdobje (12–14 let), srednje mladostniško obdobje (15–17 let), pozno mladostniško obdobje (18–20 let) in zgodnja odrasla doba (20–35 let).

Intenzivnost vpliva dejavnikov ocenjujemo po obdobjih s pomočjo 7-stopenjske ocenjevalne lestvice, ki vsebuje naslednje stopnje: 1. stopnja – povsem nepomemben vpliv, 2. stopnja – zelo nepomemben vpliv, 3. stopnja – srednje nepomemben vpliv, 4. stopnja – nevtralen vpliv, 5. stopnja – srednje pomemben vpliv, 6. stopnja – zelo pomemben vpliv, 7. stopnja – ekstremno pomemben vpliv. Devetindvajset kriterijev (dejavnikov) je razdeljenih v dva sklopa: zunanji dejavniki (9 kriterijev) in notranji dejavniki (20 kriterijev).

Raziskavo smo zaradi epidemije izvedli na daljavo. Zbiranje podatkov je potekalo v aprilu 2020. Vprašalnik je bil udeležencu študije A. V. poslan v elektronski obliki (v angleščini). Udeleženec ga je po enem tednu v celoti izpolnjenega v elektronski obliki poslal nazaj. Po pregledu odgovorov je sledil konzultacijski pogovor z udeležencem preko videokonference. A. V. je pred publiciranjem prebral študijo primera ter odobril objavo ugotovitev.

Aleksey Vylegzhanin (1987, Rusija/Avstrija) je izjemen umetnik in dobitnik številnih prvih nagrad na priznanih mednarodnih tekmovanjih, ki že več let uspešno razvija kariero koncertnega orglavca. Poleg orgel redno koncertira tudi na drugih inštrumentih s tipkami (klavir, čembalo) in je aktivno dejaven kot skladatelj. Prve glasbene izkušnje je pridobil pod mentorstvom svojih staršev, prav tako profesionalnih glasbenikov (oče – solo pevec, mama – dirigentka). S šestimi leti je pričel z izobraževanjem v novosibirskem glasbenem liceju v Rusiji, specializiranem za izjemno nadarjene otroke, kjer se je najprej pričel učiti igranja klavirja ter nekaj let kasneje orgel. Potem je nadaljeval z izobraževanjem na novosibirskem glasbenem kolidžu ter pri 18. letih na novosibirskem državnem konservatoriju M. I. Glinka, kjer se je učil igranja orgel v razredu prof. Natalye Baginskaye. Po prvi diplomi iz igranja orgel na novosibirskem državnem konservatoriju je leta 2010 nadaljeval s študijem orgel na Univerzi za glasbo in upodabljajočo umetnost v Gradcu (Avstrija) pri prof. Guntherju Rostu, kjer je drugič diplomiral ter leta 2018 z odliko magistriral, trenutno pa na graški glasbeni univerzi študira še cerkveno glasbo. A. V. je svoje prve koncerte začel izvajati že pri šestih letih, od devetega leta naprej pa je začel prejemati številne nagrade na nacionalnih in mednarodnih tekmovanjih. Za seboj ima številne solo koncerte ter izvedbe z renomiranimi umetniki, zbori, orkestr. in komornimi sestavi. Redno koncertira v Rusiji, Sloveniji, na Hrvaškem, v Nemčiji, Avstriji in Angliji. Izmed pomembnejših koncertov in projektov lahko gotovo izpostavimo gala koncert v moskovski katedrali (2009), številne solistične koncerte v Katedrali srca Jezusovega v Gradcu, projekte v koncertni dvorani Mummuth v Gradcu: organ@mumuth (2013), Petr Eben: Faust (2014), Organ on Stage (2015), Schlafes Bruder (2016), projekte s skladateljico Reiko Yamadom v sklopu festivala Orgelfrühling Steiermark (2018 in 2019), sodelovanje z mednarodno priznanim ansamblom Klangforum Wien (2019) ter mnoge druge. Še poseben izziv mu je izvajanje orgelskih del modernih in sodobnih skladateljev,

kar dokazujeta tudi zgoščenki, ki ju je posnel: Klaus Lang – Organ Works, Vol. 1 (GOD Records), in Aleksey Vylegzhanin plays Naji Hakim (Klangdebüts, Vol. 53). Poleg klasične glasbe se aktivno ukvarja tudi z jazzom, pri čemer sodeluje s priznanimi glasbeniki in ansambli. S slovensko jazz pevko Lino Rahne je posnel zgoščenko s svojimi avtorskimi skladbami, v procesu pa je tudi snemanje njegovih lastnih priredb Mozartovih arij. Poleg koncertiranja deluje tudi kot organist v številnih cerkvah v Gradcu in okolici ter sodeluje s številnimi zbori in orkestri, poseben interes pa goji za interdisciplinarne izvedbe.

Zunanji dejavniki: Mama (1) je imela celotno otroštvo na A. V. ekstremno pomemben vpliv. V mladostniškem obdobju (12–17 let) se je ta nekoliko zmanjšal, v kasnejšem mladostništvu ter zgodnji odrasli dobi (po 18. letu) pa postal nevtralen. Prav tako je imel oče (2) A. V. nanj v otroštvu ekstremno pomemben vpliv, ki se je v mladostniškem obdobju nekoliko zmanjšal (12–14 let) ter postal s 15. letom (do 35. leta) srednje pomemben. Spodbude v družini (3) so skozi vsa navedena obdobja (3–35 let) ekstremno pomembno vplivala na razvoj glasbenega talenta A. V. Izobrazba staršev (4) je imela v vseh življenjskih obdobjih (3–35 let) nanj ekstremno pomemben vpliv. Mentor/učitelj inštrumenta (5) je imel vse do zgodnje odrasle dobe ekstremno pomemben vpliv. Po 20. letu pa se je njegov vpliv nekoliko zmanjšal, vendar je še vedno zelo pomembno vplival na razvoj glasbenega talenta. Kakovost glasbenega in instrumentalnega pouka (6) je vse do zgodnje odrasle dobe ekstremno pomembno vplivala na glasbeni razvoj A. V. Po 20. letu se je vpliv zmanjšal v zelo pomembnega. Razredna klima (7) je imela celotno otroštvo in mladostniško obdobje zelo pomemben vpliv, ki se je v zgodnji odrasli dobi zmanjšal v srednje pomembnega. Vpliv vrstnikov (8) je bil v vseh življenjskih obdobjih (3–35 let) za glasbeni razvoj A. V. srednje pomemben. Kritični življenjski dogodki (9) imajo v vseh življenjskih obdobjih zelo pomemben vpliv.

Notranji dejavniki: Motivacija (10), interes (11) in strast (12) so dejavniki, ki so v vseh življenjskih obdobjih (3–35 let) zelo pomembno vplivali na glasbeni razvoj A. V. Prav tako so imele intelektualne (13) in ustvarjalne (14) sposobnosti v vseh življenjskih obdobjih zelo pomemben vpliv. Čustvena inteligenca (15) je imela v otroštvu (3–11 let) in zgodnjem mladostniškem obdobju (12–14 let) zelo pomemben vpliv, nakar se je le-ta po 15. letu povečal v ekstremno pomembnega. V zgodnjem in srednjem otroštvu je trdo delo (16) srednje pomembno vplivalo na glasbeni razvoj A. V. Vpliv se je v poznem otroštvu in zgodnjem mladostniškem obdobju povečal v zelo pomembnega ter po 15. letu v ekstremno pomembnega. Srednje pomemben vpliv je imela na glasbeni razvoj v otroštvu in zgodnjem mladostništvu vztrajnost (17), katere vpliv se je po 15. letu nekoliko povečal, in sicer v zelo pomembnega. Perfekcionizem (18) je imel v otroštvu srednje pomemben vpliv. V mladostniškem obdobju se je povečal najprej na zelo pomembnega (12–17 let), nato pa v ekstremno pomembnega (18–35 let). Srednje pomemben vpliv je imela v zgodnjem in srednjem otroštvu percepcija (19), katere vpliv se je povečal v zelo pomembnega v poznem otroštvu, po 9. letu (do 35. leta). Intuicija (20) je imela v otroštvu in zgodnjem mladostništvu srednje pomemben vpliv, ki se je po 15. letu nekoliko povečal, v zelo pomembnega. Celotno otroštvo so imele srednje pomemben vpliv socialne kompetence (21), katerih vpliv se je povečal v mladostniškem obdobju (do 35. leta) v zelo pomembnega. Psihomotorične sposobnosti (22) so v vseh življenjskih obdobjih (3–35 let) vplivale zelo pomembno na razvoj glasbenega talenta A. V., prav tako muzikalnost (23). Učne in delovne strategije (24) ter motiviranost za dosežke (25) so imele za glasbeni razvoj A. V. v vseh življenjskih obdobjih (3–35 let) zelo pomemben

vpliv. Spopadanje s stresom (26) je imelo različen vpliv glede na starostna obdobja. V zgodnjem otroštvu je bilo le-to srednje pomembno, v srednjem otroštvu zelo pomembno, v poznem otroštvu (9–11 let) pa je postal vpliv spopadanja s stresom že ekstremno pomemben. Prav tako v zgodnjem mladostništvu, nakar se je zmanjšal, vendar je imel še vedno zelo pomemben vpliv (15–35 let). Tudi trema (27) je imela različen vpliv glede na starostna obdobja. V zgodnjem otroštvu je bil le-ta srednje pomemben, nakar se je že pri 6. letih povečal v zelo pomembnega in tako je bilo vse do mladostniškega obdobja, ko se je pri 15. letih zopet zmanjšal v srednje pomembnega. V zgodnji odrasli dobi je vpliv treme postal nevtralen. Vpliv strahu pred ocenjevanjem (28) se je s starostnimi obdobji zmanjševal. V otroštvu in zgodnjem mladostniškem obdobju je imel zelo pomemben vpliv, ki se je pri 15. letih zmanjšal v srednje pomembnega. V poznem mladostniškem obdobju (18–20 let) je postal nevtralen, v zgodnji odrasli dobi pa ima strah pred ocenjevanjem zelo nepomemben vpliv. Nadzor nad pričakovanji (29) je imel največji vpliv na glasbeni razvoj A. V. v poznem otroštvu in mladostniškem obdobju (9–17 let). Le-ta se je nekoliko zmanjšal, v srednje pomembnega, v pozni mladostniški in zgodnji odrasli dobi (18–35 let). Prav tako pa je imel nadzor nad pričakovanji srednje pomemben vpliv v zgodnejših življenjskih obdobjih (3–8 let).

V splošnem rezultati kažejo na intenzivnost in pomemben vpliv številnih zunanjih dejavnikov: mama, oče, spodbude v družini, izobrazba staršev, mentor/učitelj inštrumenta, kakovost glasbenega in inštrumentalnega pouka, razredna klima, vpliv vrstnikov, kritični življenjski dogodki. V različnih življenjskih obdobjih so bila manjša odstopanja. Skozi proučevana obdobja so pomembno vplivali na razvoj izjemnega glasbenega talenta A. V. tudi številni notranji dejavniki, kot so: motivacija, interes, strast, intelektualne in ustvarjalne sposobnosti, čustvena inteligenca, trdo delo, vztrajnost, perfekcionizem, percepcija, intuicija, socialne kompetence, psihomotorične sposobnosti, muzikalnost, učne in delovne strategije, motiviranost za dosežke, spopadanje s stresom, trema. Vpliv teh dejavnikov je bil skozi proučevana obdobja večinoma velik ali pa se je s starostjo praviloma stopnjeval. Vpliv strahu pred ocenjevanjem se je skozi starostna obdobja zmanjševal. Enako velja tudi za nadzor nad pričakovanji. Zaključimo lahko, da so proučevani dejavniki razvoja izjemnega glasbenega talenta imeli praviloma (zelo) pomemben vpliv, ki se je s starostjo večinoma le še stopnjeval oz. se je minimalno spreminjal v proučevanih življenjskih obdobjih Alekseya Vylegzhanina.

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Application of Didactic Teaching Models: Teachers' and Students' Perspectives

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KLJUČNE BESEDE: aktiven pristop k učenju, pouk, didaktični modeli, šolski kontekst

POVZETEK – Inovacije pri pouku imajo prioritetno vlogo, uporaba sodobnih vsebin, metod, oblik in sredstev pa predstavlja novo filozofijo vzgoje in izobraževanja. Da bi našli rešitve za potrebe novih generacij, se številni raziskovalci osredotočajo na preučevanje postmodernih družbenih izzivov v izobraževanju. Z raziskavo želimo ugotoviti, kako učitelji in učenci dojemajo uporabo didaktičnih modelov pri pouku. Z uporabo tehnik skaliranja in anketiranja je najlažje odkriti najpogosteje uporabljene modele v praksi. V ta namen smo uporabili Likertovo ocenjevalno lestvico (SUNPIMN), ki vsebuje 30 postavk, ki preučujejo 18 didaktičnih modelov pouka. Raziskavo smo izvedli v Srbiji na vzorcu 325 anketirancev (219 učencev in 106 učiteljev). Rezultati kažejo statistično pomembne razlike v dojemanju učiteljev in učencev, učiteljev družboslovnih in naravoslovnih ved ter učiteljev z različnimi leti delovnih izkušenj.

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KEYWORDS: active learning approach, teaching, didactic models, school context

ABSTRACT – Innovations in teaching have become very important in education, whereas the application of novel contents, methods and tools in teaching has emerged as a new educational philosophy. Various researchers have focused on the study of the postmodern challenges in education with the purpose of envisaging new ideas for new generations. This research examined the teachers' and students' perceptions of the application of didactic models in teaching. The scaling technique and the survey method were used to determine which didactic models were most frequently applied in teaching practices. The Likert-type assessment scale (SUNPIMN) containing 30 items that examined 18 didactic teaching models was used. The research was conducted in the territory of the Republic of Serbia with 325 respondents (219 students and 106 teachers). The research results prove statistically significant differences regarding the perceptions of the application of didactic teaching models in schools between the following participants: teachers and students, teachers of social sciences and teachers of natural sciences, and teachers with different years of teaching experience.

1 Introduction

The improvement of the education system by introducing innovations into school contexts represents the basis that is essential for any social progress. The participants in school activities are thus regarded as the implementers of innovations and initiators of changes, which provides new roles and the development of new competencies. Consequently, the teacher is no longer a teacher in the traditional sense of the word, but rather an innovator, advisor, coordinator, etc. The teacher has to face new challenges that require the acquisition of professional, pedagogical, psychological, didactic, social and emotional competencies.

Various questions arise regarding the successful implementation of didactic models in teaching practices: Does the school environment provide the conditions necessary for their practical application? Are teachers prepared to apply new approaches? Do teachers possess the necessary competencies to apply these approaches to teaching in their everyday practice? This paper endeavours to explore and answer these questions, as well as many other (e.g. the effects of various didactic models on motivation, learning, the development of social skills, etc.). This paper is focused on the examination of the students' and teachers' attitudes in order to determine the similarities and differences in their perceptions of the application of various didactic teaching models.

2 Theoretical approach to the problem

The *Pedagogical Lexicon* (1996, p. 113) defines *didactic teaching models* as a modern term for the necessity of developing a pluralistic concept of teaching and its macro and micro structure, considering numerous and various elements, contents, techniques, technologies, structural components, systems, methods, teaching space, number of students, and their integration into versatile combinations.

The development of pedagogy and its scientific disciplines has motivated scientists specializing in didactics to pose the initial questions related to didactic systems and models. The construction of dynamic models that would unify all the relevant aspects of teaching has been the crucial problem. Stanković & Blažič (2017, p. 49) indicated the following: "the functional application of the didactic system represents an issue that directly concerns the areas of teaching strategy, classroom teaching structure, and organization of teaching. The application and alteration of teaching systems are an integral part of the process frequently termed the dynamization of teaching (making classroom teaching more vigorous or intensive, etc.). A dogmatic insistence on only one system of teaching, exemplified by the unsurpassed domination of the traditional or frontal method of teaching, proves that didactic systems are still not completely known or explored." A close examination of the relationship between the factors of teaching is essential for the realization of the system's elements. Therefore, the didactic system, as the system of relationships (didactic contact) between three subsystems – teacher (tutor, professor), student (pupil, university student) and the body of knowledge or teaching content, represents the basis of the interaction of didactic elements and their natural domain (Kohanova, 2006).

Until recently, students were taught convergent thinking and provided with ready-made, correct answers, stored in their memories to be used adequately on demand. However, divergent, creative thinking is not being taught. Students strictly follow algorithmic principles, which they learn as "information", not as novel, tentative questions and hypotheses that might stimulate their innovative concepts. Actually, the traditional school is concerned with only one task: to transfer as much information as possible and to force students to learn it by applying the traditional grading system. This requirement verges on verbalism and formalism since it provides neither quality education nor true qualifications. Generally speaking, one of the key weaknesses of traditional schooling is that it does not qualify students for independent studying and thinking about the

connection between natural and social phenomena, problem solving, cooperation, well-bred social behaviour, a sense of community and team work, personal responsibility, punctuality, industriousness and willingness to achieve success.

The aforementioned issues prove that students visualize school as a gloomy and desperate, rather than cheerful place, which is a reflection of their position in the educational processes (which are either authoritarian or democratic). Students find themselves in a gap between the rigid and intolerant school system and their parents who willingly send them to this kind of school. Students cannot grasp the true meaning of education owing to the traditional, ex-cathedra teaching, which is based on verbalism and formalism, and performed in a rigid classroom environment. Therefore, students cram for exams, study without any deeper understanding of their school materials (reproductive learning) and learn only to obtain good grades. Students blame school for their position of passive participants (teaching is performed exclusively by teachers and is separated from students' learning both in space and time), for not being educated using the methods and techniques of intellectual work, for the lack of self-assessment, for the preference of theoretical knowledge at the expense of the practical one (Stanković & Stanojević, 2019).

Teaching has been enriched by the introduction of numerous didactic and technological innovations over the past years, motivated by various reforms in pedagogy. Hence, Matijević & Topolovčan (2017, p. 95) emphasized that "these changes involve a predominant orientation towards students and more active and practical learning, which consequently leads to devising a learning strategy based on problem solving, exploration, revelation, creation and play".

Contemporary teaching practices as the foundation of the development of didactic models

Unlike reproductive learning, which is fundamental in traditional teaching, a more sophisticated learning strategy has proved very successful in achieving the educational goals of contemporary education (Salazar et al., 2019). The changed position of students presupposes a personal approach, which in turn contributes to a greater fulfilment of students' needs (Martone, 2015). On the other hand, differentiated instruction and its wide range of modalities provide an equal approach to all students in accordance with their knowledge, e.g. doing various exercises with different levels of complexity (Acosta-Tello & Shepherd, 2014). There are some other methods and approaches that contribute to the creation of cognitive independence, interests and personal qualities of students. One of them is the heuristic method of teaching in which the teacher's role is to supervise the heuristic conversation that helps students to reach conclusions independently (Scafa, 2014; Sieberer-Nagler, 2016; Terhart, 2001).

New approaches require a different type of teaching that is directed towards the development of problem-solving skills, team work, and an expression of one's own attitudes and opinions (Kunanbayeva, 2016). This is achieved by project-based learning, which stimulates students to investigate and solve problems either individually or in a group in relation to their own interests (Peterson, 2018). In project-based learning, students learn through experience. Learning is focused on discovering and negotiating, understanding and joint experimenting of students (OECD, 2018). These teaching

models qualify students for the practical application of teaching materials and acquired knowledge in everyday life (Cohen et al., 2013).

Active teaching approaches have an impact on learning and students' self-esteem. Active methods assume not only an approach that is different from the traditional one, but also a different learning environment and interaction space. Numerous strategies have proved very successful: dramatization, the snowball technique, case study, experiments, etc. On the other hand, contemporary perception of education aims at qualifying innovative, successful and accomplished individuals in the areas of intellect, art and culture. The application of contemporary didactic models in teaching art has resulted in the students' altered perception and motivation for learning (Orak & Demirci, 2018). The review of other studies has also shown that active methods are more successful than the traditional ones, which is reflected in students' positive feelings and has a positive impact on their motivation and academic achievement (Kardas & Uca, 2016; Memnun, 2008; Telli et al., 2004). Teachers are thus expected to be engaged in both innovating teaching and acknowledging the personality of each student (Demirci, 2006).

It is very important to create a dynamic and interactive learning environment that fosters group discussion (Sieberer-Nagler, 2016). This type of group work generates critical thinking and cooperation skills. It stimulates students to participate in the organization and placement of group members so as to achieve adequate cooperation. Recent action research studies have confirmed that group work has a positive influence on learning, but that it depends on the characteristics of learning, the approach to learning, motivation, and the planning skills of group members (Nuuyoma, 2017). In Taiwan, cooperative learning has been validated as a very successful classroom teaching method and has been applied in all schools in Japan (Chia-Ling & Ya-Fung, 2017). On the other hand, the team-teaching model was applied in one of the studies related to e-learning design and materials. Its results were satisfactory since the team members were more successful owing to the internal resources of the team (Graham, 2002).

The development of technology has contributed enormously to the blooming of innovations in teaching in the twenty-first century. Digital technology has created numerous advantages for teaching. Students' and teachers' interactive communication is enabled by numerous interactive tools. The use of video games in instruction motivates students, making teaching materials more interesting and attractive (OECD, 2018). Students find great delight in learning via social media as an innovative way of learning (Brownson, 2014).

All of these learning strategies contribute to the development of the cognitive and investigative component, independent activity, and use of several information and learning resources (Vilotijević & Mandić, 2016). However, although technology initiates an individualized teaching approach, it has not been fully applied in teaching. This is confirmed by one new research study that records the problems related to the lack of resources, the limited use of the Internet and teachers' practical training in the use of technology (Evans-Williams, 2017). The use of technology to modernize teaching loses its pedagogical aspect unless teachers possess adequate competencies. Moreover, it may even have negative effects on students' further development (OECD, 2015).

3 Method

The goal of this paper was to determine teachers' and students' attitudes towards the application of innovative teaching models. The following tasks were established:

- comparison of teachers' and students' attitudes in order to determine the application of didactic teaching models;
- detection of particular didactic models most frequently used by teachers;
- detection of potential differences in the application of didactic models regarding the years of teaching experience and the scientific field taught (natural sciences and social sciences).

The scaling technique and the Likert-type scale (SUNPIMN) containing 30 items were used. The teachers and students were asked to express their agreement or disagreement with the given statements by selecting one out of five possible choices: strongly disagree, disagree, neither agree nor disagree, agree and strongly agree. The survey technique was also used and the questionnaire contained closed-ended questions used to examine which didactic models the teachers used most frequently. Teachers were presented with 18 models (*individualized, programmed, integrative, exemplary, heuristic, project-based, problem-based, developmental, game-like, productive, meaningful and verbal, computerized and informative, overtaking, team, and micro teaching*) and were given the option to select more than one answer. The scale and the questionnaire were constructed for the purposes of this research. The scale reliability is presented in Table 1.

Table 1. Cronbach's Alpha reliability test

Cronbach's Alpha	*N of items*
0.911	30

The value of the Cronbach's Alpha test was 0.911, which proved the reliability of the scale used for this research. The research was conducted in 2019. The sample consisted of 325 respondents (106 teachers and 219 students of primary schools in Serbia). The sample was a voluntary sample.

The following independent variables were used:

- scientific field (two categories) and
- years of teaching experience (three categories).

As regards the first variable, the sample consisted of 30 teachers of natural sciences (11.1%) and 70 teachers of social sciences (21.5%). Considering the years of teaching experience, 33 teachers or 10.2% had 10 years of teaching experience, 36 teachers or 11.1% had 11 to 20 years of teaching experience, and 37 teachers or 11.4% had more than 21 years of teaching experience. The obtained data were entered and analysed statistically using the SPSS program, while the following statistical parameters were used: descriptive statistics, t-test and ANOVA.

4 Results and interpretation

Significant results were obtained from the analysis of the first task that aimed to examine and compare the teachers' and students' responses related to the application of didactic teaching models. The statements rated the lowest on the scale of 1 to 5 by the teachers and students were the following: *I value reproduction over the understanding of teaching materials; My students have limited time to acquire new concepts; I do not apply cooperative learning; I do not stimulate competition in the group; I cooperate with schools from foreign countries via the Internet in order to exchange experience and knowledge*. The students valued the first statement (M = 3.041, SD = 1.284) more highly than the teachers (M = 2.741, SD = 1.338) since their responses had a higher arithmetic mean. The responses provided by the teachers (M = 2.651, SD = 1.280) and by the students (M = 2.941, SD = 1.215) in relation to the statement *I do not stimulate competition in the group* were positioned very low on the scale. As regards time limitations when acquiring new concepts, the students' responses (M = 3.091, SD = 1.135) were higher on the scale than the teachers' responses (M = 2.731, SD = 1.221). The teachers provided more negative responses (M = 2.641, SD = 1.105) than the students (M = 3.061, SD = 1.267) concerning the statement *I do not apply cooperative learning*. The statement *I do not stimulate competition in the group* was assessed equally by the students (M = 2.941, SD = 1.215) and by the teachers (M = 2.651, SD = 1.280). The statement *I cooperate with schools from foreign countries via the Internet in order to exchange experience and knowledge* was more highly valued by the teachers (M = 3.711, SD = 1.127) than by the students (M = 2.191, SD = 1.306). The differences in the teachers' and students' attitudes were determined by the t-test and the results are presented in Table 2.

Table 2. Students' and teachers' attitudes towards the application of didactic teaching models

N				*Items (30)*	*p*
Students		*Teachers*			
f	f%	f	f%	28	* p < 0.050
219	67,4	106	32,6		
Total		325		2	p > 0.050

Table 2 presents the frequencies and percentages of the responses. The results of the t-test showed that statistically significant differences in the arithmetic means, i.e. in the teachers' and students' responses related to the implementation of didactic teaching models, occurred in 28 statements ($p < 0.050$).

If the differences in the responses to the items from the assessment scale are grouped according to the type of classroom teaching, they can be interpreted regarding the application of the following models: integrative teaching ($t = –3.569$, $df = 238.683$, $p = 0.001$), individualized teaching ($t = –8.205$, $df = 239.373$, $p = 0.001$), cooperative teaching ($t = 2.965$, $df = 323$, $p = 0.003$), team work ($t = –7.970$, $df = 236.572$,

p = 0.001), project-based teaching (t = –3.649, df = 258.205, p = 0.001), problem-based teaching (t = –7.224, df = 259.276, p = 0.001), experiential learning (t = –9.908, df = 291.061, p = 0.001), computerized teaching (t = –2.958, df = 231.534, p = 0.003), distance learning (t = –10.843, df = 237.440, p = 0.001), interactive teaching (t = –6.376, df = 246.267, p = 0.001).

Considering the arithmetic mean, the teachers valued their application of didactic models more positively than the students. On the other hand, the responses were homogenous regarding two statements only, i.e. with p > 0.050: *I measure students' knowledge with tests and examinations* (t = 1.109, df = 230.481, p = 0.269) and *I particularly pay attention to the students with social communication issues* (t = –1.761, df = 323, p = 0.079).

The results obtained for the second research task, related to the identification of the most frequently used didactic teaching models, were first analysed using descriptive statistics, after which the differences in the teachers' responses with regard to the subjects they taught were determined, i.e. whether they were the teachers of natural sciences or the teachers of social sciences.

These results are shown in Table 3 and Table 4.

Table 3. The frequency of the application of didactic models in teaching

	N	*%*	*M*	*SD*
Individualized teaching	58	17.8	4.56	7.669
Programmed teaching	26	8.0	1.08	0.271
Integrative teaching	26	8.0	1.16	0.543
Exemplary teaching	20	6.2	1.18	0.722
Heuristic teaching	23	7.1	1.28	1.027
Modular teaching	15	4.6	1.23	1.050
Project-based teaching	55	16.9	2.01	2.255
Interactive teaching	61	18.8	2.31	2.737
Problem-based teaching	56	17.2	2.37	3.025
Developmental teaching	11	3.4	1.30	1.630
Game-like teaching	20	6.2	1.67	2.647
Productive teaching	20	6.2	1.98	3.850
Meaningful and verbal teaching	40	12.3	2.60	4.277
Computerized teaching	41	12.6	2.76	3.850
Overtaking teaching	6	1.8	1.27	4.277
Student-oriented teaching	26	8.0	2.36	4.619
Team teaching	67	20.6	4.71	7.292
Micro teaching	6	1.8	1.35	2.561

Table 3 presents the teachers' responses related to the most frequently used didactic teaching models. Out of the 18 teaching models provided, the teachers most frequently used team, individualized, interactive, problem-based, project-based, computerized, and meaningful and verbal teaching. They rarely used the programmed, integrative, student-oriented, exemplary, heuristic, game-like and productive teaching models, while they only occasionally used the modular, developmental, overtaking and micro teaching models. The teachers never used the experiential learning model and distance learning. The differences regarding the sciences taught by the teachers are presented in Table 4.

Table 4. Differences in the responses of natural science teachers and social science teachers

		N	*M*	*SD*	*t-test*	*df*	*p*
Exemplary teaching	Natural sciences	36	1.91	1.401	2.019	54.284	*0.048
	Social sciences	70	1.38	1.011			
Interactive teaching	Natural sciences	36	3.91	3.500	2.415	104	*0.017
	Social sciences	70	5.60	3.346			

The results of the t-test show the differences in the respondents' answers related to exemplary teaching and interactive teaching considering the independent variable of the scientific field. The teachers of natural sciences provided more positive responses for exemplary teaching than the teachers of social sciences. On the other hand, the teachers of social sciences valued interactive teaching more positively than the teachers of natural sciences. The differences were statistically significant with $p < 0.050$.

The differences in the subjects' responses related to the application of didactic models as regards the independent variable of teaching experience (up to 10 years; from 11 to 20 years; over 21 years) were determined by the ANOVA. The arithmetic means and the levels of deviation showed that the teachers with more than 21 years of teaching experience valued the reproductive teaching model and limiting the time for learning certain concepts more positively than the teachers from the remaining two categories. The teachers with 11 to 20 years of teaching experience valued the skills of applying new knowledge more positively than the rest of the respondents. The use of interactive methods and the application of the individualized approach were most valued by the teachers with up to 10 years of teaching experience. The diversity of the applied methods and the application of the problem-based teaching model were predominantly present in the responses of teachers with more than 21 years of teaching experience. The obtained results are presented in Table 5.

Table 5. Application of didactic teaching models according to teaching experience

		N	*M*	*SD*	*F-test*	*df*	*p*
I value reproduction over the understanding of teaching materials.	up to 10	33	2.06	1.028	8.324	2	*0.001
	from 11 to 20	36	2.58	1.204			
	over 21	37	3.27	1.446			
My students have limited time to acquire new concepts.	up to 10	33	2.39	1.143	6.019	2	*0.003
	from 11 to 20	36	3.11	1.213			
	over 21	37	3.35	1.206			
I measure students' knowledge with tests and examinations.	up to 10	33	4.15	0.712	9.657	2	*0.001
	from 11 to 20	36	4.47	0.654			
	over 21	37	3.75	0.722			
I use various methods that motivate students to be active.	up to 10	33	4.45	0.616	4.555	2	*0.013
	from 11 to 20	36	4.27	0.701			
	over 21	37	3.94	0.814			
I apply the individualized teaching model.	up to 10	33	4.42	0.902	5.903	2	*0.004
	from 11 to 20	36	3.97	0.696			
	over 21	37	3.75	0.862			
I use the problem-solving learning model.	up to 10	33	3.90	1.128	4.786	2	*0.010
	from 11 to 20	36	4.05	0.892			
	over 21	37	4.17	0.933			

The results obtained by the ANOVA show the differences in the use of didactic teaching models according to the years of teaching experience in relation to 6 statements. As regards the statement *I value reproduction over the understanding of teaching materials*, the statistically significant difference was evident between the responses of the teachers with up to 10 years of teaching experience and of those with over 21 years of teaching experience (Mean Difference = –1.209, p = 0.001). A statistically significant difference was observed between the same two categories in relation to the following statements: *I apply various methods that motivate students to be active* (Mean Difference = 0.508, p = 0.013), *I apply the individualized teaching model* (Mean Difference = 0.667, p = 0.004) and *I use the problem-solving learning model* (Mean Difference = –0.631, p = 0.010). Regarding the statement *My students have limited time to acquire new concepts*, statistically significant differences were evident in the responses of the teachers with up to 10 years of teaching experience when compared to the responses of the teachers with 11 to 20 years of teaching experience and those with more than 21 years of teaching experience (Mean Difference = –0.717, p = 0.003). Also, the differences in the responses regarding the years of teaching experience were detected in relation to the statement *I measure students' knowledge with tests and examinations* (Mean Difference = 0.715, p = 0.001). The obtained results show the differences within the studied categories of respondents which were calculated by the Bonfferoni post hoc test. Namely, the teachers with the fewest years of teaching experience put the most

effort into applying various teaching models and approaches, whereas the most experienced teachers still adhere to traditional teaching and value reproductive knowledge.

Firstly, the models and methods selected by the teachers in this research prove to be advantageous in many respects. Not only do they stimulate students' participation in classroom teaching but they also develop critical thinking, communication skills, problem solving, creativity, cognition, understanding, deduction, a practical approach to learning, an independent and inquiring spirit. These interpretations are present in other relevant research studies (Dorgu, 2015; Morrison, 2008; Forrest et al., 2012).

Secondly, this research proves that the teachers predominantly used the teaching methods that stimulate students' activity and an individualized approach. Moreover, it was determined that none of the teachers used the experiential learning model and distance learning. However, the teachers showed their readiness to apply didactic teaching models. Nevertheless, the obtained results show that certain teaching models are not used enough, probably due to a lack of finances and human resources. Although the respondents assessed the use of active methods positively, the majority of them still applied the traditional teaching model. The students thought that 40 % of the time should be dedicated to active learning, while 98 % of the teachers emphasized that they did not have enough time to apply active learning (Miller & Metz, 2014). Therefore, the obtained research results should not be generalized but judged carefully, taking into consideration the possibility of receiving socially acceptable responses from the teachers. The fact that the teachers did not apply distance learning can be explained by a lack of the necessary resources in schools, a deficiency in the relevant competencies or simply by a lack of interest on the part of the teachers in applying this model.

The research results obtained by the t-test indicate the differences in the teachers' responses regarding the subjects they taught, i.e. the corresponding scientific field. The teachers of natural sciences valued exemplary teaching more than the teachers of social sciences, whereas the teachers of social sciences assessed interactive teaching more positively than the teachers of natural sciences. The review of the relevant empirical research studies has not revealed the same findings, which further proves the authentic quality of this research. The differences in the teachers' responses related to the application of the studied teaching models were evident in relation to teaching experience, which was calculated by the ANOVA. The teachers with the fewest years of teaching experience used interactive methods the most, while the most experienced teachers still adhered to traditional teaching models, i.e. reproductive teaching and learning.

5 Conclusion

The most significant result is that the teachers assessed their application of teaching models more highly than the students did. This indicates that the students judged their teachers with criticism. The obtained results may be partially ascribed to the incongruence in the students' expectations, but also to the teachers' perceptions about the number of active methods that should be used in classroom teaching. Anyway, the results clearly indicate that the students believed that the studied didactic models and methods should be implemented more frequently. This finding is confirmed by the re-

search which determined that active learning increased students' motivation and interest (Wen-Ling & Chun-Yen, 2017). On the other hand, interactive methods contribute to the creation of positive personal traits, i.e. self-esteem, cooperation, independent thinking and an optimal level of anxiety. Interactive methods have a positive effect on better understanding and more adequate self-assessment and assessment of other people (Yukhimenko et al., 2017). Compared to the traditional concepts of learning, the meta-analysis of 225 studies has determined that the application of active learning methods increases students' academic achievement by 6% (Freeman et al., 2014). The results of the research presented in this paper prove that the teachers' acceptance of new teaching models increases their students' efficiency, academic achievement and interest in learning.

The models suggested for the twenty-first century are literacy, personalized learning, problem-based learning and project-based learning. The same was emphasized by Lambrechts et al. (2013), who underlined the importance of connecting various models involving interactive methods (group discussion, role play, brainstorming), action methods (field work) and research-based methods (problem analysis, case study). Experiential learning and project-based learning have yielded good results judging by the students' estimates because of the application of the following didactic methods: films, cooperative learning and learning through web tools (Bachiorri et al., 2016; Kazlauskiene et al., 2016). These models are particularly important for teaching practices that tend to follow contemporary trends. This research proved that the teachers applied these models in their everyday classroom teaching and instruction.

As regards the research question "*Are teachers willing to implement innovative teaching models*?", the responses were positive, which only shows that the teachers are willing to apply the majority of didactic teaching models. The theoretical review of various research studies and their results has determined the effects of various didactic models on motivation, learning and development of social skills. However, certain questions and issues remain open for further consideration, one of them being "*Do teachers have enough competencies and resources necessary for the implementation of these models*?" This question may initiate theoretical and empirical research studies in the future.

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Uporaba didaktičnih modelov – vidik učiteljev in učencev

Uporaba sodobnih didaktičnih metod in modelov se je izkazala za zelo uspešno, saj z njo lahko dosežemo visoko raven razmišljanja, odločanja in sodelovanja. Pri učencih se povečuje odgovornost za učenje in raziskovanje možnosti povezovanja starega in novega znanja ter preverjanje samostojno pridobljenega znanja. Vloga učitelja v tem procesu je zagotoviti okolje, ki je skladno z učno vsebino. Njegova naloga je, da uporablja interaktivne metode dela in ne tradicionalnih tehnik, zaradi katerih so učenci pri pouku pasivni. V tej vlogi je mentor, saj učence motivira k razmišljanju o problemih, raziskovanju in uporabi pridobljenega znanja.

Za razliko od tradicionalnega pouka in transmisijskega modela, pri katerem se pričakuje pri učencih predvsem pridobivanje kompetenc, pri sodobnih kognitivno-konstruktivističnih modelih pouka prihaja do učinkovitejšega načina dela učiteljev, ker je pedagoško delo usmerjeno predvsem v učenca. Skozi praktično uresničevanje izobraževalnih idej učitelj pomembno prispeva k spremembam v sodobni didaktiki. Takšen pouk vključuje aktiviranje individualnih posebnosti učencev in tudi učinkovitega in konstruktivnega načina pedagoškega pristopa. V sodobni šoli se pojavljajo didaktični modeli, ki omogočajo bolj učinkovit in razumljiv pouk vsem učencem. Novi pristopi so privedli do spremembe vloge učiteljev in učencev. Učenec postane središče zanimanja, vse pomembnejša postaja njegova aktivna vloga.

V tej raziskavi je bilo z metodo teoretične analize in tehniko analize vsebin ugotovljeno, da "aktivna šola" daje veliko boljše rezultate v primerjavi s šolami, ki ohranjajo tradicionalni pristop k poučevanju. Sodobni didaktični modeli spodbujajo učence k razvijanju samostojnosti, ustvarjalnosti in kritičnega mišljenja ter kompetenc za negovanje samostojnega in timskega dela. Ustvarjanje vzpodbudnega okolja prispeva k razvoju učencev, da so pripravljeni sodelovati in znanje uporabljati v vsakdanjem življenju. Tudi analize drugih raziskav so pokazale, da so aktivne metode uspešnejše od tradicionalnih, da se to vidi v pozitivnih čustvih učencev, v njihovi večji motivaciji in dosežkih. Sodobni didaktični modeli kažejo zelo dobre rezultate, saj njihova uporaba pri učencih spodbuja visoko raven razmišljanja, odločanja in sodelovanja. Povečuje se odgovornost učencev za učenje in raziskovanje možnosti povezovanja starih in novih znanj z neodvisno oceno naučenega. Vloga učitelja v tem procesu je zagotoviti okolje, ki je skladno z učno vsebino. Njegova naloga je, da uporablja interaktivne metode dela in ne tradicionalnih tehnik, zaradi katerih so učenci pasivni v učnem procesu (neposredno poučevanje, narekovanje, učenje na pamet). V tej vlogi je mentor, saj učence motivira k razmišljanju o problemih, raziskovanju in uporabi pridobljenega znanja. Zato se pričakuje, da bodo učitelji enako zainteresirani za inoviranje poučevanja in spoštovanje individualnosti vsakega učenca. Različni didaktični modeli poučevanja omogočajo izvajanje učinkovitih hevurističnih strategij, ki prispevjo k uspešnemu učenju in razvoju socialnih veščin.

Postavljajo se vprašanja o pogojih za izvajanje didaktičnih modelov v učnem procesu v smislu uporabe različnih metod, o motivaciji učiteljev za njihovo uporabo in katere učiteljeve kompetence so najpomembnejše za učinkovito uporabo didaktičnih modelov pri poučevanju. Iz teh vprašanj se je izoblikoval raziskovalni problem, ki se je osredotočil na proučevanje stališč učencev in učiteljev do uporabe didaktičnih modelov poučevanja, s primerjavo odgovorov anketirancev pa smo dobili pomembne rezultate. Namen prispevka je ugotoviti odnos učiteljev in učencev do uporabe didaktičnih učnih modelov. V empirični raziskavi so bile postavljene naloge, s katerimi smo ugotavljali, kateri didaktični modeli se v praksi največkrat uporabljajo, tako z vidika učiteljev kot učencev. Poleg tega se je preučevalo, ali obstajajo statistično pomembne razlike v uporabi različnih didaktičnih modelov poučevanja glede na zastavljene neodvisne spremenljivke raziskovanja, leta delovnih izkušenj in strokovno področje dela učiteljev. Uporabili smo opisno raziskovalno metodo s tehniko skaliranja in ocenjevalno lestvico Likertovega tipa (SUNPIMN), ki vsebuje 30 predmetov. Poleg tehnike skaliranja je bila uporabljena tehnika anketiranja, ki je vključevala vprašanje zaprtega tipa, ki je preučevalo najbolj uveljavljene didaktične modele pri pouku (18 ponujenih učnih modelov:

individualizirani, programirani, integrativni, zgledni, hevristični, modularni, projektni, interaktivni, problemski, razvijajoči se, igriv, produktiven, smiselno-beseden, računalniško-informativen, prenatrpan, osebnostno naravnan, timski pouk in mikro poučevanje). Anketiranci so lahko odgovorili z več odgovori. V raziskavi sta bili uporabljeni naslednji spremenljivki: področje znanosti (naravoslovne in družbene vede) in leta delovnih izkušenj (do 10, od 11 do 20 in več kot 20 let delovnih izkušenj).

Ocenjevalna lestvica in vprašalnik sta bila posebej izdelana za potrebe raziskovanja o prisotnosti didaktičnih modelov pri pouku. Instrument ocenjevalne lestvice je bil preizkušen z validacijskim testom. Cronbach alfa test z vrednostjo 0,911 je dokazal, da je lestvica, uporabljena za namene te študije, zanesljiva. V skladu s postavljenimi raziskovalnimi spremenljivkami so bili v prispevku uporabljeni elementi parametrične statistike (t-test in ANOVA test) in deskriptivne statistike (M in sd). Raziskava je bila izvedena leta 2019 v Republiki Srbiji. Skupni vzorec zajema 325 anketirancev (106 učiteljev in 219 osnovnošolcev) in je naključen.

Raziskava je prinesla pomembne rezultate, ki kažejo statistično pomembne razlike v dojemanju uporabe didaktičnih modelov poučevanja v šolskem kontekstu med učitelji in učenci, učitelji družboslovnih in naravoslovnih ved ter učitelji z različnimi leti delovnih izkušenj. Pomemben rezultat se je pokazal z uporabo t-testa za prvo nalogo, ki se nanaša na primerjavo med učitelji in učenci. Statistično pomembna razlika se kaže v vseh odgovorih na postavljene trditve. Razlike je mogoče opaziti pri uporabi didaktičnih modelov pri poučevanju, in sicer pri uporabi integrativnega, individualiziranega, kooperativnega, timskega, projektnega, problemskega, izkustveno-vitagenega, interaktivnega, računalniško-informativnega modela in poučevanja na daljavo. Učitelji v primerjavi z učenci bolj cenijo uporabo omenjenih didaktičnih modelov poučevanja. Ugotovitve kažejo tudi na razlike v odzivih učiteljev, ki se nanašajo na področje znanosti v smislu interaktivnega pouka. Učitelji s področja naravoslovja kažejo bolj pozitivne odgovore, ko gre za eksemplarno obliko pouka, interaktivni pouk pa bolj pozitivno vrednotijo učitelji družboslovja. Razlog, zakaj učitelji naravoslovja v večji meri uporabljajo eksemplarni pouk, so lahko njegove široke možnosti za uporabo v naravoslovju. Čeprav gre za učenje po modelu, ki lahko privede do reproduktivnega sprejemanja vsebin, je še vedno koristno zaradi podobnosti in razlik med eksemplarnimi in analognimi vsebinami. Po drugi strani pa so interaktivne metode primernejše za predmete z družboslovnega področja, kar pomeni, da so pridobljeni rezultati v skladu s predpostavko te raziskave.

Razlike v odgovorih učiteljev glede uporabe didaktičnih modelov poučevanja so vidne tudi glede na leta delovnih izkušenj in so bile ugotovljene z uporabo testa ANOVA. Učitelji z najmanj delovnimi izkušnjami (do 10 let) pripisujejo večji pomen individualnemu pristopu in interaktivnim metodam, kar kaže na prepoznavanje pomena teh metod in odprtost za njihovo izvajanje. Učitelji, ki imajo od 10 do 20 let delovnih izkušenj, pripisujejo pomembnost pridobivanju praktičnih znanj, kar je mogoče rezultat dolgoletnega dela in izkušenj, torej pozitivnih rezultatov pri delu z učenci. Učitelji z največ leti delovnih izkušenj (nad 21 let) deloma kažejo nagnjenost k reproduktivnemu učenju, kar je skladno s predpostavko, da zaradi dolgotrajnega dela z učenci, ki je v nekaterih segmentih dalo pozitivne rezultate, še vedno vidijo pomen njegove uporabe.

Po drugi strani pa je mogoče rezultate razlagati tudi kot zadržanost pri uporabi različnih učnih modelov, torej počasnejše prilagajanje novim izzivom sodobnega poučevanja. To domnevo lahko ovržejo drugi rezultati raziskav, ki kažejo na njihovo od-

prtost za uporabo problemskega poučevanja in njihovo zavezanost k uporabi sodobnih didaktičnih modelov.

Modeli in metode, ki so jih učitelji prepoznali kot pomembne v učnem procesu, imajo številne prednosti: spodbujajo udeležbo učencev, razvijajo kritično mišljenje, sposobnost komunikacije, spodbujajo reševanje problemov, ustvarjalnost, razmišljanje, razumevanje, sklepanje, praktični pristop k učenju, samostojnost, raziskovalni duh, refleksijo in samorefleksijo. V zvezi z raziskovalnim vprašanjem, ali so učitelji pripravljeni na uporabo inovativnih učnih modelov, je bil pridobljen pritrdilni odgovor, ki kaže na odprtost in uporabo večine didaktičnih modelov poučevanja. Zato je pomembno razmisliti o možnosti kritičnega pregleda rezultatov te raziskave s poudarkom na previdnosti pri njihovem posploševanju, prav zaradi možnosti družbeno zaželenih odzivov učiteljev. Pri teoretični analizi različnih izsledkov raziskav je bilo ugotovljeno, kakšen vpliv imajo različni didaktični modeli na motivacijo in učenje. Še vedno je dovolj možnosti za odgovore na vprašanja, ki so zelo pomembna za razumevanje in ustvarjanje realne slike o izvajanju didaktičnih in inovativnih učnih modelov, vključno z vprašanjem kompetenc in pogojev, ki so potrebni za izvajanje takšnih različnih pristopov v šolskem okolju in za neposredno delo z učenci. Na podlagi teh predpostavk je mogoče utemeljiti potrebo po številnih prihodnjih kvalitativnih in kvantitativnih raziskavah.

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Technological Approach to the Formation of Mathematical Competence in Preschool Children

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KLJUČNE BESEDE: izobraževalni postopek, posplošen način dela, posplošeni postopki, izobraževalne in praktične situacije

POVZETEK – Članek obravnava težave z oblikovanjem matematičnih idej pri predšolskih otrocih. Predlaga združevanje posameznih komponent izobraževalnega procesa (vsebine, metod, načinov in oblik) v dosledni pedagoški postopek. Tehnološki pristop bo zagotovil kakovost matematičnega izobraževanja predšolskih otrok. Avtorja sva razvila izobraževalni postopek "Oblikovanje matematične kompetence", ki je sestavljen iz sistema izobraževalnih in praktičnih situacij. Med študijo primera so otroci usvojili matematične koncepte in pridobili znanje v obliki posplošenih postopkov. Posplošeni postopki prispevajo k oblikovanju strukture simbolnega in logičnega mišljenja, ki omogoča lahek prehod od vizualnega in simbolnega k verbalnemu in logičnemu mišljenju. Praktične situacije nudijo priložnost za pridobivanje matematične kompetence in za oblikovanje sposobnosti uporabe pridobljenega znanja pri reševanju življenjskih situacij.

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ABSTRACT – The article discusses the problems of the formation of mathematical ideas in preschool children. It proposes to combine the individual components of the educational process (content, methods, means, forms) into a coherent pedagogical procedure. The technological approach will ensure the quality of mathematical education of preschool children. The authors developed the educational procedure "The Formation of Mathematical Competence", which consists of a system of educational and practical situations. During the case study, the children learned mathematical concepts and acquired knowledge in the form of generalized procedural ideas. Generalized procedural ideas contribute to the formation of a structure of figurative and logical thinking, which provides a smooth transition from visual and figurative to verbal and logical thinking. Practical situations give the opportunity to acquire mathematical competence; to form the ability to use the acquired knowledge to solve life situations.

1 Introduction

The development of science and production requires of a modern person to master a large amount of knowledge and practical skills. In a short time, the child must learn the culture of previous generations. In this regard, the teachers are faced with the task of increasing the effectiveness of teaching and raising children at all age levels. Preschool education is the first stage in which the learners begin to master knowledge. Their further development depends on the result which will be obtained at this stage.

The analysis of the experience of teachers at preschool educational institutions showed that they have significant difficulties in organizing the mathematical development of preschool children. One of the reasons is the teachers' insufficient knowledge of

the basics of mathematics. In the process of explanation, they do not reveal the essential features of mathematical concepts and do not know how to adapt these concepts to the children's level of visual and figurative thinking. Knowledge is imparted verbally or at the level of empirical generalization.

Children must learn the system of scientific concepts and the methods of obtaining them, highlight and relate individual aspects of the subject, and establish connections between them (Elkonin, 1974, p. 63). Education in its various forms is a decisive factor in the development of a child's thinking and speech. As N. Talyzina notes, the theory of education should be aimed at studying the laws of transformation of the phenomena of collective consciousness into individual psychological phenomena. "In those cases when the necessary types of activities and the methods of their execution are not objectified and not fixed as components of social experience, but exist only as facts of individual consciousness, the theory of education should indicate the way to identify and define them, making them accessible for assimilation" (Talyzina, 1975, p. 42). If the structure of educational activity is simplified, reduced to the perception and memorization of knowledge and verbal formulations, then the concept is not really acquired, and the positive impact of learning on the learners' development is significantly reduced (Vallon, 2008).

As D. Elkonin notes, the result of educational activity, in which the assimilation of scientific concepts occurs, is primarily a change in the learner, in his/her development. The scientist notes that these changes are the achievement of the child's new learning abilities, that is, a new course of action. According to D. Elkonin's definition (1997), the educational activity is a purposeful activity that aims to master a generalized course of action in the field of scientific concepts. According to V. Davydov, the educational activity is an activity that has a developing character, the content of which is the theoretical knowledge and the skills that are based on it (Davydov, 2008, pp. 110–118).

Investigational studies by N. Nepomnyashcha (1983) indicate that if a child has mastered the method of establishing the most general relationships, he/she solves problems and numerical examples much easier. The child will not search for random results, but consciously and reasonably apply the learned method to solve a specific problem. Having solved it, he/she will be able, and this is the main thing, to justify and prove the correctness of his/her decisions.

Through training, it is necessary to convey to children not only empirical knowledge about the properties and methods of acting with objects, but the experience of cognition by mankind of the phenomena of reality: nature, society and thinking, generalized in science and fixed in the system of scientific concepts. D. Elkonin notes that the activity will be developing in the context of children's mastery of the scientific content, that is, the system of scientific knowledge and the ways to obtain it (Elkonin, 1974, p. 64).

Among the achievements of the visual and figurative thinking of preschoolers, which are important for the formation of generalized representations, scientists (Rychik, 1987) distinguish the following:

- Representation in the operational structure of the dynamic image of an object, the essential principles of its change and development, revealing the meaning of generalized concepts.
- Concentration of the child on these principles when performing an objective or mental action.

□ Generalization of the operational structure of the dynamic image during the change of the object or conditions (Rychik, 1987, p. 47).

The achievements of visual and figurative thinking allow learners to ascend from the abstract to the concrete within the transitional unit of the process of thinking, that is, a generalized procedural idea. "The essence of this approach is to maintain the characteristic activity of visual and figurative thinking in children's educational activity, to consistently organize and direct the cognitive process to realize the content of the actions performed, which complies with the general concept" (Rychik 1987, p. 47).

Only a dynamic image contains the properties that are not disclosed by static visibility. Therefore, it is necessary to perceive the changes in objects as processes caused by their internal nature and subject to their internal principles, that is, they occur regardless of external influences (Shchedrovytskiy, 1987).

During the assimilation of mathematical concepts, the suitable actions of the child are determined as a necessary means of assimilation. These actions are modeled in an external, material (or materialized) form, which makes it possible not only to reveal their contents to the child, but also to ensure their assimilation. Afterwards, a program of a phased transformation of actions is drawn up, and at each stage the actions are modified according to independent characteristics. In all stages of the transformation of actions, operational control over the course of their implementation is ensured, which, in the last stages of assimilation, is transformed into self-control (Talyzina, 1975).

S. Rubinstein (1958) singled out two characteristic features of dialectical generalization: it is carried out in such an analysis of any single fact (event, task) that reveals the internal connection of its individual manifestations; based on this connection, a person immediately generalizes all other facts. In this case, a lengthy comparison of many similar facts is not required for their gradual empirical generalization.

In the representation of educational material, the forms of everyday and scientific concepts are not distinguished, leading to the absolutization of the empirical experience of children. Therefore, the role of illustrative clarity, as well as the mental operation of comparison when concepts appear, is exaggerated (Vygotskii, 1996).

The study by N. Menchinska (2004) proved that children, focusing on specific objects requiring the use of concepts, do not always rely on essential features. Often there is a reproduction of the learned text or the words of the teacher. It means that knowledge in such cases has a verbal, formal character. Verbal knowledge (Leontyev, 1992) does not change the essence of the process of its assimilation, which convincingly proves the impossibility of transferring knowledge in its finished form. A child can receive it only as a result of his/her own activity, aimed not at words, but at those objects the knowledge of which we want to form. For the assimilation of concepts, the corresponding objective activity of the child with the object that is being studied is necessary. During learning activities, children model the process of generating concepts. As E. Ilyenkov (2002) wrote, the educational process has to reproduce in a closed form the actual historical process of the creation and development of knowledge.

The competency-based approach in modern education, according to I. Bekh (2009), should provide a high level of competence in the subjects of scientific education. The fundamental point of scientific competence is that it directly depends on the quality of educational achievements that will be transformed into the subject's competency

system. Only proper scientific evidences have sufficient potential for such competence. So, only the pedagogy of development (and not the pedagogy of memorizing words and empirical generalization) can ensure the development of the subject-specific competence at the highest level.

Most of the scientific evidences obtained by scientists remain unclaimed by practitioners. Preschool teachers do not have enough time to process a large amount of theoretical material nor the ability to transform it into a compendium of lessons by which children can be taught. The technological approach might be an alternative to such a learning path. It will help to transfer scientific evidences from a theoretical plane to a practical one (Selevko, 2005). The main advantage of the technological approach is that it will contribute to the development of the educational procedure, which can be reproduced by teachers at different levels of professional training.

To ensure the quality education of preschool children, it is necessary to provide the teacher with a mechanism for the implementation of the educational content selected by scientists, taking into account the children's individuality. In this regard, the individual components of the educational process (content, forms, methods, means) must be combined into a holistic educational procedure. The latter should be presented as a system of components of the educational process that are interconnected, built on a scientific basis, programmed in time and space, and lead to the planned results.

The educational procedure reflects the path to mastering specific educational material within a specific subject, topic and question. The training material should be structured (Selevko, 2004). O. Piekhota (2013) notes that the procedure is knowledge-intensive and takes into account various aspects of educational and cognitive activity (pedagogical, psychological, physiological, methodological). The technological approach to the formation of the mathematical competence of preschool children requires the definition of clear criteria for the organization of the educational process. H. Selevko (2005) determines the important criteria of the procedure, such as consistency, comprehensiveness, integrity, scientificity, structuredness, reasonableness, and algorithmic characteristics.

Aims of the present study

It is necessary to combine the scientific evidences of the theory of developmental education to create a procedure for the acquisition of mathematical knowledge by preschool children. On the basis of the complementarity principle, it is necessary to integrate the following scientific concepts into the educational process: meaningful generalization (Davydov, 2008), the essence and correlation of knowledge and thinking (Ilyenkov, 2002), the genesis of the dynamic image (Rychik, 1987), the procedural nature of scientific knowledge (Shchedrovytskiy, 1987), and the activity integration (Losev, 1995).

The purpose of the procedure is to form a structure of figurative and logical thinking, which provides a smooth transition from visual and figurative to verbal and logical thinking. The conceptual idea behind the procedure is the mastery of mathematical generalized procedural ideas, which in content correspond to a scientific concept; the rational solution of practical problems based on the use of mathematical knowledge; taking into account the individual characteristics of children; the development of thinking.

It is necessary to combine the individual components of the educational process, such as the mathematical meaning – counting, form, size, space, time; active methods – dialogue, modeling; abstract and plot teaching means – models, diagrams, drawings; various forms of training – individual, group, collaborative; formation of a holistic view of objects; development of creativity, speech, moral education; familiarization with the objects of the natural and personal environment.

2 Study methods

To effectively teach mathematics to preschool children, we have developed a system of educational (activity-based approach) and practical situations (competency-based approach). In educational situations, the children mastered mathematical concepts, and in practical situations they acquired competencies. All educational material is presented in textbooks for the educator (Zaitseva, 2016d; 2016e; 2016f) and in self-instructional workbooks (Zaitseva, 2016a; 2016b; 2016c).

The implementation of the activity-based approach (Galperin, 1959) in the educational process requires orientation towards the following methodological provisions: in the development and organization of training, the primary provisions are the activities and actions that are specified by the content knowledge; the ultimate goal of training is the formation of a course of action that ensures the implementation of activities; in the educational process, the subject of learning carries out educational activities and models future practical activities; the mechanism for mastering knowledge is the solving of learning situations; studying is a combination of two interconnected activities, the activities of the subject that is studying, and of the subject that is teaching; the activities of the teacher relate to the development, organization and management of educational activities; the child's activity relates to mastering knowledge. Competence as a scientifically relevant experience appears when a preschool child uses scientific knowledge as a generalized course of action to solve a certain type of problem. If he/she uses this knowledge as a course of action for solving only one practical problem and cannot transfer this method to solving other similar problems, it means that he/she has not formed such an experience. Under such conditions, the pedagogical process is a system in which all components are interconnected (Slastenin, 2000).

The first step in the creation of the educational procedure "The Formation of Mathematical Competence in Preschool Children" was the development of a two-level (basic and advanced level) partial program. In the program for each age group a certain mathematical meaning is determined. The content provided a system of mathematical concepts for each age group in the following sections: multitude, counting (quantitative, ordinal), numbers, geometric shapes, magnitude, space, time. The program has a structure with a quarterly distribution of educational material, which allows you to select it for each lesson and to observe the gradually increasing difficulty of knowledge. The tasks that contribute to the formation of cognitive interest and learning skills are a significant complement to the program.

Dividing the mathematical content into basic and advanced levels provides the teacher with the opportunity to take into account the individual characteristics, interests

and abilities of children, and their development prospects. The tasks of different difficulty levels help to avoid averaging a child's education, limiting his/her ability to master the mathematical knowledge within a certain age group.

The next stage of the work was the transformation of scientific mathematical concepts (an essential feature) into generalized mathematical procedural ideas. The generalized procedural idea coincides in form with the dynamic image of the action object, and in content with the concept that is being formed. The concepts must be presented precisely in the form of a dynamic image. The latter consists of operations that are similar in content to a scientific concept. Performing an action which is regulated by a visual and figurative thinking process, the learner becomes aware of the advantage of the initial state of the action object and infers its final state. The acquired knowledge, on the basis of the selected indicative basis of the course of action, thereby reveals to the child the general meaning of long-known specific phenomena. For the child to consciously assimilate the process, based on which a generalized procedural idea of the essential properties of certain objects is formed, it is important to determine the necessary and sufficient operations (quantity and sequence) that make up the structure of this process. Even the absence of one operation gives an inaccurate picture of the phenomenon that is being studied.

Each mathematical concept is revealed through the objective transforming actions of cognitive orientation. As a result, the child masters the necessary number of operations carried out in a certain sequence, which constitutes a generalized course of action. A detailed compendium of lessons, which define the topic, goal, demonstration and handout material, and the course of the lesson (questions for children), helps the teacher to get the planned results. The compendium of lessons has a clear structure, which provides several interrelated stages:

- The motivation of activities;
- The statement of the problem, which requires the use of new knowledge;
- An adequate objective transforming activity;
- The reproduction of a new course of action in a typical situation;
- Developing tasks;
- The result of the lesson.

The competency-based approach is realized by practical tasks that are solved on the basis of the acquired essential properties. It is during the practical activity that the child gains experience. He/she can solve problems of various types, associated with a wider social or domestic practice. Competence as a scientifically relevant experience appears when a preschooler uses scientific knowledge as a generalized course of action to solve a certain type of problem. If he/she uses this knowledge as a course of action for solving only one practical problem and cannot transfer this method to solving other similar problems, it means that he/she has not formed such an experience.

The use of practical situations creates the conditions for children to acquire mathematical competence. In the classroom, an initial familiarization with the mathematical concept is carried out. Mastering the skills to use the acquired knowledge (counting, measuring, navigating in space and time) in various types of activity, such as game, work, design. The application of the knowledge of mathematics in practical situations requires its inclusion in new systems of relationships, finding the already known rela-

tionships under new conditions. Practice gives the child the opportunity to distinguish the right thoughts from false ones and is a criterion of their validity. The basics of experience are gained in the process of performing a series of practical tasks, where the idea is fully realized, according to which the ultimate goal of knowledge is not knowledge in itself, but the practical transformation of reality to meet the material and spiritual needs of a person.

After each lesson, practical situations are used in which two or three children participate. The interaction between the teacher and the child in this form can last 3-5 minutes. An important component of such situations is the questions for children. They encourage learners to establish relationships (quantitative, spatial, temporal, causal, sequential), give proof for their own opinions, and generalize their knowledge on a particular topic. The practical tasks are aimed at a direct transformation of reality. A problem field was created for solving practical problems, which provides the setting of conditions and goals.

The workbook contributes to the consolidation of the procedure "The Formation of Mathematical Competence in Preschool Children". It consists of a set of cards for organizing the independent work of children. For each age group, a workbook with tasks of different difficulty levels is offered. With continuity in mind, the workbooks and textbooks complement each other. The placement of cards allows the teacher to independently choose the form of training (individual, group, frontal) in accordance with the learning conditions (amount of knowledge, number of children in the group, the presence of handouts).

Mathematics characterizes the quantitative side of the environment. Therefore, the tasks with mathematical content are designed in such a way to ensure the development of speech, creativity, and to enrich the child's understanding of various aspects of the environment (Losev, 1995). The development of a child's speech in the process of solving mathematical tasks is facilitated by the exchange of opinions on the topic of assimilation of the material, and the compilation of short plots or descriptive stories.

3 Results and discussion

The educational procedure "The Formation of Mathematical Competence in Preschool Children" instead of several separate tasks – the transfer of knowledge, the formation of skills, and their application – sets one goal: to form such an activity that from the very beginning includes a given knowledge system and ensures the formation of practical experience.

To master mathematical knowledge, external and internal incentives for motivation are used: the plots of fairy tales, a problem and a game, or a problem and a practical situation. The artistic texts or plot drawings help to create the emotional strength of the lessons. Under the conditions of an organized educational and cognitive activity, the acquired knowledge becomes not only understandable, but also internally accepted, acquires significance for the child, and resonates with his/her experiences. Knowledge of measurement will help you to do many good deeds: choose a board of the appropri-

ate size to fix a slide for the kids; patch a hole in a bee hive. The ability to count objects will be of use when choosing the necessary number of ropes for kids to tie them to the sledge; will help travelers buy the necessary number of bus tickets; will help determine the number of balls that will be needed for a game.

Positive criteria are used to control and evaluate children's actions, for example, correctly, accurately, in an original way (in their own way). In the process of evaluating their work, the conventional signs (multi-colored stars) are applied that correspond to each criterion. The learners have the right to acquire all three stars or refuse any (or all) if they fail to reach the appropriate level of task performance. The child does not receive a negative assessment. The use of conventional signs makes it possible to carry out a personal assessment method, which consists of comparing the child's previous achievements with those newly acquired.

How well the children fulfill the mathematical task depends on the teacher's ability to formulate instructions. Each child acquires knowledge at his/her own pace. Some students complete the tasks quickly, while others are just starting their work. To those who have finished or are completing the task, the teacher suggests that they paint the image, while the teacher carries out one-on-one work with those who have difficulties.

After all the children have completed the task, the teacher draws attention to the children's drawings: "Sasha has all the cups of the same color – this is a tea set.", "Natasha drew the cups with handles. It will be convenient for drinking hot drinks.", "Olena painted all the cups in different colors. Each member of the family can choose a cup in their favorite color.", "Mariyka drew the cups with flowers, as a bright spring meadow." Painting exercises are used so that the child does not wait for the others to complete the task and does not become intellectually passive. Also, such tasks help to prepare the child's hands for practicing writing and develop creativity.

Mathematical tasks have great potential for the development of creativity. Each learning situation involves a problem, for the solution of which the child needs to be smart, curious, original and demonstrate imagination. Mathematical tasks contribute to the awareness of knowledge about nature. For example, while familiarizing themselves with plants, the concepts of "many" and "one" help children to distinguish a bush from a tree; the ability to compare in size is facilitated by the question "Why do apricot flowers appear first, then the leaves, but it is the other way round for the cherry tree?", "Why are leaves on trees larger at the bottom and smaller at the top?", "Why do deciduous trees change their leaves, but conifers do not?".

Therefore, the effectiveness of the educational procedure "The Formation of Mathematical Competence" ensures that the psychological mechanisms of the development of a preschool child are taken into account. The proposed educational material provides a perception of the world as a whole, an understanding of the fact that mathematics characterizes the quantitative side of objects and phenomena. A clear, logically motivated mathematics, focused on the capabilities of children provides the teacher with space for creativity and pedagogical research. The learning material for this procedure is presented so that the teacher has the opportunity, depending on the specific conditions for organizing the mathematical activity of children (the purpose and content of the lesson, how well the learners master the subject matter, the number of children in the group), to

choose the form of the lesson, vary the number and sequence of tasks, and accelerate or slow down the rate of the assimilation of knowledge.

4 Conclusion

The technological approach will help to solve the problem of generalizing and systematizing the results of a large number of psychological and pedagogical studies, and pedagogical experience. Theoretical developments that remain unclaimed by teachers can be introduced into mass pedagogical practice and ensure the quality of preschool education. Procedural materials provide an opportunity for adults to qualitatively acquaint preschool children with mathematical concepts. By precisely executing the procedure algorithm, the children master the generalized mathematical ideas, forming the ability to rationally solve practical problems.

Dr. Larysa Zaitseva, dr. Maxym Lukianchykov

Tehnološki pristop k oblikovanju matematične kompetence pri predšolskih otrocih

Članek obravnava težave z oblikovanjem matematičnih idej pri predšolskih otrocih. Dosežki vizualnega in simbolnega mišljenja omogočajo učencem, da napredujejo od abstraktnega h konkretnemu znotraj prehodne enote procesa mišljenja, tj. posplošenega postopka. "Bistvo tega pristopa je ohranjanje otrokovega značilnega vizualnega in simbolnega mišljenja med poučno dejavnostjo ter dosledno organiziranje in usmerjanje kognitivnega procesa, da bi otroci lahko dojeli vsebino izvedenih dejanj, kar je skladno s splošnim konceptom."

Znanstveniki ločijo med naslednjimi dosežki vizualnega in simbolnega mišljenja predšolskih otrok, ki so pomembni za oblikovanje posplošenih predstav:

- *Predstava znotraj operativne strukture dinamične podobe predmeta in osnovna načela njegovega spreminjanja in razvoja, ki razkrivajo pomen posplošenih konceptov.*
- *Otrokova osredotočenost na ta načela med izvajanjem objektivne ali miselne dejavnosti.*
- *Posplošenje operativne strukture dinamične podobe med spreminjanjem predmeta ali pogojev.*

Le dinamična podoba vsebuje lastnosti, ki jih statična podoba ne razkriva.

Med usvajanjem matematičnih konceptov so otrokova dejanja, ki služijo temu namenu, opredeljena kot nujno potrebno sredstvo. Ta dejanja so zasnovana v zunanji, materialni (ali materializirani) obliki, kar nam omogoča, da otroku razkrijemo njihovo vsebino ter zagotovimo njihovo usvojitev.

Otroci, osredotočeni na specifične predmete, ki zahtevajo uporabo konceptov, se ne zanašajo vedno na bistvene elemente. Pogosto prihaja do reprodukcije učenega

besedila ali učiteljevih besed. To pomeni, da ima v takšnih primerih znanje verbalni, formalni značaj. Verbalno znanje ne spremeni bistva procesa njegovega usvajanja, kar prepričljivo dokazuje, da je znanje nemogoče prenesti v njegovi končni obliki. Otrok lahko sprejema znanje le kot rezultat lastne dejavnosti, ki ni usmerjena proti besedam, temveč proti tistim predmetom, o katerih hoče pridobiti znanje. Za usvajanje konceptov je potrebna objektivna aktivnost otroka s predmetom, ki ga preučuje. Med učnimi dejavnostmi otroci modelirajo proces ustvarjanja konceptov. Izobraževalni proces mora v sklenjeni obliki reproducirati dejanski zgodovinski proces nastanka in razvoja znanja.

Večine znanstvenih dokazov, ki so jih pridobili znanstveniki, se praktiki ne poslužujejo. Vzgojitelji predšolskih otrok nimajo dovolj časa na razpolago, da bi obdelali veliko količino teoretičnega gradiva in ne sposobnosti, da bi ga preoblikovali v kompendij učnih ur za poučevanje otrok.

Tehnološki pristop je morda alternativa takšni učni poti. Pomagal bi prenesti znanstvene dokaze iz teorije v prakso. Glavna prednost tehnološkega pristopa je ta, da bi prispeval k razvoju izobraževalnih postopkov, ki bi jih nato lahko izvajali vzgojitelji na različnih stopnjah strokovnega usposabljanja.

Za zagotovitev kakovostnega izobraževanja predšolskih otrok moramo vzgojiteljem priskrbeti mehanizem za izvajanje izobraževalne vsebine, ki so jo določili znanstveniki, pri čemer upoštevamo individualnost otrok. Iz tega razloga moramo posamezne komponente izobraževalnega procesa (vsebine, metode, načine in oblike) združiti v celosten izobraževalni postopek. Slednji naj bo zasnovan kot sistem medsebojno povezanih komponent izobraževalnega procesa, ki so osnovane na znanstveni podlagi, časovno in prostorsko programirane ter vodijo k načrtovanim rezultatom. Izobraževalni postopek nakazuje pot k obvladovanju specifične učne snovi znotraj specifičnega predmeta, teme in vprašanja.

Avtorja sva razvila izobraževalni postopek "Oblikovanje matematične kompetence", ki je sestavljen iz sistema izobraževalnih in praktičnih situacij. Tehnološki pristop bo zagotovil kakovost matematičnega izobraževanja predšolskih otrok. Predlaga združevanje posameznih komponent izobraževalnega procesa (vsebine, metod, načinov in oblik) v dosledni pedagoški postopek.

Namen tega postopka je oblikovanje strukture simbolnega in logičnega mišljenja, ki omogoča lahek prehod od vizualnega in simbolnega k verbalnemu in logičnemu mišljenju. Idejna zasnova tega postopka je obvladovanje posplošenih matematičnih postopkov, katerih vsebina se ujema z znanstvenim konceptom. Nadalje racionalno reševanje praktičnih problemov na podlagi uporabe matematičnega znanja, upoštevanje individualnih značilnosti otrok in razvoj mišljenja.

Za učinkovito matematično poučevanje predšolskih otrok sva razvila sistem izobraževalnih (pristop, osnovan na dejavnosti) in praktičnih situacij (pristop, osnovan na kompetenci). V izobraževalnih situacijah so otroci usvojili matematične koncepte, v praktičnih pa so pridobili kompetence. Vsa učna snov je predstavljena v učbenikih za pedagoge in delovnih zvezkih za samoizobraževanje.

Prvi korak k ustvarjanju izobraževalnega postopka "Oblikovanje matematične kompetence pri predšolskih otrocih" je bil razvoj dvostopenjskega delnega programa (osnovna in višja raven). V programu za posamezno starostno obdobje je predstavljen določen matematični pomen.

Naslednja faza je bila preoblikovanje znanstvenih matematičnih konceptov (bistvenega elementa) v posplošene matematične postopke. Oblikovno se posplošen postopek sklada z dinamično podobo predmeta dejanja, vsebinsko pa s konceptom, ki ga oblikujemo. Koncepti morajo biti predstavljeni v obliki dinamične podobe. Slednja je sestavljena iz operacij, katerih vsebina je sorodna znanstvenemu konceptu.

Vsak matematični koncept je razkrit preko objektivnih, kognitivno usmerjenih transformacijskih dejanj. Posledično se otrok nauči število operacij, ki jih je treba izvesti v določenem zaporedju in ki predstavljajo posplošen način dela.

Pristop, osnovan na kompetenci, se realizira s pomočjo praktičnih nalog, ki jih rešujejo na podlagi spoznanih osnovnih lastnosti. S praktično dejavnostjo otrok pridobiva izkušnje. Zmožen je reševati različne vrste problemov, ki so povezani s širšo družbeno ali domačo prakso. Kompetenca kot znanstveno relevantna izkušnja se pojavi, kadar predšolski otrok uporabi znanstveno znanje kot posplošen način dela, da bi rešil določeno vrsto problema. Če otrok uporabi to znanje kot način dela pri reševanju le enega praktičnega problema in te metode ni zmožen prenesti na reševanje drugih, sorodnih problemov, to pomeni, da te izkušnje ni pridobil.

Delovni zvezek prispeva k utrjevanju postopka "Oblikovanje matematične kompetence pri predšolskih otrocih". Vsebuje komplet kartic za organiziranje samostojnega dela otrok. Za vsako starostno skupino je na voljo delovni zvezek z nalogami različne težavnostne stopnje.

Delovni zvezki in učbeniki se dopolnjujejo, s čimer ohranjamo kontinuiteto. Postavljanje kartic omogoča vzgojitelju, da samostojno izbere obliko izobraževanja (individualno, skupinsko, frontalno) v skladu z učnimi pogoji (količina znanja, število otrok v skupini, uporaba izročkov).

Matematika označuje kvantitativni vidik okolja. Naloge z matematično vsebino so zato zasnovane na takšen način, da omogočajo razvoj govora, ustvarjalnost in bogatijo otrokovo razumevanje različnih vidikov okolja.

Izobraževalni postopek "Oblikovanje matematičnih kompetenc pri predšolskih otrocih" namesto številnih ločenih nalog – prenos znanja, oblikovanje spretnosti in njihova uporaba – zastavlja en sam cilj: oblikovanje dejavnosti, ki bo od samega začetka vsebovala sistem znanja in zagotovila pridobivanje praktičnih izkušenj.

Učinkovitost izobraževalnega postopka "Oblikovanje matematične kompetence pri predšolskih otrocih" potemtakem zagotavlja upoštevanje psiholoških mehanizmov razvoja predšolskih otrok. Predlagano izobraževalno gradivo ponuja dojemanje sveta kot celote in razumevanje dejstva, da matematika označuje kvantitativni vidik predmetov in pojavov. Matematika, ki je jasna, logično naravnana in osredotočena na sposobnosti otrok, vzgojiteljem omogoča določeno mero ustvarjalnosti in pedagoškega raziskovanja. Pripravljeno gradivo je zasnovano na način, ki vzgojitelju nudi možnost – odvisno od specifičnih pogojev za organiziranje matematične dejavnosti otrok (namen in vsebina učne ure, kako dobro otroci obvladajo snov, število otrok v skupini) – da izbere obliko učne ure, spreminja število in zaporedje nalog ter pospeši ali upočasni hitrost usvajanja snovi.

Tehnološki pristop bo pomagal rešiti problem posploševanja in sistematiziranja rezultatov velikega števila psiholoških in pedagoških raziskav ter pedagoških izkušenj. Teoretične dosežke, ki se jih vzgojitelji ne poslužujejo, lahko vpeljemo v množično pe-

dagoško prakso in s tem zagotovimo kakovost predšolskega izobraževanja. Gradivo, ki prikazuje postopke, odraslim omogoča, da predšolske otroke kvalitativno seznanijo z matematičnimi koncepti. Če je algoritem postopka natančno izveden, otroci usvojijo posplošene matematične ideje in oblikujejo sposobnost racionalnega reševanja praktičnih problemov.

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Vpliv interakcije in vzgojnega stila na koncentracijo predšolskih otrok

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KLJUČNE BESEDE: koncentracija, trajanje pozornosti, vzgojni stil, interakcija

POVZETEK – Koncentracija je sposobnost, ki ima v življenju pomembno vlogo in se odraža pri uspešnosti na različnih življenjskih področjih, kot je uspeh v šoli in pri delu. Sposobnost koncentracije se razvija tekom otrokovega odraščanja. V raziskavi smo ugotavljali, kako je koncentracija pri predšolskih otrocih povezana z različnimi vrstami interakcij z odraslimi in vzgojnimi stili staršev. To smo preverjali s pomočjo intervjuja z vzgojiteljicami v vrtcu, vprašalnika vzgojnih stilov za starše in eksperimenta z otroki, kjer smo variirali vrsto interakcije med izvajanjem dejavnosti (brez, verbalna, fizična), pri čemer smo merili čas vzdrževanja pozornosti. Rezultati so pokazali, da so interakcija in vzgojni stili povezani s trajanjem pozornosti pri predšolskih otrocih. Vzdrževanje pozornosti najbolj spodbuja fizična interakcija. Najboljšo koncentracijo imajo v povprečju otroci, ki so vzgojeni v izrazito avtoritativnem vzgojnem stilu, najslabšo pa otroci, ki so vzgojeni v permisivnem načinu.

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KEYWORDS: concentration, attention span, parenting style, interaction

ABSTRACT – Concentration is a skill that plays an important role in life and is reflected in performance in various areas, such as success at school and at work. The ability to concentrate develops as the child grows up. The study investigated how concentration in preschool children is related to different types of adult interactions and parenting styles. This was tested by interviewing kindergarten teachers, questionnaires on parenting style, and experiments in which the type of interaction was varied during the child's activity (no interaction, verbal, physical interaction), while at the same time the sustaining of attention over time was measured. The results showed that interaction and parenting styles are related to the attention span in preschool children. The sustaining of attention is most strongly promoted by physical interaction. On average, children educated in a highly authoritative parenting style have the highest concentration, and children educated in a permissive style have the lowest.

1 Uvod

Področje pozornosti in koncentracije pri otrocih je eno tistih, ki se mu strokovnjaki in raziskovalci v zadnjem času vedno bolj posvečajo (Yu in Smith, 2016). Prav pozornost in koncentracija bosta v času šolanja vplivali na otrokov uspeh v šoli, posledično pa bosta lahko vplivali tudi na vsa druga področja v življenju mladostnika in kasneje odraslega. Porast raziskav lahko pripišemo tudi porastu različnih motenj pozornosti in težav s koncentracijo, ki so odraz bolezenskih stanj (npr. ADD, ADHD).

Pozornost lahko definiramo kot predmetno usmerjenost naših psihičnih procesov. Pozorni smo lahko na informacije, ki jih naši možgani dobivajo preko čutil, oz. na tisto, kar zaznavamo, ali pa na druge duševne procese (na svoje spomine, znanje, mišljenje, sodbe, misli) (Musek in Pečjak, 2001). Trajanje je po mnenju nekaterih avtorjev (Pečjak, 1977) ena izmed dimenzij pozornosti, mnogi (Mravlje, 1999; Filley, 2002; Keller,

Binder in Thiel, 1999) pa le-to enačijo s koncentracijo, vztrajanjem v pozornosti, ki jo za omejen čas usmerimo na določeno dejavnost.

Pozornost se razvije zelo zgodaj. Raziskave kažejo, da že novorojenčki obrnejo glavo v smer premikajočega se predmeta. Z odraščanjem se pozornost razvija in izboljšuje (Alliger Ruff in Klevjord Rothbart, 2001). Največji napredek, ki ga opazimo v prvih osmih mesecih otrokovega življenja, je prehod od kratkotrajne usmerjenosti fokusa na dražljaj k daljši, aktivni pozornosti (Hopkinks, 2005). Po 18. mesecu se začne razvijati izvršilna pozornost in se razvija vse do sredine pubertete, najhitreje med četrtim in sedmim letom (Richards, 2001).

Eden od pomembnih načinov razvijanja koncentracije je tudi socialna interakcija. Že Vygotsky (1980) je poudarjal pomen socialne interakcije in odraslega v razvoju otroka. Vpeljal je pojem "*območje mogočega oz. bližnjega razvoja*", ki predstavlja območje spoznavanja (reševanje nalog, problemov, razumevanje besedil ...), kar otrok z določeno stopnjo spoznavnega razvoja lahko doseže le s pomočjo spoznavno bolj razvitega posameznika, ne more pa ga doseči sam. Trdil je, da je razvoj intelektualnih sposobnosti (med katere spada tudi koncentracija) v veliki meri odvisen od dialoga, vodstva, usmerjanja in razlage odraslih (staršev, mentorjev, učiteljev). Pregledne raziskave (Kontos in Wilcox-Herzog, 1997) dokazujejo pozitiven odnos med kakovostnimi otrokovimi interakcijami z učitelji in njihovim okrepljenim kognitivnim, socialno-čustvenim in jezikovnim razvojem.

Yu in Smith (2016) sta s pomočjo naprave za sledenje očesnim premikom pokazala, da družbeni kontekst vpliva na pozornost. Ugotovila sta, da je pri otroku pozornost trajala dlje, če so starši skupaj z otrokom opazovali isti predmet, kot pa če so opazovali drug predmet. Ti rezultati so potrdili teorijo skupne pozornosti (Moore in Dunham, 1995), ki je definirana kot skupna osredotočenost dveh posameznikov na isti predmet. Dosežena je, ko en posameznik opozori drugega na objekt bodisi s pomočjo usmerjanja pogleda, kazanja s prstom bodisi drugih verbalnih ali neverbalnih znakov. Posameznik mora prikazati zavedanje, da je pozornost usklajena med njim in drugim posameznikom. Tovrstne vzpodbude naj bi imele ugoden učinek na razvoj koncentracije. Raziskovalci so opazili povečano aktivacijo v desni amigdali, desnem fuziformnem girusu, anteriornem in dorzalnem sprednjem cingulatnem korteksu, striatumu, ventralnem tegmentalnem območju in zadnjem parietalnem korteksu, ko so se udeleženci vključevali v skupno pozornost (Gordon in sod., 2013).

O tem, katera vrsta interakcije je tista, ki najbolj spodbuja trajanje pozornosti, pa je malo napisanega. Byron in Baveystock (2005) poudarjata pomen verbalne spodbude, ki naj bi bila pomembna predvsem zato, ker bo otrok vedenje, za katero je pohvaljen in pri katerem ga vzpodbujamo, ponavljal. Obenem omenjata pomen pohvale kot sredstva za gradnjo otrokove samozavesti, ta pa že sama po sebi pripomore k daljši koncentraciji kot ena izmed notranjih dejavnikov pozornosti. Tonge in sodelavci (2017) so objavili napoved raziskave o protokolu merjenja vplivov socialnih in fizičnih interakcij vzgojiteljev na vzdrževanje otrokove fizične aktivnosti.

Na trajanje koncentracije ne vpliva le trenutna interakcija med odraslim in otrokom, ampak njen razvoj določa tudi širši kontekst otrokove vzgoje (Aunola, Stattin in Nurmi, 2000). Vzgojo Peček Čuk in Lesar (2011) opredelita kot odnos med vzgojiteljem in vzgajancem, katerega cilj je vzgojiti otroka z določenimi lastnostmi. Vzgojitelj ob tem

uporabi določene metode, sredstva in postopke, ki se glede na vzgojne stile med seboj razlikujejo. Vzgojne stile delita na: represivni oz. avtoritarni, permisivni ter interakcijski oz. avtoritativni vzgojni stil. Opozarjata pa, da v praksi "čisti" vzgojni stili skoraj ne obstajajo, starši pa se zgolj nagibajo k določenemu vzgojnemu stilu.

Avtoritarni stil je primer trde, neprijazne in nepopustljive vzgoje (Hauck, 1988). Značilna sredstva so prepovedi, omejitve in nadzorovanje. Starši otroke kritizirajo in jih ustrahujejo. Značilno je, da se otrok starša boji (Ručigaj, 2012). Ta način vključuje malo interakcije med staršem in otrokom, obenem pa je verbalna interakcija pogosto zelo negativno nastrojena, graja otrokovo osebnost in posledično negativno vpliva na otrokovo samozavest. Pozornost pri otroku je pogosto prisilna in zanjo velja, da ni tako dolgotrajna kot tista, ki jo vodijo notranje želje, motivi in potrebe (Kroflič, 1997).

Permisivni vzgojni stil za otroka ni vsiljiv, saj vzgojitelj v otrokovo avtonomnost skorajda ne posega. Starši otroka vzgajajo brez pravil, mu izpolnjujejo želje, otroku pa je dovoljeno vse (Ručigaj, 2012). Fizična interakcija je sicer prisotna, vendar se starš pri tem ves čas prilagaja otroku. Starš vztrajnosti od otroka niti ne pričakuje niti ne zahteva. Otrok lahko z dejavnostjo kadarkoli preneha, s čimer ne krepi vztrajanja pozornosti. Verbalne interakcije je pri tem vzgojnem stilu veliko. Pohvala, za katero je sicer značilno, da pozitivno vpliva na trajanje pozornosti, pa je podana prepogosto in posledično ne doseže želenega vpliva (Zalokar Divjak, 2000).

Avtoritativna vzgoja temelji predvsem na vzpodbujanju in pohvali, kjer pa starš meni, da je potrebno, se otroku postavi meje (Ručigaj, 2012). Fizična interakcija med otrokom in staršem je takšna, da otroka skozi igro nauči razumeti pravila in se jih držati. Obenem starš pozna otrokove zmožnosti in jih razume ter upošteva, s čimer pri otroku ne sproža prisilne pozornosti. Verbalna interakcija poteka na ravni, kjer je starš sicer avtoriteta, vendar upošteva otrokovo mnenje in ga spoštuje (Kroflič, 1997). Pohvala je del verbalne interakcije, vendar pa je starš ne izreka za vsako najmanjšo stvar, ki jo otrok naredi. Otrok se uči poslušati in uriti pozornost, ne iz strahu pred kaznijo, ampak iz zavedanja pravil, obenem pa tudi zaradi notranjih vzgibov, motivov in čustev. Tudi pri drugih dejavnostih bo otrok bolj vztrajen, ker starši spodbujajo otrokovo samozavest, hkrati pa le-ta vpliva na njegova čustva, motive in druge notranje dejavnike pozornosti (Ručigaj, 2012).

2 Cilj

Z raziskavo smo preverjali, kako interakcija z odraslo osebo vpliva na trajanje pozornosti pri otroku in katera vrsta interakcije (besedna ali fizična) prinaša najboljše rezultate. Ugotavljali smo tudi, kako vzgojni stili vplivajo na trajanje pozornosti pri otroku in kateri vzgojni stil prinaša najboljše rezultate.

3 Metoda

V raziskavi smo uporabili tri različne metode: polstrukturiran intervju z vzgojiteljicami, eksperiment s pet- in šestletnimi otroki ter vprašalnik za njihove starše.

3.1 Vzorec

Intervjuje smo izvedli s sedmimi vzgojiteljicami, zaposlenimi v vzgoji in izobraževanju. Njihova starost se je gibala med 28 in 59 leti, delavna doba v vzgoji in izobraževanju pa med 7 in 34 leti.

Staršem v raziskavi udeleženih otrok smo ob podpisu soglasja za sodelovanje njihovih otrok v raziskavi razdelili vprašalnik, na podlagi katerega smo preverili, kakšne vzgoje so deležni otroci, ki smo jih testirali. Skupno je vprašalnik izpolnilo 18 staršev.

Izmed 18 otrok staršev, ki so rešili vprašalnik, smo izbrali 12 otrok, po štiri predstavnike za vsako vrsto vzgojnega stila, ki so kar se da sorazmerno razporejeni po spolu. Vsi testirani otroci so v tekočem letu dopolnili šest let. Nihče od njih nima diagnosticiranih motenj pozornosti. Vsi so prostovoljno sodelovali v raziskavi z dovoljenjem staršev in ravnateljice vrtca.

3.2 Postopek in instrumenti

Intervju

Z vzgojiteljicami smo izvedli polstrukturirane intervjuje, s katerimi smo želeli pridobiti njihovo mnenje o tem, kako interakcija med odraslim in otrokom vpliva na trajanje pozornosti pri aktivnosti in katera interakcija po njihovem mnenju najbolj podaljša trajanje pozornosti. Vprašanja so se navezovala tudi na njihovo mnenje o vplivu vzgojnih stilov na trajanje pozornosti pri aktivnosti otroka. Odgovore smo ustrezno kodirali in jih analizirali.

Eksperiment

Z eksperimentom smo preverjali vpliv vrste interakcije na vztrajanje pozornosti otrok med izvajanjem določenih aktivnosti.

Dejavnosti, pri katerih smo merili pozornost, so bile:

- *Vaje za grafomotoriko*: to so vaje, pri katerih morajo otroci s svinčnikom slediti narisani črti, v nekaterih primerih pa so ob črtah tudi majhne pobarvanke, ki jih morajo pobarvati. Otroci so v sklopu dnevnih zaposlitev v vrtcu podobne naloge že reševali.
- *Igra z lego kockami*: otrokom je vzgojiteljica na nekaj miz postavila lego kocke in jim povedala, da se bodo zdaj vsi igrali z njimi, da pa lahko z dejavnostjo kadar koli prenehajo in se gredo igrat drugam.
- *Človek, ne jezi se*: vzgojiteljica je na mizo postavila igro *človek, ne jezi se* in štiri otroke povabila k sodelovanju. Otroci so igro poznali, saj so se jo v vrtcu večkrat igrali.

Kot neodvisne spremenljivke smo vključili tri različne vrste interakcij tekom otrokovega izvajanja aktivnosti:

- *Brez interakcije*: v tem primeru interakcije med odraslim in otrokom ni bilo. Otroci so bili med dejavnostjo sami, naloge so reševali toliko časa, kolikor so sami želeli.
- *Verbalna interakcija*: v tem primeru je bila vzgojiteljica v bližini otrok in z njimi komunicirala. Verbalna komunikacija je bila ves čas pozitivno usmerjena in odvisna od situacije, v kateri se je posamezen otrok znašel. Primeri verbalne komunikacije so: "*to, kar si naredil, mi je zelo všeč*", "*sedaj, ko si sestavil to, lahko sestaviš še kaj drugega*", "*super, dobil si število šest, lahko greš iz hišice*", "*no, saj ni važno, boš pa drugič dobil število šest*", "*no, drugič boš pa ti pojedel koga*", "*tako, ja*", "*super ti gre*", "*tukaj moraš še pobarvati*", "*danes ti pa res uspeva*", "*na tem listu imaš še malo*" in podobno. Z verbalno komunikacijo je vzgojiteljica posredno poudarjala, da ni pomembna samo zmaga, s čimer je poskušala vplivati na to, da otroci ne bi odnehali samo zato, ker ne zmagujejo.
- *Fizična interakcija*: v tem primeru je vzgojiteljica z otroki skupaj reševala naloge in delovne liste ter se vključevala v igralno dejavnost. Pri igri z lego kockami je na primer nekomu pomagala sestaviti drevo, drugemu poiskati gume, hkrati pa je tudi sama sestavljala svoj izdelek.

Preverjali smo vpliv neodvisne spremenljivke (vrste interakcije) na odvisno spremenljivko "trajanje pozornosti" pri izvajanju zadane aktivnosti. Preverjali smo, katera vrsta interakcije pripomore k najdaljšemu trajanju vzdrževanja pozornosti. Pri vseh treh dejavnostih smo merili čas, ko so otroci vztrajali pri aktivnosti. Čas smo začeli meriti, ko so z izvajanjem dejavnosti začeli, in ga prenehali meriti, ko so z dejavnostjo želeli prenehati. Otrokom smo, preden so začeli z reševanjem, povedali, da lahko z reševanjem kadarkoli prenehajo. Vse eksperimentalne situacije so bile zastavljene tako, da so predstavljale del vsakdanjih dejavnosti, ki potekajo v vrtcu. Otroci niso vedeli, kdaj so bili vključeni v eksperiment, s čimer smo izločili možen vpliv na merjenje. Vrstni red dejavnosti in vrste interakcij smo ustrezno variirali, da bi izključili vpliv vrstnega reda na rezultate.

Vprašalnik

Tretja uporabljena metoda v raziskavi je standardiziran vprašalnik *Parental Authority Questionnaire* (Buri, 1991) za preverjanje vzgojnega stila staršev. Vprašalnik je sestavljen iz tridesetih trditev in preverja prisotnost avtoritarnega, permisivnega oziroma avtoritativnega vzgojnega stila. Za vsako vprašanje so starši na lestvici od ena do pet določili, koliko posamezna trditev drži oziroma ne drži za odnos med njimi in njihovim otrokom. S seštevkom rezultatov smo določili vzgojni stil, ki pri njih prevladuje.

4 Rezultati

Rezultati so predstavljeni v treh delih:

- mnenje vzgojiteljic o tem, kakšna je koncentracija pri otrocih pred vstopom v šolo, in o tem, ali je trajanje pozornosti pri predšolskem otroku pomembno,

- rezultati o vplivu interakcije na trajanje pozornosti pri predšolskem otroku in
- rezultati povezanosti vzgojnih stilov in trajanja pozornosti pri predšolskem otroku.

Mnenje vzgojiteljic o pomenu koncentracije in težavah z njo pri predšolskih otrocih

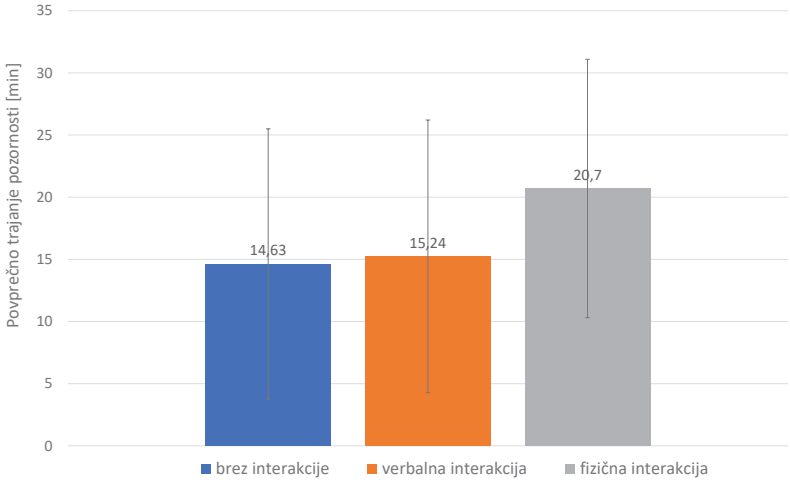
Vsem vzgojiteljicam se zdi pozornost ključnega pomena za otroka pred vstopom v izobraževalni sistem. Kot glavne razloge za to navajajo sposobnost daljšega poslušanja in sledenja ter posledično sposobnost razumevanja in upoštevanja navodil. Tako otrok lahko izpolni naloge, ki mu jih vzgojitelj in kasneje učitelj postavi. Nekatere vzgojiteljice izpostavljajo tudi, da je koncentracija pomembna zato, da se otrok že pred vstopom v šolo nauči določenih stvari, ki mu bodo koristile v šoli. Večina (pet od sedmih) vzgojiteljic meni, da imajo otroci težave s koncentracijo, ena delavka meni, da jih nimajo, ena pa je neopredeljena. Večinoma se strinjajo, da so bili otroci včasih bolj umirjeni, poslušni, so sledili navodilom in so imeli manj težav s koncentracijo.

Vpliv interakcije na trajanje pozornosti pri izvajanju dejavnosti

Vzgojiteljice se strinjajo, da je interakcija med otrokom in vzgojiteljem pomembna ter vpliva na trajanje pozornosti pri otrocih. Nekatere so povedale, da interakcija med otrokom in vzgojiteljem v določenih situacijah podaljša trajanje pozornosti, da pa je to odvisno tudi od otroka samega, saj so nekateri otroci bolj željni pozornosti odraslega oziroma interakcije z njim. Ena omenja tudi pomen interakcije med otroki. Po mnenju vzgojiteljic je poleg otrokove osebnosti primernost ene ali druge vrste interakcije in njen vpliv odvisen tudi od situacije oziroma dejavnosti, v katero je otrok vključen.

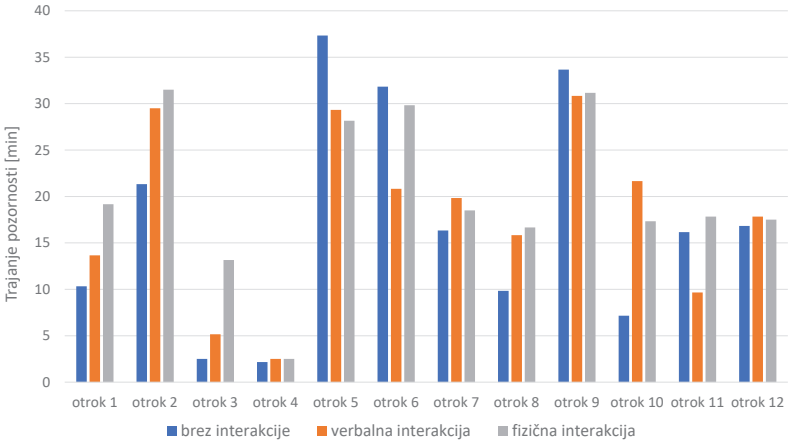
Ali interakcija vpliva na trajanje pozornosti pri otroku, smo preverili tudi z eksperimentom, kjer smo izračunali povprečen čas pozornosti otrok za vse tri testirane dejavnosti (*vaje za grafomotoriko*, *igra z lego kockami* in igra *človek, ne jezi se*) (glej sliko 1).

Slika 1: Povprečno trajanje pozornosti za vse tri dejavnosti skupaj glede na vrsto interakcije

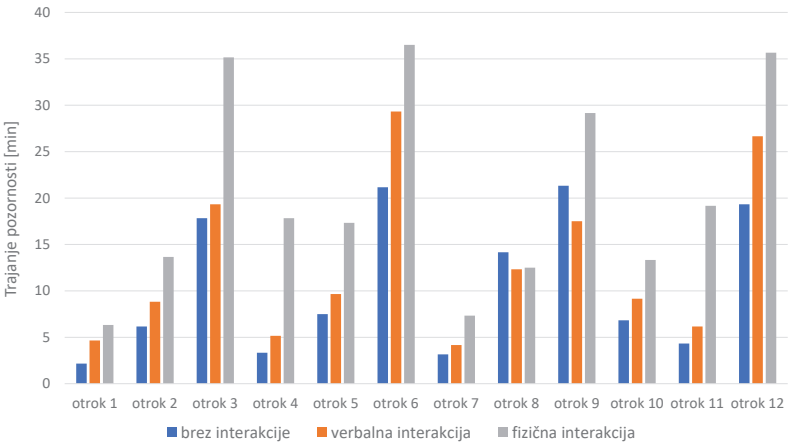


Slika 2: Vpliv interakcije na trajanje pozornosti pri posameznih otrocih pri vajah za grafomotoriko (a), igri z lego kockami (b) in igri človek, ne jezi se (c)

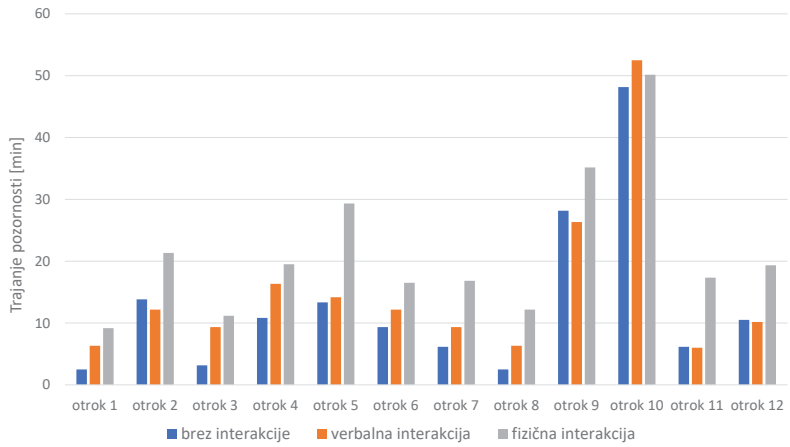
(a)



(b)



(c)



Iz slike 1 lahko razberemo, da so pri vseh treh dejavnostih otroci v povprečju največ časa vzdrževali pozornost, ko je bila prisotna fizična interakcija med odraslim in otrokom. Slabši je bil učinek verbalne interakcije. Na vzdrževanje pozornosti pri otrocih najslabše vpliva odsotnost kakršnekoli interakcije. Rezultati t-testa parnih vzorcev so pokazali, da so razlike v času vzdrževanja pozornosti med različnimi vrstami interakcij statistično značilne:

- brez interakcije – verbalna interakcija ($t = –2.233$, $df = 35$, $p = 0.032$),
- brez interakcije – fizična interakcija ($t = –7.230$, $df = 35$, $p = 0.000$),
- verbalna interakcija – fizična interakcija ($t = –6.331$, $df = 35$, $p = 0.000$).

Na sliki 2 so prikazani časi vzdrževanja interakcije pri posameznem otroku glede na različno vrsto interakcije. Iz slike 2 lahko vidimo, da je fizična interakcija v večini primerov (85,7 %) spodbujala daljše vzdrževanje pozornosti v primerjavi z verbalno (v 14,3 %). Verbalna interakcija pa je bila učinkovitejša od odsotnosti interakcije pri spodbujanju vzdrževanja pozornosti v 72,2 % (26 od 36) primerov.

Odgovori vzgojiteljic glede najbolj optimalne vrste interakcije za vzdrževanje otrokove pozornosti ne dajejo enotnega odgovora. Tri menijo, da ima fizična interakcija najboljši vpliv na trajanje pozornosti pri otrocih, ena pa meni, da je pri predšolskih otrocih verbalna interakcija tista, ki najbolj podaljša pozornost. Ostale se strinjajo, da je primernost in posledično vpliv določene vrste interakcije odvisen predvsem od otroka in situacije, v katero je otrok vključen. Primer odgovora: "*Pri risanju na primer večini otrok največ pomeni pohvala. Pri kakšni družabni igri pa so zelo veseli, če se jim pridružiš. Jim nameniš svojo pozornost. In potem kar vztrajajo pri tej igri. Samo zato, ker si ti tam*." Sicer pa so vse vzgojiteljice enotne, da je za otrokovo vzdrževanje pozornosti najslabše, če interakcije z odraslim ni. Omenjajo tudi pomen medvrstniške interakcije, kjer "*otroci sami sebe nenehno motivirajo s tem, da igro preusmerjajo, si izmišljujejo nove dogodke in igro vodijo v druge smeri. Tako en drugega urijo, da vztrajajo in podaljšujejo pozornost*."

Vpliv vzgojnih stilov na pozornost

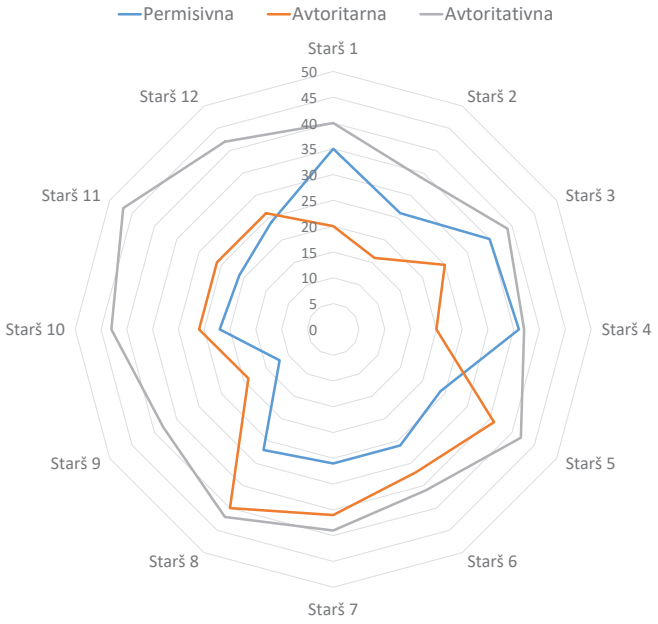
Vse vzgojiteljice menijo, da vzgojni stil staršev vpliva na razvoj koncentracije pri otroku. Ena izmed vzgojiteljic meni, da je za razvoj koncentracije zelo pomemben "*način vzgoje in neverbalni stil odraslega*". Druga pravi, "*da se vidi, da določenemu otroku dovolijo vse. Če je otrok vajen nekega reda, pa ne mislim na prestrogo vzgojo, potem bo tudi njegova pozornost boljša. Pri tistih, ki skačejo okrog in norijo, ko jim želiš nekaj povedati, bi jaz presodila, da je to tudi posledica vzgoje. Zagotovo tu prispeva še otrokov karakter in to, kar je prinesel na svet, vendar mislim, da ima tu velik pomen tudi vzgoja*."

Vpliv vzgojnega stila staršev na trajanje pozornosti pri otroku smo ugotavljali tudi s primerjavo povprečnega časa vzdrževanja pozornosti otrok pri izvajanju dejavnosti eksperimenta v odvisnosti od vzgojnega stila.

Vsi starši so svoj vzgojni stil opredelili kot avtoritativnega, vseeno pa so nekateri starši dosegli več točk pri permisivni kot pri avtoritarni vzgoji ali obratno (glej sliko 3). V primerih, kjer so starši na vprašalniku o vzgojnem stilu dosegli pri avtoritativni vzgoji vsaj 15 točk več kot pri drugih dveh, smo njihovo vzgojo opredelili kot avtoritativni vzgojni stil. Če so starši v dimenziji permisivne vzgoje dosegli vsaj 10 točk več kot pri

avtoritarni, smo njihovo vzgojo opredelili kot avtoritativno z večjim delom permisivne vzgoje (v nadaljevanju permisivni vzgojni stil). Če so starši pri vprašanjih, vezanih na avtoritarni vzgojni stil, zbrali vsaj 10 točk več kot pri vprašanjih, vezanih na permisivni vzgojni stil, smo njihov vzgojni stil označili kot avtoritativen z večjim delom avtoritarnega vzgojnega stila (v nadaljevanju avtoritarni vzgojni stil).

Slika 3: Doseženo število točk pri posameznem staršu glede na njegov vzgojni stil

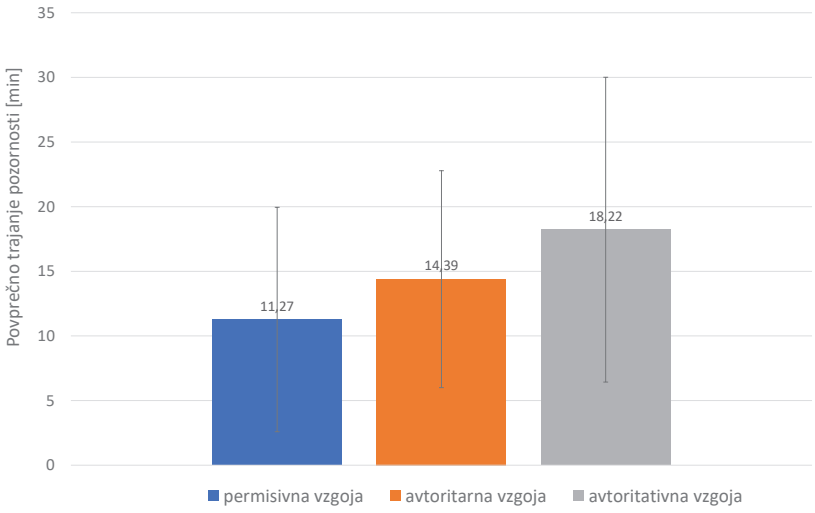


Iz slike 4 je razvidno, da so otroci najdlje vzdrževali pozornost pri dejavnostih v primeru, ko je bil prevladujoč vzgojni stil staršev izrazito avtoritativni, nekoliko manj v primeru avtoritarne in najmanj v primeru, da so bili deležni permisivne vzgoje. Korelacija med vzgojnim stilom in trajanjem pozornosti je nizka, a statistično značilna za vse vrste interakcij in vse vrste dejavnosti ($r = 0.340$, $p < 0.000$).

Podobno menijo tudi vzgojiteljice. Pravijo, da avtoritarni vzgojni stil ni najboljši, če želimo pri otrocih doseči najdaljšo pozornost, saj je pozornost, ki jo dosežemo pri otroku, prisilna, zanjo pa je značilno, da nima tolikšnega trajanja kot želena pozornost. Omenjajo tudi, da je otrok lahko umirjen in daje vtis, da dejavnosti sledi, v resnici pa je njegova pozornost drugje. Pozornost je v tem primeru velikokrat zamenjana z vztrajnostjo, ki pa ne vključuje pozornega ukvarjanja s stvarjo. Otroci se tudi bojijo kazni, ki bi lahko sledila, in vztrajajo zgolj iz strahu pred njo. "*Za take otroke sicer velikokrat rečejo, da so vzgojeni*." Avtoritarni vzgojni stil se jim zaradi značilnih vzgojnih metod ne zdi pravi, vendar pa večinoma menijo, da na trajanje pozornosti vseeno bolje vpliva kot permisivni vzgojni stil. Za permisivni vzgojni stil vzgojiteljice povedo, da se jim načeloma zdi najslabši za spodbujanje koncentracije, saj je tak otrok vzgajan brez ciljev

in ni motiviran, da bi vztrajal. Omenjajo, da otrok, vzgojen s permisivnim stilom, "*dela, kar želi, ko želi in če sploh želi. Na tak način pride pri otroku do izraza nevztrajnost. Hitro obupajo in odnehajo, ko naletijo na prvo oviro*." Ključno pri tem vzgojnem stilu se jim zdi dejstvo, da otroku niso postavljene meje in lahko počne, kar želi, s čimer neugodno vplivamo na trajanje pozornosti. "*Ko otrok nečesa noče, recimo, ko ne želi nadaljevati z branjem, mu mi to dovolimo. – No, pa pusti. In s tem mu ne vzpodbujamo koncentracije*." Takšni otroci se "*ne znajo zaigrati sami, če se starši ves čas igrajo z njimi in jih animirajo. In potem slišiš stavke "meni je dolgčas" in "nimam kaj delat*'."

Slika 4: Povprečno trajanje pozornosti otrok pri testiranih dejavnostih glede na podvrsto vzgojnega stila



Avtoritativni vzgojni stil vzgojiteljice opisujejo kot najboljšega na vseh področjih. Otroci iz tega vzgojnega stila prihajajo samozavestni, obenem pa se zavedajo mej. Omenjajo tudi, da vztrajajo zaradi notranje motivacije, otrok se ne boji izzivov in je vedoželjen. Menijo, da ima otrok, vzgojen z avtoritativnim vzgojnim stilom, dobro in dolgotrajno pozornost, "*ker z avtoritativnim stilom gradimo na medsebojnem zaupanju in otrok na tak način pridobiva samozavest. Vztraja, ker si to sam želi. Ne želi samo zadovoljiti drugega. Razvije neke mehanizme, da vztraja, ker to sam želi in čuti, da je to prav*."

5 Razprava

Rezultati povprečnega trajanja pozornosti otrok pri izvajanju določene aktivnosti se delno skladajo z raziskavo Rappa (v Gurtler 1994, str. 60), ki je pokazal, da je za petdo sedemletnike značilno, da lahko usmerjeno pozornost zadržijo približno 15 minut,

medtem ko so od sedem do deset let stari otroci sposobni obdržati pozornost približno 20 minut. Naši rezultati kažejo, da vzdrževanje pozornosti pri 5–6-letnikih lahko traja okrog 15 minut, v kolikor ni interakcije odraslega oz. je ta verbalna. Ko pa je interakcija fizična, se tudi pri predšolskih otrocih povprečni čas vzdrževanja le-te poveča na okrog 20 minut.

Na osnovi rezultatov lahko zaključimo, da interakcija vpliva na trajanje usmerjene pozornosti pri predšolskih otrocih. Čeprav raziskave Mackwortha (1950), Wienerja (1963) in drugih (Pečjak, 1977) kažejo na velik pozitiven vpliv nagrade/pohvale na notranje dejavnike pozornosti (motive, potrebe in čustva) pri odraslem, se je v naši raziskavi pokazalo, da na trajanje pozornosti pri otrocih najbolj pozitivno vpliva fizična interakcija. Ob dejstvu, da notranji dejavniki pozornosti najbolj optimalno vplivajo na trajanje pozornosti (Pečjak, 1977, str. 87–94), lahko rečemo, da je fizična interakcija tista, ki najbolj vpliva na potrebe, čustva in motive. Razlog je lahko v tem, da pri fizični interakciji otroci razen vida in sluha uporabljajo tudi druge vrste senzornih informacij, kot so taktilne, prostorske in proprioceptivne (Fan in sod., 2018). Tovrstne interakcije naj bi učitelji pogosto uporabljali. Po Kontosu (1999) se učitelji v prosti igri največkrat vključujejo kot spodbujevalci igre/soigralci in upravljavci dogajanja. Največ časa so posvečajo konstrukciji in manipulaciji aktivnosti. Verbalizacija se najpogosteje nanaša na spodbujanje igre z objekti, praktično/osebno pomoč in vprašanja, povezana z objektno igro.

Glede na vzgojne stile so najboljše rezultate pri vzdrževanju pozornosti dosegli otroci, ki so vzgojeni na izrazito avtoritativni način. Rezultate lahko razlagamo z razumevanjem avtoritativne vzgoje, ki temelji na vzpodbudi, obenem pa tudi postavljanju mej in vključevanju odraslega v otrokovo dejavnost (Ručigaj, 2012, str. 26). Rezultati so skladni z večino študij (po Darling, 1999), predvsem v anglofonskih državah, ki so pokazale, da imajo otroci z avtoritativnimi starši najboljše rezultate na različnih področjih (vedenje, duševno in socialno prilagajanje ...).

Do neke mere je trajanje pozornosti odvisno tudi od vrste dejavnosti. Rezultati so pokazali, da so pri *vajah za grafomotoriko* najboljše rezultate dosegli otroci, vzgojeni s prisotnim avtoritarnim vzgojnim stilom. Najslabše rezultate pri vzdrževanju pozornosti so v vseh primerih dosegli otroci, katerih starši imajo visoko izražen permisivni vzgojni stil. Že predhodne raziskave so pokazale, da so otroci in mladostniki, katerih starši niso vključeni v vzgojo oz. so pasivni ali permisivni, na vseh področjih slabši, kar se pokaže že pri predšolskih otrocih (Darling, 1999).

Ugotovitve deloma vodijo v smer raziskave Alizadeha in Andrieseve (2002), ki je pokazala, da je avtoritativni stil v negativni korelaciji z motnjami pozornosti in hiperaktivnosti. Ta korelacija pa je pozitivna v primeru avtoritarnega stila vzgoje, medtem ko pri permisivnem stilu korelacija ni bila pokazana.

Koncentracija je eden ključnih dejavnikov, ki bodo imeli na otroka predvsem v času šolanja, velik vpliv. Vzgojitelji in starši na otrokovo koncentracijo vplivajo s svojim načinom interakcije in vzgoje. Vzgojitelj mora skrbno načrtovati dejavnosti, da bodo vsebovale dovolj fizične in verbalne interakcije med njim in otroki. Glede na slovenske visoke normative glede števila otrok v vrtčevskih skupinah pa obstaja problem individualne obravnave, zato menimo, da je smiselno delati predvsem na dejavnostih, ki so skupinske, pa vendar vsebujejo fizično in verbalno interakcijo med otrokom in odra-

slim. Z otrokom se lahko individualno doma ukvarjajo starši, ki z avtoritativno vzgojo lahko najbolje pripomorejo k razvoju koncentracije. Dobrodošlo bi bilo oblikovanje programov za krepitev čustvene inteligentnosti pedagoških delavcev, kot izpostavljata Čotar Konrad in Kukanja-Gabrijelčič (2014, str. 15), ki bi razvijali občutljivost pedagoških delavcev za otrokove potrebe in najprimernejše odzive na njegove aktivnosti. Smotrno bi bilo preučiti tudi uporabo drugih vrst interakcij za namene spodbujanja koncentracije, kot je npr. glasba (Habe, 2018, str. 3). Kovačič in sodelavci (2018, str. 31) so pokazali, da obstaja velika razlika v izpostavljenosti otrok zaslonom in medijem s strani staršev, kar zelo različno vpliva na njihovo medijsko opismenjevanje. V tej luči bi bilo smiselno raziskati tudi, ali in če, kako je medijska pismenost povezana s koncentracijo otrok.

Jana Krivec, PhD, Tjaša Popovič

The Influence of Interaction and Parenting Style on Concentration of Preschool Children

Concentration or attention span is a skill that plays an important role in children's lives and is therefore a hot topic among scientists (Yu & Smith, 2016). Attention is defined as the orientation of our mental processes towards a specific object, which can also be our memories, knowledge, thinking, judgments or thoughts (Musek & Pečjak, 2001). The duration of attention is often equated with concentration, as an insistence of attention focused on a particular activity for a limited time (Ants, 1999; Filley, 2002; Keller, Binder & Thiel, 1999).

Attention develops at a very early stage. The greatest improvement in attention with age is the prolonging of the attention span. Within his concept of the "zone of proximal development", Vigotsky (1980) emphasized the importance of adult social interaction for child development. He argues that the development of intellectual abilities (which includes concentration) depends to a large extent on the dialog, guidance and interpretation of adults (parents, mentors and teachers). Reviews show a positive relationship between the quality of teachers' interactions with children that promote cognitive, socio-emotional and language development (Kontos and Wilcox-Herzog, 1997). Little is written about what type of interaction most promotes the attention span.

The development of concentration also depends on the broader context of the education in which the child grows up (Aunola, Stattin & Nurmi, 2000), i.e. the parenting style. Peček Čuk and Lesar (2011) divide parenting styles into: authoritarian, permissive and authoritative.

The authoritarian style is an education with prohibitions, restrictions, imperatives and control (Hauch, 1988). It is characterized by little parent-child interaction, while verbal interaction towards the child is often very negative. A child's attention is often forced and is not considered as prolonged as that of a child driven by inner desires, motives and needs (Kroflič, 1997). The permissive parent has almost no influence on the child's autonomy; there are no rules, everything is allowed (Ručigaj, 2012). Physical interaction is present, but the parent constantly adapts to the child. The parent neither

expects nor demands endurance from the child, which does not increase the attention span. Verbal interactions include too much praise and do not achieve the desired impact (Zalokar Divjak, 2000). Authoritative parenting is primarily based on encouragement and praise, but when necessary, the child is restricted (Ručigaj, 2012). Physical interaction is designed in such a way that the child learns to understand the rules and follow them in a playful way. At the same time, the parent knows the child's abilities and takes them into account so that no forced attention is triggered in the child. Verbal interaction takes place at a level where the parent is an authority, but takes into account and respects the child's opinion (Kroflič, 1997). The child improves his or her attention, not out of fear of punishment, but out of awareness of the rules, and because of internal drives, motives and emotions.

The study examined how interaction with an adult affects a child's concentration and which type of interaction (verbal or physical) produces the best results. It also investigated how parenting styles affect the child's concentration and which parenting style achieves the best results.

Three different methods were used in the study: a semi-structured interview with the caregivers, an experiment with five- and six-year-old children, and a questionnaire for the parents.

The interviews were conducted with seven childcare workers aged between 28 and 59, who had between 7 and 34 years of service. We were interested in their opinions on how the interaction between an adult and a child affects the duration of attention in the activity and which interaction in their opinion prolongs the duration of attention the longest. The questions also related to their views on educational styles.

18 parents completed the Parental Authority Questionnaire (Buri, 1991). On the basis of the results, we identified their parenting style (highly authoritative, authoritarian, permissive). From the 18 children of the parents who answered the questionnaire, we selected 12 children, four representatives for each type of educational style, as gender-balanced as possible. All the children tested turned six years old in the current year and will go to school next year. None of them were diagnosed with attention deficit disorder. All have voluntarily participated in the study with the permission of their parents and the kindergarten director.

The experiment tested the effect of the type of interaction on concentration in children when they play three types of games.

The activities that the children performed were:

- *Graphomotor exercises: in which the children must follow the drawn line with a pencil.*
- *Lego game: The children could play with Legos as much as they wanted.*
- *Ludo game: The educator invited four children to participate.*

As independent variables we have included three different types of interactions:

- *No interaction: In this case, there was no adult-child interaction. The children were alone during the activity and were engaged in solving tasks as long as they wanted.*
- *Verbal interaction: In this case, the educator was nearby and interacted with the children with positive verbal communication, such as "I see you made a little car", "You are great", "You must paint here". Through the verbal communication, the*

educator indirectly emphasized that victory is not the only thing that counts, thus ensuring that the children do not give up just because they have not won.

- *Physical interaction: In this case, the educator worked with the children to solve tasks and worksheets, and to carry out playful activities. In the Lego game, for example, she helped someone to assemble a tree, find a tire, and at the same time build their own product.*

We investigated the influence of independent variables on the dependent variable "duration of attention" during the performance of the given activity. We investigated which type of interaction contributes to the longest retention of attention.

All educators consider it crucial for a child to develop a good ability to concentrate before entering the educational system, so that he or she can follow the educational process properly. However, most of them believe that children have problems with their concentration. Most respondents agree that children used to be calmer and more obedient, followed instructions, and had fewer attention problems.

All educators agree that the interaction between the child and the educator is important and influences the duration of the child's attention. They also emphasize the child's personality and the situation or activity in which the child is involved. Although the majority of educators believe that physical interaction is best suited to help a child maintain attention, there are some who believe that it is best to verbally encourage children. They all agree that the worst thing for the child's attention span is the lack of any kind of interaction with the adult.

We have proven that interaction is an important factor in the attention span by comparing the average time spent with children for a given activity. On average, children spent most time on the activity when the interaction was physical (M = 20:07 min., SD = 10:39 min.), followed by verbal interaction (M = 15:24 min., SD = 10:79 min.), and the least time when there was no interaction with the educator (M = 14:63 min., SD = 10:87 min.). The results are to some extent congruent with Rapp (in Gurtler 1994, p. 60), who states that five- to seven-year-olds are able to keep their attention focused for about 15 minutes, while seven- to ten-year-olds are able to retain attention for about 20 minutes. However, our results show that with physical interaction with adults, even in preschool children, the average attention time can be increased to about 20 minutes.

Using the paired sample t-test, we have shown that the differences in the time children spent on activities when different types of interaction were used are statistically significant:

- *No interaction vs. verbal interaction ($t = –2.233$, $df = 35$, $p = 0.032$);*
- *No interaction vs. physical interaction ($t = –7.230$, $df = 35$, $p = 0.000$);*
- *Verbal interaction vs. physical interaction ($t = –6.331$, $df = 35$, $p = 0.000$).*

Physical interaction promoted longer retention of attention in most cases (85.7%) compared to verbal interaction (14.3%). However, in 72.2%, verbal interaction was more effective than the absence of interaction in promoting attention retention.

From the results we can conclude that interaction influences the duration of attention in preschool children, with physical interaction being the most effective. The explanation for this could be that children can use other types of sensory information besides sight and hearing in physical interaction, such as tactile, spatial and proprioceptive

information (Fan et al., 2018). This can enrich their environment and enhance their inner motivation. Our results are not fully consistent with earlier studies (Mackworth, 1950; Wiener, 1963), which suggest that verbal interaction (such as praise) has a highly positive impact on inner aspects of attention (motives, needs, emotions).

Educators agree that the parenting style influences the development of concentration in children. They believe that an authoritarian education is the best and a permissive one the worst, as it is "difficult to address a child who does not follow rules, is unmotivated and without goals". Their attention and stamina are disrupted at the first obstacle. An authoritarian style is considered better by the educators, but it still stimulates the forced attention to follow the rules and avoid punishment, and the quality of attention is not good and can be substituted with perseverance. The authoritative educational style is described by educators as the best in all areas. In this case, the children are guided by intrinsic motivation, are not afraid of challenges, and are curious. All this leads to a better attention span, because "a child develops some mechanisms to insist on it because it wants to and feels that it is right".

We evaluated the effect of the parenting style by comparing the average time spent by children educated with different styles on the proposed activities.

The average activity time of children raised in a permissive manner was 11:27 min. (SD = 8:68 min.), in an authoritarian manner 14:39 min. (SD = 8:39 min.) and in an authoritarian manner 18:22 min. (SD = 11:79 min.).

The correlation between parenting style and attention span is low but statistically significant for all types of interactions and all types of activities ($r = 0.340$, $p = 0.000$).

The results can be interpreted by understanding authoritative education as based on encouragement, setting limits, and involving the adult in the child's activity (Ručigaj 2012, 26). The results are consistent with most studies (Darling, 1999), especially in Anglophone countries, which have shown that children with authoritative parents achieve the best results in different areas (behavior, intellectual and social adaptation, etc.). Previous research has also shown that children and adolescents whose parents are not involved in education, and are raised in a passive or permissive manner are worse off in all areas, as can be seen in preschool children (Darling, 1999).

The results are partially congruent with the direction of the research of Alizadeh and Andries (2002), which showed that the authoritative style is negatively correlated with attention deficit and hyperactivity disorders.

On the basis of the results, we can understand that educators and parents are the ones who influence the child's attention through the way they interact and educate. Attention and its duration are one of the key factors that will have a great influence on the child, especially during the school years. Educators should carefully plan activities that include sufficient physical and verbal interaction between them and the child. Parents should aim for an authoritarian style of parenting. In any case, it is important that parents and caregivers work together in all areas of the child's development.

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Občutljivost za otrokove potrebe pri mamah dveh generacij

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KLJUČNE BESEDE: občutljivost, navezanost, spanje, telesni stiki, dojenje

POVZETEK – Mamina občutljivost za otrokove potrebe pomembno prispeva k otrokovemu razvoju varne navezanosti. Pogojena je z njenimi delovnimi modeli navezanosti (Ainsworth in sod., 1978; Bowlby, 1969). V raziskavi smo preučili medgeneracijske razlike v zadovoljevanju otrokovih potreb. Sestavili smo vprašalnik, ki so ga izpolnile mame in stare mame predšolskih otrok iz vseh slovenskih regij (654 udeleženk). Poleg vprašanj o odzivih na otrokov jok, spalnih navadah, telesnih stikih in dojenju je vseboval Vprašalnik medosebnih odnosov (Bartholomew in Horowitz, 1991) tudi merjenje slogov navezanosti udeleženk. Ugotovili smo, da se je v času med obema generacijama povečala (ali vsaj ohranila) intenzivnost stikov med mamo in otrokom. Upadla je zastopanost ne-varnih slogov navezanosti, ki so bili v pričakovani smeri povezani z občutljivostjo. Rezultati so pokazali porast naklonjenosti mam do vzgojnih pristopov, ki naj bi pozitivno prispevali k psihofizičnemu razvoju mlajšega otroka in kažejo občutljivost za njegove potrebe.

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ABSTRACT – A mother's sensitivity to her child's needs significantly contributes to the child's development of secure attachment and is conditioned by her working models of attachment. Our research examined intergenerational differences in meeting a child's needs. We compiled a questionnaire, which was completed by mothers and grandmothers of preschool children from every Slovenian region (number of respondents was 654). In addition to questions on their responses to the child's crying, their sleeping habits, physical contact, and breastfeeding, the questionnaire also included The Relationship Questionnaire to establish the respondents' attachment style. We have found that, between the two generations, the intensity of mother/child contacts has increased. The number of non-secure attachment styles, which are expectedly negatively correlated with the mother's sensitivity, has declined. Results have revealed an increase in the mothers' proclivity towards child-rearing approaches that have a supposedly positive impact on young children's psychophysical development and display sensitivity to their needs.

1 Uvod

Bowlby (1969, 1982) in Ainsworth (glej Ainsworth, Blehar, Waters in Wall, 1978) sta postavila temelje teorije navezanosti. Navezanost sta opredelila kot čustveno vez, ki jo dojenček oz. dojenčica (v nadaljnjem besedilu je rabljena moška oblika samostalnika kot spolno nevtralna) razvije z objektom navezanosti (običajno mamo) v prvem letu starosti in je stabilna v prostoru in času. Otrok uporabi objekt navezanosti kot varno podlago za raziskovanje in kot varno pribežališče v okoliščinah, ki mu povzročajo čustveno stisko (Ainsworth in sod., 1978).

Otrok na podlagi zgodnjih izkušenj z objekti navezanosti razvije spoznavne modele sebe, objekta navezanosti in sveta (Bowlby, 1969, 1973, 1988). To so notranji delovni modeli navezanosti, ki vključujejo pričakovanja in predstave odzivov staršev v oko-

liščinah, ko bo potreboval njihovo pomoč, tolažbo, oporo ali bližino (Bowlby, 1969). Omogočajo mu, da doživlja bližino skrbnika kljub temu, da ta ni telesno prisoten, kar zmanjša čustveno stisko ob ločitvi od njega in spodbuja raziskovanje v njegovi odsotnosti (Bowlby, 1973).

Ainsworth in sodelavci (1978) so na podlagi postopka *tuja situacija* prepoznali naslednje sloge otrokove navezanosti na mamo: *varnost, izogibanje in upiranje/ambivalentnost*. Obstaja pa še četrti slog, *neorganiziranost* (Main in Solomon, 1990). Varno navezani otroci najdejo ravnovesje med raziskovanjem in navezanostjo. Če so vznemirjeni, jih stiki z mamo umirijo (Ainsworth in sod., 1978). Približno 65 % razvojno normativnih otrok izraža varno navezanost (Van IJzendoorn, Goldberg, Kroonenberg in Frenkl, 1992).

Kateri slog navezanosti otrok razvije, je v največji meri odvisno od občutljivosti objekta navezanosti (De Wolff in Van IJzendoorn, 1997). Kako se starši odzovejo na otrokovo potrebo po udobju, prispeva k razvoju otrokove strategije uravnavanja negativnih čustev in obvladovanja čustvene stiske (Bowlby, 1982). Občutljivost pomeni prepoznavanje in pravilno razumevanje otrokovih signalov ter odzivanje nanje na ljubezniv, pravočasen in primerno stimulativen način (Ainsworth, Bell in Stayton, 1974). Izraža se s tem, da objekt navezanosti otroka sprejema, sodeluje z njim in mu je dosegljiv, ko ga potrebuje (Ainsworth in sod., 1978; Waters in Cummings, 2000). Občutljivost staršev je pomembna tako pri otrocih, ki se razvijajo normativno, kot pri otrocih s posebnimi potrebami (glej Cugmas, 2018) in v celotnem življenju njihovega otroka. Npr. višja raven starševske topline, intimnosti in povezanosti prispeva k bolj kakovostnim odnosom med starši in njihovim mladostnikom (glej Cugmas, Zupančič, Poredoš in Kranjec, 2017).

Varno navezani otroci imajo starše, ki so vpleteni v njihovo nego in vzgojo, izražajo toplino in so odzivni, medtem ko neobčutljivo in nedosledno starševstvo napoveduje ne-varno otrokovo navezanost. Izogibanje je povezano z maminim zavračanjem telesnega stika z otrokom. Ambivalentna oziroma upirajoča se navezanost se razvije, če se mama ne odziva, ko otrok doživlja čustveno stisko (pregled v: Filangeri-Parashar, 2007). Neorganizirana navezanost je povezana z zlorabo otroka in vedenjem staršev, ki otroka prestraši (pregled v: Poehlmann, 2003).

Odrasli imajo glede na odnose z ljudmi posplošene delovne modele navezanosti (Waters in sod., 2015). Bartholomew in Horowitz (1991) razlikujeta naslednje štiri sloge navezanosti v odraslosti: *slog varne navezanosti*, *plašljivo izogibajoči se slog*, *preokupirani slog in odklonilno izogibajoči se slog*. Za osebe z varnim slogom navezanosti je značilno, da se hitro zbližajo z drugimi, so zanesljive, počutijo se varne in nimajo strahu pred zapustitvijo (Bartholomew in Horowitz, 1991). Sprejemajo tolažbo in oporo od drugih in brez težav prosijo za pomoč (Wearden, Lamberton in Crook, 2005). Za osebe s plašljivo izogibajočim se slogom navezanosti je značilno, da se bojijo stikov z drugimi, čeprav si jih želijo, težko zaupajo drugim in sebi, bojijo se zavrnitve. Osebe s preokupiranim slogom navezanosti imajo nizko samospoštovanje, druge pa vrednotijo visoko. Želijo si stikov z njimi, doživljajo veliko čustvenih vzponov in padcev. So posesivne in se bojijo izgube in osamljenosti. Osebe z odklonilno izogibajočim se slogom navezanosti menijo, da so same sebi zadostne, in ne priznajo, da si želijo bližine drugih. So neodvisne od drugih. Ne počutijo se prijetno, če si ljudi pustijo preblizu, zato vzdržujejo z njimi čustveno razdaljo (Bartholomew in Horowitz, 1991).

Slogi navezanosti v odraslosti so skladni s tistimi, ki so se razvili v zgodnjih letih življenja (Grossmann, Grossmann, Kindler in Zimmermann, 2008). Predstave zgodnjih odnosov vplivajo na posameznikove vedenjske in čustvene odzive ter razlage interakcij v prihodnjih medosebnih odnosih (Bretherton in Munholland, 2016). Ob spremenjenih odnosih obstaja možnost za spremembe notranjih delovnih modelov navezanosti (pregled v: Pace, Zavattini in D'Alessio, 2012).

Slogi navezanosti staršev se pozitivno povezujejo s slogi navezanosti njihovih otrok (Van IJzendoorn, 1995), kar imenujemo medgeneracijska stabilnost navezanosti. Pojasnimo jo lahko z občutljivostjo staršev za otrokove potrebe. Starši z varnimi delovnimi modeli navezanosti so prožni v interakciji z otrokom, saj mu želijo zagotoviti varnost in dobrobit (Erzar in Kompan Erzar, 2011). Številni avtorji (pregled v: Perko, 2016) navajajo, da naslednja starševska vedenja dojenčku zagotavljajo varnost in dobrobit: hitro odzivanje na njegov jok z zadovoljitvijo njegovih potreb, spanje dojenčka skupaj s starši na skupnem ležišču, pogosti in topli stiki med dojenčkom in starši ter dojenje.

2 Problem s hipotezami

Preučili smo sloge navezanosti ter prepričanja in vedenja mam dveh generacij do njihovega dojenčka. Na podlagi vprašalnika, ki smo ga sestavili, so mame in stare mame samoocenile izraženost slogov navezanosti ter poročale o odzivanju na dojenčkov jok (kako pogosto in zakaj so same ali drugi člani družine (če so) namenoma puščali dojenčka jokati daljši čas oz. zakaj so se (če so se) na dojenčkov jok vedno odzvali takoj, ko je bilo mogoče), skupnem spanju z dojenčkom (kje je dojenček spal in zakaj so se oz. se niso same ali skupaj s partnerjem redno odločale za skupno spanje z dojenčkom), telesnih stikih z dojenčkom (koliko jih je bilo in kakšno je njihovo prepričanje glede telesnih stikov med starši in dojenčkom, npr. pestovanja v naročju) in hranjenju/dojenju (kako je bil dojenček v prvih štirih do šestih mesecih starosti hranjen in kako dolgo je bil dojen). Preučili smo razlike v prepričanjih in vedenjih mam do dojenčka glede na generacijo in izobrazbo ter izračunali povezanost med izraženostjo slogov navezanosti in preučevanimi vidiki prepričanj in vedenj, povezanimi z zadovoljevanjem dojenčkovih potreb.

Oblikovali smo hipoteze, da

- večina mam in starih mam izraža varen slog navezanosti, saj ta slog prevladuje v populaciji (Uytun, Öztop in Eşel, 2013);
- mame izražajo nižjo raven ne-varne navezanosti kot stare mame, kar lahko pripišemo spremenjenim vzgojnim praksam (Puhar, 2004);
- mame izražajo višjo raven občutljivosti za dojenčkove potrebe, kot so jo izražale stare mame do svojih dojenčkov, kar predvidevamo na podlagi navedb različnih avtorjev (pregled v: Perko, 2016), da so mame bolje informirane z načini nege in vzgoje, ki ugodno vplivajo na otrokov razvoj, kot so bile stare mame, hkrati pa so tudi družbeni pogoji, v katerih negujejo in vzgajajo svoje otroke, kakovostnejši od tistih, v katerih so to

počele stare mame (obporodna praksa, dopust za nego in varstvo otroka, splošno naraščanje zavedanja o vrednosti dojenja ipd.);

- bolj izobražene mame in stare mame izražajo v primerjavi z manj izobraženimi višjo raven občutljivosti za dojenčkove potrebe, saj predvidevamo, da je izobraženost pozitivno povezana s seznanjenostjo s sodobnimi načini nege in vzgoje, ter
- mame in stare mame z varnim slogom navezanosti izražajo višjo raven občutljivosti za dojenčkove potrebe kot mame in stare mame z ne-varnimi slogi navezanosti (to povezanost odkrivajo številne raziskave; pregled v: Cugmas, 2020).

3 Metodologija

Udeleženke

V raziskavi so sodelovale mame dveh generacij, ki so bile v sorodstvenem odnosu hči-mama in so imele v času raziskave vsaj enega otroka oz. vnuka, ki je obiskoval javni vrtec. Od razdeljenih 1024 (512 parov) vprašalnikov je bilo vrnjenih in v celoti izpolnjenih 654 vprašalnikov, od tega 50 % vprašalnikov za mame in 50 % za stare mame. Povprečna starost mam je bila: M = 33,96 leta (SD = 4,51, min. = 22, max. = 46), starih mam pa: M = 58,22 leta (SD = 6,48, min. = 43, max. = 82). Prevladovale so mame z doseženo izobrazbo od V. do VII. stopnje in stare mame z doseženo izobrazbo od I. do V. stopnje.

Pripomoček

Sestavili smo vprašalnik za mame in stare mame, ki je vseboval vprašanja zaprtega in odprtega tipa ter ocenjevalno lestvico. Po navodilih za izpolnjevanje smo na kratko predstavili namen raziskave. Mame z več otroki so odgovarjale za svojega najmlajšega otroka, ki je dopolnil že vsaj 11 mesecev. Stare mame so odgovarjale na podlagi spominov, kako so same vzgajale in negovale svojega dojenčka.

Vprašanjem o demografskih podatkih je sledilo enajst vprašanj zaprtega tipa o njihovih načinih nege in vzgoje dojenčka. Z *Vprašalnikom medosebnih odnosov* (RQ; Bartholomew in Horowitz, 1991) smo merili izraženost naslednjih slogov navezanosti: *varnost*, *plašljivo izogibajoči se*, *preokupirani*, *odklonilno izogibajoči se*.

Opise slogov navezanosti so udeleženke ocenile po Likertovi 7-stopenjski ocenjevalni lestvici (od 1 – *sploh ne velja zame*, do 7 – *popolnoma velja zame*). Zanesljivost RQ je ustrezna, saj znaša test-retest korelacija za ženske r = 0,78 (Scharfe in Bartholomew, 1994; v: Žvelc in Žvelc, 2006). Veljavnost celotnega vprašalnika smo preverili s sondažno uporabo na manjšem vzorcu udeleženk.

Postopek zbiranja in obdelave podatkov

Vsebinsko enaka, a oblikovno različna vprašalnika za mame in stare mame smo sondažno preizkusili. Vzgojiteljice v vrtcih so razdelile vprašalnike vsem staršem otrok

v svojih skupinah. Udeleženkam raziskave smo na podlagi šifer zagotovili anonimnost in zaupnost podatkov.

Podatke, zbrane z vprašalnikoma, smo obdelali v računalniškem programu SPSS. Uporabili smo χ^2*-preizkus*, *Mann-Whitneyev preizkus*, *Kruskal-Wallisov preizkus* in *t-teste*. Odzive mam smo pri vsakem vprašanju razporedili v dve kategoriji, in sicer "neobčutljivi odzivi" in "občutljivi odzivi".

4 Rezultati z interpretacijo

Slog navezanosti

Povprečne samoocene slogov navezanosti kažejo (tabela 1), da je bila pri udeleženkah najmočneje izražena varna navezanost, kar podpira hipotezo 1, da je ta slog najpogosteje zastopan v populaciji.

Tabela 1: Izid Mann-Whitneyevega preizkusa razlik v pojavnosti slogov navezanosti pri udeleženkah glede na generacijo

Slog navezanosti	*Generacija*	*N*	*M*	$\bar{R}$	*Z*	*p*
Varni	mame	326	5,38	319,35	–0,123	0,902
	stare mame	310	5,28	317,60		
Plašljivo izogibajoči se	mame	327	2,71	293,69	–3,068	0,002
	stare mame	301	3,33	337,11		
Preokupirani	mame	326	2,65	281,13	–4,781	0,000
	stare mame	300	3,21	348,68		
Odklonilno izogibajoči se	mame	325	3,18	302,54	–1,744	0,081
	stare mame	303	3,50	327,33		

Rezultati so pokazali, da sta plašljivo izogibajoči se in preokupirani slog navezanosti statistično značilno bolj izražena pri starih mamah kot pri mamah, glede odklonilno izogibajočega se sloga pa obstaja tendenca v isti smeri (tabela 1).

Rezultati so podprli hipotezo 2, da bodo mame izražale nižjo raven ne-varne navezanosti kot stare mame. Rezultate razlagamo s spremenjeno, za otrokove potrebe bolj občutljivo vzgojno prakso, ki so je bile deležne mame (glej Puhar, 2004) in vodi do razvoja varne navezanosti (De Wolff in Van IJzendoorn, 1997).

Občutljivost do dojenčkovih potreb pri mamah in starih mamah glede na izobrazbo in slog navezanosti

Tabela 2: Rezultati t-testov statistično značilnih razlik med mamami in starimi mamami z različnimi slogi navezanosti, ki so se občutljivo ali neobčutljivo odzivale na otrokove potrebe

Prakse in prepričanja	*Slog navezanosti*	*Vedenje do dojenčka*	*M*	*SD*	*t*	*df*	*p*
Pogostost ignoriranja joka (mama)	plašljivo izogibajoči se	neobčutljivo	3,08	1,83	2,01	323	0,046
		občutljivo	2,60	1,67			
Ignoriranje joka (stara mama)	preokupirani	neobčutljivo	2,92	1,99	2,05	298	0,041
		občutljivo	3,44	1,68			
Ignoriranje joka, da se ne bi razvadil (mama)	varni	odgovor ni izbran	5,44	1,36	2,12	324	0,035
		odgovor je izbran	4,93	2,00			
Ignoriranje joka, da z jokom ne bi manipuliral (stara mama)	plašljivo izogibajoči se	odgovor ni izbran	3,11	1,88	2,15	299	0,032
		odgovor je izbran	3,75	1,95			
Ignoriranje joka, da z jokom ne bi manipuliral (stara mama)	odklonilno izogibajoči se	odgovor ni izbran	3,36	2,11	2,47	301	0,014
		odgovor je izbran	4,16	1,93			
Ignoriranje joka, da bi se navadil na red (stara mama)	plašljivo izogibajoči se	odgovor ni izbran	3,13	1,89	2,15	299	0,033
		odgovor je izbran	3,88	1,85			
Takojšnje odzivanje na jok, ker je bil jok moteč za okolico (mama)	odklonilno izogibajoči se	odgovor ni izbran	3,14	1,95	2,10	323	0,036
		odgovor je izbran	4,71	2,14			
Spanje na ločenih ležiščih, ker se je z dojenčkom ob sebi težko naspati (mama)	preokupirani	odgovor ni izbran	2,78	1,68	2,01	324	0,045
		odgovor je izbran	2,40	1,43			
Spanje na ločenih ležiščih, ker se je z dojenčkom ob sebi težko naspati (stara mama)	plašljivo izogibajoči se	odgovor ni izbran	3,11	1,89	1,98	299	0,048
		odgovor je izbran	3,66	1,91			
Spanje na ločenih ležiščih, ker se je z dojenčkom ob sebi težko naspati (stara mama)	odklonilno izogibajoči se	odgovor ni izbran	3,37	2,05	2,02	301	0,044
		odgovor je izbran	3,98	2,26			

Prakse in prepričanja	*Slog navezanosti*	*Vedenje do dojenčka*	*M*	*SD*	*t*	*df*	*p*
Spanje na skupnem ležišču, ker je naravno in normalno (mama)	varni	odgovor ni izbran	5,32	1,47	2,58	324	0,010
		odgovor je izbran	6,13	1,14			
Spanje na skupnem ležišču, ker je naravno in normalno (mama)	preokupirani	odgovor ni izbran	2,70	1,61	2,15	324	0,031
		odgovor je izbran	1,96	1,40			
Spanje na skupnem ležišču, ker je bilo tako najlažje poskrbeti za dojenčkove potrebe (mama)	plašljivo izogibajoči se	odgovor ni izbran	2,63	1,70	2,14	325	0,033
		odgovor je izbran	3,27	1,71			
Spanje na skupnem ležišču, ker je bilo tako najlažje poskrbeti za dojenčkove potrebe (stara mama)	odklonilno izogibajoči se	odgovor ni izbran	3,56	2,11	2,59	300	0,010
		odgovor je izbran	2,13	1,46			

Rezultati niso pokazali pomembnih medgeneracijskih razlik v ignoriranju dojenčkovega joka ($\chi^2 = 1,49$, $p = 0,828$). Približno 80 odstotkov mam obeh generacij se je redno odzivalo na jok svojega dojenčka (pri ignoriranju joka prevladujeta odgovora: "bilo je le nekajkrat" in "nikoli"). 20 odstotkov jih je jok ignoriralo v razponu od "vsakodnevno" (5 %) do "nekajkrat mesečno". Glede na izobrazbo nista obstajali statistično značilni razliki v odzivanju mam ($\chi^2 = 10,00$, $p = 0,616$) in starih mam ($\chi^2 = 18,89$, $p = 0,091$) na dojenčkov jok.

Obstaja statistično značilna razlika med mamami s plašljivo izogibajočim se slogom navezanosti, ki so se občutljivo ali neobčutljivo odzivale na dojenčkov jok (tabela 2). Mame, ki so se neobčutljivo odzivale na dojenčkov jok (tj. so dojenčka pustile jokati dalj časa), so imele višji rezultat plašljivo izogibajočega se sloga navezanosti kot mame, ki so se odzivale občutljivo (nikoli niso ignorirale joka oz. le redko). Stare mame, ki so redkeje ignorirale dojenčkov jok, so imele višji rezultat preokupiranega sloga navezanosti kot stare mame, ki so se neobčutljivo odzivale na dojenčkov jok. Druge razlike pri mamah in starih mamah v izraženosti različnih slogov navezanosti glede njihove občutljivosti do dojenčkovega joka niso bile statistično značilne (tudi v nadaljnjem besedilu navajamo le statistično značilne razlike).

Med razlogi za ignoriranje dojenčkovega joka so mame najpogosteje navajale bojazen pred dojenčkovo manipulacijo (19,6 %), sledita bojazen pred razvajenostjo (12,2 %) in navajanje na red (11,3 %); stare mame pa so navajale bojazen pred razvajenostjo (17,1 %), sledita bojazen pred manipulacijo (15,9 %) in navajanje na red (10,7 %). Razlog "krepitev pljuč z jokom" je navajala manjšina mam (0,9 %) in starih mam (5,2 %). Razlika je bila statistično značilna ($\chi^2 = 10,11$, $p = 0,001$). Med vzroki, ki izhajajo iz psihofizične nemoči skrbnika, so mame (13,2 %) in stare mame (11,3 %) najpogosteje navajale, da dojenčku niso znale pomagati; sledi odgovor preutrujenost (mame: 9,5 %, stare mame: 6,4 %), nato odgovor "drugo" (mame: 9,5 %, stare mame: 4,6 %), kjer pre-

vladujejo vzroki, povezani z okoliščinami, v katerih se je bilo težko ali nemogoče takoj odzvati na dojenčkov jok. Kljub odsotnosti statistično značilnih razlik lahko na podlagi primerjave odstotkov pri razlogih za ignoriranje dojenčkovega joka zaključimo, da obstaja težnja, da so mame navajale razloge, ki izražajo večjo občutljivost kot pri starih mamah.

Mame z nižjo izobrazbo so izražale več bojazni pred otrokovo razvajenostjo kot mame z višjo izobrazbo ($\chi^2 = 9{,}49$, $p = 0{,}023$). Statistično značilna razlika v odgovorih glede na izobrazbo se je pojavila še pri ignoriranju joka zaradi preutrujenosti staršev ($\chi^2 = 9{,}56$, $p = 0{,}023$). Bolj izobražene mame so omenjeni vzrok navajale pogosteje kot manj izobražene. Različno izobražene stare mame so se statistično značilno razlikovale v bojazni pred otrokovo razvajenostjo ($\chi^2 = 12{,}13$, $p = 0{,}007$), ki so jo v največji meri izražale stare mame z najnižjo izobrazbo.

Mame, ki niso izbrale odgovora, da so ignorirale dojenčkov jok, "da se ne bi razvadil", so imele statistično značilno višji rezultat varne navezanosti kot mame, ki so se strinjale s to razlago (tabela 2). Stare mame, ki so izbrale odgovor "da z jokom ne bi manipuliral svojih staršev", so imele statistično značilno višja rezultata plašljivo izogibajočega se in odklonilno izogibajočega se sloga navezanosti kot stare mame, ki tega odgovora niso izbrale. Stare mame, ki so izbrale odgovor "da bi se navadil na red", so imele statistično značilno višji rezultat plašljivo izogibajočega se sloga navezanosti kot stare mame, ki tega odgovora niso izbrale.

Glede razlogov za takojšnje odzivanje na dojenčkov jok ni bilo statistično značilnih razlik v odgovorih glede na generacijo. Največ mam (63,3 %) in starih mam (61,2 %) se je na dojenčkov jok hitro odzivalo zato, ker so menile, da "je tako prav". Petina udeleženk (19 % mam in enak odstotek starih mam) je navedla, da so tako ravnale zato, da bi bile dojenčkove potrebe čim prej zadovoljene. Približno 11 % mam in približno enak odstotek starih mam je odgovorilo, da lahko dolgotrajni jok škoduje dojenčkovemu razvoju. Razlog "ker je bil dojenčkov jok moteč za okolico" je navedlo 2,1 % mam in 3,4 % starih mam.

Rezultati niso pokazali statistično značilnih razlik med mamami v njihovih odgovorih glede na izobrazbo. Odgovor "ker sem čutila, da je tako prav" so pogosteje izbrale stare mame z vsaj III. stopnjo izobrazbe kot stare mame z nižjo izobrazbo ($\chi^2 = 10{,}48$, $p = 0{,}015$). Odgovor "ker je bil dojenčkov jok moteč za okolico" so najpogosteje izbrale stare mame s stopnjo izobrazbe, ki je nižja od III. ($\chi^2 = 12{,}66$, $p = 0{,}005$).

Mame, ki so izbrale razlog za svoje takojšnje odzivanje na dojenčkov jok "ker je bil moteč za okolico", so imele višji rezultat odklonilno izogibajoče se navezanosti kot mame, ki tega odgovora niso izbrale (tabela 2).

Zanimalo nas je, kako so mame dveh generacij vzpostavljale stike z dojenčkom v kontekstu družinskih spalnih navad. V obeh generacijah so dojenčki najpogosteje spali v svojih posteljah v skupnem prostoru z vsaj enim od staršev (mame: 43,7 %, stare mame: 62,1 %). Sledi kombiniranje spanja v lastni postelji in na skupnem ležišču, kar je prakticirala približno četrtina udeleženk (28,1 % mam in 24,2 % starih mam). Spanje v ločenih prostorih (13,5 % mam in 8,3 % starih mam) ali na skupnem ležišču z mamo oz. vsaj enim od staršev je prakticirala manjšina udeleženk (14,7 % mam in 5,5 % starih mam). Odkrili smo statistično značilne razlike glede spalnih navad med generacijami ($\chi^2 = 29{,}10$, $p = 0{,}000$). Spanje dojenčka v ločenem prostoru od prostora staršev in spa-

nje dojenčka na skupnem ležišču z vsaj enim od staršev se je pogosteje pojavljalo pri mlajši kot starejši generaciji. Avtorji (glej pregled v: Perko, 2016) ločeno spanje dojenčka in staršev razumejo kot neobčutljivo ravnanje staršev.

Glede na izobrazbo so rezultati pokazali statistično značilne razlike pri mamah ($\chi^2 = 20{,}69$, $p = 0{,}014$), ne pa tudi pri starih mamah. Mame z višjo izobrazbo so imele več neposrednega telesnega stika z dojenčkom med spanjem kot mame z nižjo izobrazbo. Razlike v odgovorih mam in starih mam z različnimi slogi navezanosti glede tega, kje je dojenček ponoči spal, niso bile statistično značilne.

Mame so kot najpogostejši razlog za ločeno spanje dojenčka navajale svoje udobje ("ker se je bilo z dojenčkom ob sebi težko naspati") (mame: 34,6 %; stare mame: 19,3 %). Razlika med generacijama je bila statistično značilna ($\chi^2 = 19{,}44$, $p = 0{,}000$), a v nasprotni smeri od pričakovane. Pogost razlog za ločeno spanje pri mamah (26,6 %) in starih mamah (36,7 %) je bilo udobje dojenčka ("ker se je dojenček tako bolje naspal"). Razlika med generacijama je bila statistično značilna ($\chi^2 = 7{,}70$, $p = 0{,}006$), prav tako v nasprotni smeri od pričakovane. Naslednji razlog je bojazen pred otrokovo razvajenostjo (mame: 30,9 %, stare mame: 28,4 %; razlika med generacijama ni bila statistično značilna). Približno četrtina vseh udeleženk (26,6 % mam in 24,8 % starih mam; razlika med generacijama ni bila statistično značilna) je navajala otrokovo varnost, da se med spanjem ne bi nehote ulegle nanj. Redkeje sta se pojavljala odgovora "da ne bi motil spolnega življenja" (mame: 2,1 %, stare mame: 0,6 %) in "ker ni bilo možnosti za skupno spanje" (mame: 1,5 %, stare mame: 3,4 %); razlika med generacijama ni bila statistično značilna.

Edina statistično značilna razlika glede na izobrazbo je bila pri različno izobraženih mamah pri bojazni pred otrokovo razvajenostjo ($\chi^2 = 14{,}58$, $p = 0{,}002$). Višja kot je bila izobrazba mam, nižja je bila njihova bojazen pred otrokovo razvajenostjo, če bi otrok spal skupaj s starši.

Mame, ki niso izbrale odgovora "ker se je bilo z dojenčkom ob sebi težko naspati", so imele statistično značilno višji rezultat preokupirane navezanosti kot mame, ki so izbrale ta odgovor (tabela 2). Stare mame, ki so izbrale odgovor "ker se je bilo z dojenčkom ob sebi težko naspati", so imele statistično značilno višji rezultat plašljivo izogibajočega se in odklonilno izogibajočega se sloga navezanosti kot stare mame, ki tega odgovora niso izbrale.

Mame (11,3 %) so statistično značilno pogosteje kot stare mame (4,9 %) ($\chi^2 = 8{,}92$, $p = 0{,}003$) navajale kot razlog za redno nočno spanje z otrokom na skupnem ležišču, da je bilo "tako najlažje poskrbeti za dojenčkove potrebe". Statistično značilna razlika med generacijama je bila še pri odgovoru "ker se mi skupno spanje zdi popolnoma naravno in normalno" ($\chi^2 = 16{,}40$, $p = 0{,}011$), s čimer so se bolj strinjale mame (7,1 %) kot stare mame (2,8 %). 8 % mam in 7,1 % starih mam je odgovorilo "ker je dojenček na skupnem ležišču manj jokal in je bolje spal".

Mame z višjo izobrazbo so pogosteje izbrale odgovor "ker je bilo ponoči tako najlažje poskrbeti za dojenčkove potrebe" kot mame z nižjo izobrazbo ($\chi^2 = 10{,}276$, $p = 0{,}016$).

Mame, ki so izbrale odgovor, da so z dojenčkom redno skupaj spale na istem ležišču, ker je to naravno in normalno, so imele višji rezultat varne navezanosti kot mame, ki tega odgovora niso izbrale (tabela 2). Mame, ki niso izbrale odgovora, da je sku-

pno ležišče naravno in normalno, so imele višji rezultat preokupirane navezanosti kot mame, ki so izbrale ta odgovor. Mame, ki so izbrale skupno ležišče, "ker je bilo tako ponoči najlažje poskrbeti za dojenčkove potrebe", so imele višji rezultat plašljivo izogibajočega se sloga navezanosti. Stare mame, ki so izbrale odgovor, da so spale z dojenčkom na skupnem ležišču, "ker je bilo tako ponoči najlažje poskrbeti za dojenčkove potrebe", so imele nižji rezultat odklonilno izogibajočega se sloga navezanosti kot stare mame, ki so izbrale ta odgovor.

Večina mam (73,8 %) in starih mam (70,1 %) je odgovorila, da so svojim dojenčkom nudile srednjo mero telesnega stika ("ko je bil dojenček buden, je bil včasih v naročju, včasih pa smo ga odložili nekje v naši bližini, kjer nas je lahko opazoval"). Naslednji odgovor po pogostosti izbire je bil "ko je bil dojenček buden, ni bil veliko v naročju. Večino časa je ležal oz. sedel nekje v naši bližini, kjer nas je lahko opazoval." Izbralo ga je 14,8 % mam in 21,3 % starih mam. Odgovor "Ko je bil dojenček buden, je bil večino časa v naročju. Veliko smo ga nosili in le redko smo ga odložili za daljši čas." pa je izbralo 11,4 % mam in 8,6 % starih mam. Razlike v pogostosti nudenja telesnega stika dojenčku glede na generacijo niso bile statistično značilne, se je pa pokazala težnja ($\chi^2 = 5{,}33$, $p = 0{,}070$), da so mame imele več telesnih stikov z dojenčkom kot stare mame.

Obstajale so pomembne razlike v nudenju telesnega stika pri mamah ($\chi^2 = 17{,}86$, $p = 0{,}007$) in starih mamah ($\chi^2 = 49{,}89$, $p = 0{,}000$) glede na izobrazbo. Največ telesnega stika so svojim dojenčkom nudile najbolj izobražene mame in stare mame; tiste s srednjo izobrazbo so bile do telesnih stikov zadržane, najmanj pa so jih nudile mame in stare mame z najnižjo izobrazbo.

Večina udeleženk (74,5 % mam in 64,4 % starih mam) je menila, da bi morali starši dojenčku nuditi toliko telesnih stikov, kot pokaže, da si jih želi. Ostale udeleženke so zagovarjale ali odtegovanje telesnega stika zaradi bojazni pred razvajenostjo (mame: 10,6 %; stare mame: 15,5 %) ali nudenje več telesnih stikov ("starši bi morali otroku nuditi več telesnih stikov, kot pokaže, da si jih želi, saj jih ali še ne zna pokazati ali pa telesnih stikov še ni navajen") (mame: 13,4; stare mame: 18,6 %). Mame in stare mame so se statistično značilno razlikovale po odgovorih ($\chi^2 = 8{,}10$, $p = 0{,}044$).

Pri starih mamah je zagovarjanje nudenja telesnih stikov dojenčku toliko, kot ta pokaže, da si jih želi, naraščalo sorazmerno z njihovo izobrazbo, zagovarjanje odtegovanja telesnih stikov zaradi bojazni pred razvajenostjo pa je bilo najmočneje prisotno pri starih mamah z najnižjo izobrazbo ($\chi^2 = 35{,}75$, $p = 0{,}000$).

Največ udeleženk je navajalo, da so v prvih šestih mesecih po rojstvu svoje dojenčke izključno dojile (mame: 56 %; stare mame: 27 %) ali so kombinirale dojenje in hranjenje po steklenički z nadomestnim mlekom (mame: 28 %; stare mame: 53,7 %). 9,8 % mam in 17,8 % starih mam je poročalo, da so hranile dojenčka izključno po steklenički z nadomestnim mlekom. 1,2 % mam (in nobena stara mama) je hranilo dojenčka s svojim načrpanim mlekom. 4,9 % mam in 1,5 % starih mam je hranilo dojenčka z načrpanim mlekom in prilagojenim mlekom. Odkrile smo statistično značilno razliko med generacijama v načinu hranjenja ($\chi^2 = 76{,}52$, $df = 4$, $p = 0{,}000$). Ugotavljamo, da se je delež izključno doječih mam skozi zadnji dve generaciji močno povečal.

Pri mamah (ne pa tudi pri starih mamah) je obstajala statistično značilna razlika v hranjenju dojenčka glede na njihovo izobrazbo ($\chi^2 = 39{,}30$, $df = 12$, $p = 0{,}000$). Uspe-

šnejše pri dojenju so bile mame, ki so imele vsaj V. stopnjo izobrazbe, kot mame z manj kot V. stopnjo izobrazbe. Mame z nižjo izobrazbo so poročale, da manj pogosto izključno dojijo in bolj pogosto dojenčke hranijo izključno z nadomestnim mlekom. Kombiniranje dojenja in dodajanja mleka je upadalo z višanjem izobrazbe.

Zanimalo nas je, kako dolgo so mame obeh generacij dojile svoje otroke, ne glede na to, če so v prvih mesecih dodajale nadomestno mleko. Največ mam (33,1 %) je otroka dojilo 7–12 mesecev, največ starih mam (40,9 %) pa 3–6 mesecev. Delež doječih mam (26,1 %) po otrokovem dopolnjenem prvem letu starosti je bil večji kot pri starih mamah (2,5 %). Ugotavljamo, da med generacijama ni porastel samo delež izključno doječih mam v prvih šestih mesecih otrokove starosti, temveč se je podaljšalo tudi trajanje dojenja. Mame z višjo izobrazbe so dojile dalj časa kot tiste z nižjo izobrazbo ($\chi^2 = 52{,}67$, df = 18, p = 0,000), pri starih mamah pa razlike glede na izobrazbo niso bile statistično značilne.

Pri mamah obeh generacij, pri katerih se dojenje ni ustrezno vzpostavilo, so nas zanimali vzroki za prezgodnje prenehanje dojenja. Večina anketirank (24 % mam, 47,5 % starih mam) je kot najpogostejšo težavo pri vzpostavljanju in ohranjanju dojenja navajala pomanjkanje mleka. Razlika med mamami in starimi mamami je bila statistično značilna ($\chi^2 = 39{,}26$, df = 1, p = 0,000). Mame z višjo izobrazbo so statistično značilno redkeje navajale ta razlog kot mame z nižjo izobrazbo ($\chi^2 = 13{,}74$, df = 3, p = 0,003).

5 Sklep

Rezultati raziskave so podprli hipotezo 1, saj je večina mam in starih mam izražala varen slog navezanosti. Odkrili smo, da izražajo mame nižjo raven preokupiranega in odklonilno izogibajočega sloga navezanosti kot stare mame, kar je podprlo hipotezo 2. Sklepamo, da so pri starih mamah ne-varni slogi navezanosti bolj razviti kot pri mamah, ker so bili njihovi starši manj občutljivi pri zadovoljevanju njihovih potreb, na kar je vplivalo pomanjkanje znanja o razvoju in potrebah mlajšega otroka. Današnji starši dajejo otrokovim potrebam velik pomen in mu poskušajo nuditi največ, kar zmorejo (glej Hmelak, 2017). Hipotezo 3, da mame izražajo višjo raven občutljivosti za dojenčkove potrebe, kot so jo izražale stare mame, so podprli rezultati vsaj pri nekaterih postavkah, povezanih z vprašanji o razlogih ignoriranja dojenčkovega joka, spalnih navadah, razlogih za skupno spanje z dojenčkom, telesnih stikih, načinih hranjenja dojenčka, času dojenja in razlogih za prenehanje dojenja. Odkrili smo pomembne razlike med mamami (v manjši meri tudi med starimi mamami) glede na njihovo izobrazbo, in sicer bolj izobražene udeleženke so poročale o občutljivejšem zadovoljevanju otrokovih potreb kot manj izobražene, kar je podprlo hipotezo 4. Tovrstne razlike so bile še posebej jasno izražene pri strahu pred otrokovo razvajenostjo, telesnih stikih in dojenju. Sklepamo, da so bolj izobražene mame bolj seznanjene z novejšimi trendi in ugotovitvami na področju nege in vzgoje mlajšega otroka kot manj izobražene mame in kot so bile nekoč stare mame. Odgovori udeleženk na vprašanja o odzivanju na dojenčkov jok in razlogih za različne spalne navade so podprli hipotezo 5, da bodo mame in stare mame z varnim slogom navezanosti izražale višjo raven občutljivosti za dojenčkove potrebe kot mame in stare mame z ne-varnimi slogi navezanosti.

Prednost raziskave je, da smo preučili vzgojno prakso in prepričanja o njej pri dveh generacijah mam iz vseh slovenskih regij in ugotovili, na katerih področjih se občutljivost za otrokove potrebe povezuje z maminim slogom navezanosti. Pomanjkljivost je, da lahko podvomimo v resničnost nekaterih podatkov, saj je možno, da so stare mame že delno pozabile, kako je potekala vzgojna praksa, ki so jo izvajale pri svojem dojenčku. Starostni razpon pri mamah in starih mamah je bil velik, zato starostna meja med njimi ni bila ostra. Smiselno bi bilo preučiti vlogo slogov navezanosti starih mam na njihovo vedenje do vnukov, saj stari starši pomembno prispevajo k otrokovemu razvoju (glej Lepičnik Vodopivec in Berlič, 2013), hkrati bi bilo dobro spremljati vzgojno prakso in prepričanja tudi pri prihodnjih generacijah.

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Sensitivity to the Child's Needs in Mothers of Two Generations

Bowlby (1969, 1982) and M. S. Ainsworth (Ainsworth et al., 1978) laid down the foundations of attachment theory. They define attachment as an emotional bond that infants develop with their objects of attachment (usually the mother) in their first year of life and which endures across space and time. The child uses the object of attachment as a secure basis for exploration and a safe haven in circumstances that cause emotional distress (Ainsworth et al., 1978).

The mother's sensitivity to her child's needs significantly contributes to the child's development of secure attachment (De Wolff & Van IJzendoorn, 1997). With an insensitive mother, a child may develop a non-secure attachment style, namely: avoidance, ambivalence (Ainsworth et al., 1978) or disorganization (Main & Solomon, 1990). Securely attached children find a balance between exploration and attachment. If they are upset, they are calmed through contact with their mother (Ainsworth et al., 1978). Approximately 65% of developmentally normal children display secure attachment (Van IJzendoorn et al., 1992).

Sensitivity to a child's needs signifies that the mother recognizes and correctly understands the child's signals, and responds to them in a loving, timely and appropriately stimulating manner (Ainsworth, Bell & Stayton, 1974). This is expressed through the mother's acceptance of the child, her cooperation with him or her, and her availability in the child's time of need (Ainsworth et al., 1978; Waters & Cummings, 2000).

In interpersonal relationships, adults possess generalized working models of attachment (Waters et al., 2015). Bartholomew and Horowitz (1991) differentiate between the following four styles of attachment in adulthood: secure, fearful-avoidant, preoccupied and dismissive-avoidant. People with a secure attachment style are typically quick to bond with others, they are reliable, feel safe and do not fear abandonment (Bartholomew & Horowitz, 1991). They accept other people's consolation and support, and have no trouble asking for help (Wearden, Lamberton & Crook, 2005). People with a fearful-avoidant attachment style are typically afraid of human contact despite craving it. They have a hard time trusting themselves and others, and fear rejection. People with a preoccupied style of attachment suffer from low self-esteem but highly regard

others. They crave contact with them and experience many emotional ups and downs. They are possessive, fear loss and loneliness. People with a dismissive-avoidant style of attachment believe they are self-sufficient and deny their wish to be close to others. They are independent. They feel uncomfortable letting other people too close and, therefore, maintain emotional distance (Bartholomew & Horowitz, 1991).

Styles of attachment in adulthood are consistent with those developed in the early years of life (Grossmann et al., 2008). The parents' styles of attachment are positively correlated with their children's styles of attachment (Van IJzendoorn, 1995), which can be explained with the parents' sensitivity to their child's needs. Parents with secure working models of attachment are flexible in interactions with their children since they want to ensure their safety and well-being (Erzar & Kompan Erzar, 2011). Authors (review in: Perko, 2016) note the following parental behaviours, which ensure an infant's safety and well-being: quickly reacting to the child's crying by meeting his or her needs, sleeping with the baby in a shared bed, frequent and affectionate contact between the parents and the baby, and breastfeeding.

Our study explored the differences between mothers and grandmothers in meeting their infant's needs. We compiled a questionnaire, where mothers and grandmothers were required to self-evaluate their expression of different attachment styles and report on their reactions to their babies crying (how often and why did they or other members of the family intentionally leave a baby crying for a longer period of time (if at all) or why did they (if at all) respond to the baby's crying as soon as possible); on sleeping with the baby (where did the baby sleep, and why did they alone or together with their partner choose to sleep with the baby); on physical contacts with the baby (how frequent they were and what their opinion is on physical contact between parents and babies, for example holding the baby in one's arms); and on feeding/breastfeeding (how was the baby fed in the first four to six months and how long was he or she breastfed). We studied the differences in the mothers' beliefs and behaviours towards the baby according to their generation and their level of education, and calculated the correlation between attachment styles and the studied aspects of beliefs and behaviours, connected with meeting the infant's needs.

The questionnaire was completed by mothers and grandmothers (which were in a mother/daughter relationship) of preschool children from every Slovenian region (654 respondents). In addition to questions on their responses to the child's crying, their sleeping habits, physical contacts, and breastfeeding, the questionnaire also included the Relationship Questionnaire (Bartholomew & Horowitz, 1991) to establish the respondents' attachment styles.

The results confirmed our first hypothesis, in which we predicted that the majority of mothers and grandmothers will display a secure attachment style. This style is prevalent in the population (Uytun, Öztop & Eşel, 2013), as was also observed in our mother and grandmother research sample. Our second hypothesis claimed that mothers will display a lower level of non-secure attachment than the grandmothers, which can be attributed to changes in child-rearing practices (Puhar, 2004). We have found that mothers display a lower level of preoccupied and dismissive-avoidant style than grandmothers. We infer that grandmothers developed more non-secure attachment styles than the mothers because their parents were less sensitive in meeting their needs. This was due to the lack of knowledge about a young child's development and needs. In

our third hypothesis, we predicted that mothers will display a higher level of sensitivity to their infants' needs than the grandmothers displayed to their infants. Numerous authors (review in: Perko, 2016) note that mothers are more informed about child care and child-rearing methods that have a positive effect on their children's development as compared to the grandmothers. At the same time, the social conditions in which they are nurturing and raising their children are better than those in which the same was done by the grandmothers (perinatal practice, childcare leave, general increase in awareness about the importance of breastfeeding, etc.). Hypothesis 3 was partially supported by results on items related to reasons for ignoring the infant's crying, sleeping habits, reasons for sleeping with the baby, physical contact, manners of feeding, breastfeeding time, and reasons for abandoning breastfeeding. Approximately 20% of mothers from both generations reported that they more or less frequently intentionally ignored their infant's crying. They did not want the baby to manipulate them with their crying and to become spoiled. They wanted to instil discipline or did not react because they did not know what to do. With regard to sleeping, contact between mother and baby was established in the majority of cases both then and now (they at least shared a sleeping area), although cases of direct contact (sleeping in a shared bed) were few. Three-quarters of mothers and two-thirds of grandmothers believe that parents should offer the child as much physical contact as he or she requests. The comparison between the numbers of exclusively breastfeeding mothers from two generations shows an increase. The fourth hypothesis predicted that mothers and grandmothers with a higher education will express a higher level of sensitivity to the baby's needs as compared to the less educated respondents. We have found significant expected differences among mothers, and to a lesser extent among grandmothers, in their sensitivity to the child's needs based on their education. Differences in education were especially pronounced in items dealing with the fear of child pampering, physical contact, and breastfeeding. We assume that mothers with a higher education are more familiar with the current trends and findings on nurturing and raising a young child as compared to the less educated mothers and grandmothers back in the day. In hypothesis 5, we hypothesized that mothers and grandmothers with the secure attachment style will express a higher level of sensitivity to the infant's needs than mothers and grandmothers with non-secure attachment styles (this correlation has been discovered by numerous studies; review in: Cugmas, 2020). The respondents' reports about their responses to the infant's crying and their reasons for different sleeping habits support our fifth hypothesis.

The originality of our research lies in the examination of intergenerational differences in mothers' sensitivity to their infants' needs, and in determining in which areas of nurturing and raising an infant this sensitivity is correlated with their level of education and attachment style. Our research provides a good examination of child-rearing practices and beliefs among two generations of mothers from all Slovenian regions. The disadvantage, however, is that the veracity of some data can be questioned since the grandmothers could have already partially forgotten the upbringing practices they adopted with their infants. The age range between mothers and grandmothers was extensive; therefore, the age limit between them was not strict. It would be sensible to monitor child-rearing practices and beliefs in future generations as well. The study highlights the importance of informing mothers about recent findings regarding child care and child-rearing, which has an encouraging effect on the child's overall development. We

assume that this knowledge has a stimulating effect on their sensitivity to the child's needs, which in turn encourages the child to develop a secure style of attachment. This remains stable throughout the individual's life and also persists through generations. As reported by the future and current preschool teachers, this kind of knowledge is also very useful for them (see Hmelak & Lepičnik Vodopivec, 2013).

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Študent demonstrator kot soustvarjalec pedagoškega procesa v visokem šolstvu

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POVZETEK – V članku se osredotočamo na predstavitev vzpostavitve sistema študentov demonstratorjev oz. demonstratorstva v visokošolskem pedagoškem procesu. Opisana so temeljna izhodišča za tovrstno delo, poglavitne naloge in oblike sodelovanja ter izzivi, prednosti in pomanjkljivosti tega sistema. Podrobneje so analizirani rezultati raziskave o zadovoljstvu in izkušnjah študentov demonstratorjev s sodelovanjem v pedagoškem procesu na Univerzi v Mariboru, Fakulteti za organizacijske vede. Kot kažejo rezultati raziskave, je sistem demonstratorstva dobrodošla novost v univerzitetnem poučevanju, ki prinaša številne oprijemljive koristi tako za študente demonstratorje kot aktivne soustvarjalce pedagoškega procesa kakor tudi za študente, ki sodelujejo v pedagoškem procesu. K ugodnim in pozitivnim učinkom študenti demonstratorji štejejo pridobivanje novega in poglabljanje že pridobljenega znanja, boljšo učno klimo, tvorno sodelovanje s profesorjem in študenti ter pridobivanje novih izkušenj. Prispevek zaključimo z nekaterimi pogledi na razvoj sistema študentov demonstratorjev v prihodnosti, nasveti za delo bodočih študentov demonstratorjev in predlogi za izboljšanje sistema demonstratorstva.

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ABSTRACT – The paper focuses on the introduction of a student demonstrator system or demonstration into the educational process in higher education. It presents basic starting points for this type of work, the main tasks and forms of cooperation as well to the challenges, advantages and disadvantages of such a system. The results of the study among student demonstrators on the satisfaction and experience with the system of student demonstrators in the educational process at the University of Maribor, Faculty of Organizational Sciences are analysed in more detail. According to the research findings, the demonstrators represent a welcome novelty in university teaching, which brings many tangible advantages both for demonstrators as active co-creators of university teaching and for the students involved in the educational process. Among the beneficial and positive effects for the student demonstrators are the acquisition of new and the deepening of already acquired knowledge, a more positive learning environment, a fruitful cooperation with the teacher and the students, and the acquisition of new skills and experiences. The paper concludes with some views on the future development of the demonstrator system, ideas for the work of future student demonstrators and suggestions for improving the student demonstrator system.

1 Uvod

V sodobnem izobraževalnem procesu so snovalci kurikulov in izvajalci učnega procesa nenehno iščejo inovativne in raznolike metode dela ter poti do podajanja in usvajanja znanja. V želji, dvigniti kakovost učenja in poučevanja, izboljšati motivacijo učencev in zadovoljiti njihove raznolike učne potrebe ter stopnje zmožnosti, smo bili v zadnjem desetletju priče vpeljevanju različnih inovativnih oblik dela in pristopov pri

poučevanju (100 načinov uspešnega poučevanja) kot so medpredmetno povezovanje, timsko poučevanje (Peery, 2017), projektno delo, formativno spremljanje, obrnjeno učenje (Bergmann in Sams, 2014); na terciarni ravni izobraževanja pa kot alternativni način izvedbe pedagoškega procesa poznamo tudi sistem študentov demonstratorjev ali demonstratorstvo, pri katerem študent demonstrator pod vodstvom visokošolskega učitelja preko različnih oblik sodelovanja postane aktiven sooblikovalec pedagoškega procesa. Takšno sodelovanje sodi k iniciativi evropskih držav, ki po Standardih in smernicah za zagotavljanje kakovosti v evropskem visokem šolstvu (ENQA, 2015) spodbuja inovativne pristope h krepitvi kakovosti univerzitetnega poučevanja in učenja ter k uvajanju pristopov, v katerih je študent partner v poučevanju. Prav tako omogoča, spodbuja in udejanja učiteljevo vlogo "refleksivnega praktika" (Maksimović in Osmanović, 2018, str. 145), ki se osredotoča na razvoj in izboljšanje lastne prakse. Z vključevanjem novih metod poučevanja učitelj presega okvire tradicionalnega poučevanja, spodbuja izkustveno učenje in prispeva k razvoju svoje učenčeve refleksivnosti.

V slovenskem visokošolskem izobraževalnem prostoru nimamo dolge tradicije demonstratorstva niti ni sistem študentov demonstratorjev v rabi na vseh visokošolskih ustanovah. Podobno velja za tujino, kjer so primeri demonstratorstva omejeni na posamezne visokošolske ustanove, na primer na Hrvaškem (glej Pravilnik 2016). Nekaj več primerov smo zasledili v angleškem visokošolskem izobraževalnem sistemu (Bristol University, Imperial College London, The University of Edinburgh, University of Leicester), kjer je študent demonstrator visokošolskemu učitelju v pomoč predvsem pri naravoslovnih predmetih, laboratorijskem in eksperimentalnem delu ter terenskih vajah.

V Sloveniji je prve omembe študentov demonstratorjev mogoče zaslediti v publikacijah izobraževalnih ustanov (Lesjak, 2006, str. 12), kjer je v študijskem programu Fakultete za management Koper navedeno, da se študentje 1. stopnje "lahko vključijo v izvedbo izobraževalnega procesa in v raziskovalne projekte FM kot demonstratorji (pomočniki) visokošolskega učitelja, tako pri klasični izvedbi kot v e-učilnici". Formalno je z objavo Pravilnika o demonstratorstvu in razpisom leta 2012 demonstratorstvo uvedla Filozofska fakulteta Univerze v Mariboru (UM), naslednje leto se ji je pridružila Pedagoška fakulteta Univerze v Ljubljani (UL), sledile so jima še druge visokošolske ustanove – Fakulteta za turizem UM (2016), Medicinska fakulteta UL (2018), Fakulteta za informacijske študije v Novem mestu (2018) in Fakulteta za turizem UM (2019). Na Fakulteti za organizacijske vede (FOV) smo po vzoru že delujočega sistema demonstratorjev na Univerzi v Mariboru to obliko dela in vključevanja študentov v pedagoški proces prvič vpeljali v študijskem letu 2018/19.

Pregled strokovne in znanstvene literature kaže, da je sistem študentov demonstratorjev povsem neraziskano področje. Razen pravilnikov o demonstratorstvu na spletnih straneh posameznih fakultet v Sloveniji in tujini (Pravilnik, 2012, 2016, 2017), razpisov za študente demonstratorje (Razpis, 2018, 2019) in poljudnih člankov, kjer je na kratko omenjena izkušnja študenta demonstratorja (Prebevšek, 2018), nismo našli niti enega znanstveno-strokovnega članka na to temo. S pričujočim prispevkom tako želimo zapolniti vrzel na tem področju in predstaviti primer uspešne vpeljave sistema demonstratorstva na FOV, opisati različne načine sodelovanja študentov demonstratorjev v pedagoškem procesu, oceniti zadovoljstvo študentov demonstratorjev, poudariti pozitivne učinke, prednosti in slabosti ter podati predloge za izboljšavo sistema demonstratorjev.

Preden se lotimo predstavitve temeljnih izhodišč za vpeljavo in izvedbo sistema demonstratorjev, si poglejmo naloge študentov demonstratorjev, ki jih opredeljujejo različni pravilniki in razpisi za demonstratorje (Pravilnik, 2012, 2017; Razpis, 2018); ti navajajo, da študenti demonstratorji delujejo z namenom sodelovanja pri pedagoškem delu s pripravo gradiv, preko hospitacij pri vajah ali predavanjih in preko drugih oblik sodelovanja. Študenti demonstratorji naj bi bili študenti višjih letnikov, v tujini so to večinoma študenti podiplomskega študija.

Pred vpeljavo sistema študentov demonstratorjev smo tudi na FOV njihove naloge zapisali v pravilnik (Pravilnik o demonstratorstvu na Fakulteti za organizacijske vede, 2017), rekoč, da je poglavitna naloga študenta demonstratorja pomagati visokošolskemu učitelju pri predstavitvi in širjenju razumevanja določenega predmetnega področja. Študent demonstrator s profesorjem sodeluje pri pedagoškem delu v obliki pomoči na predavanjih in vajah, s pripravo gradiv in v obliki tehnično-administrativne pomoči na predavanjih/vajah. Poleg teh je, odvisno od želja, potreb in dogovora z mentorjem, demonstrator lahko aktiven tudi pri drugih oblikah dela, npr. pri znanstveno-raziskovalnem delu, pri pisanju strokovnih prispevkov, delu na projektih idr.

Profesorji – mentorji demonstratorjev morajo pred nastopom dela natančno opredeliti cilje in določiti naloge, ki naj bi jih študent demonstrator opravljal. Po pravilniku je obseg dela, ki ga lahko demonstrator opravi mesečno, do 20 ur. Izjemoma jih lahko opravi tudi več, vendar ne več kot 80 ur, saj je pomembno, da študent ni preobremenjen in da lahko hkrati nemoteno opravlja tudi svoje študijske obveznosti. Študent demonstrator je lahko redni ali izredni študent drugega ali višjega letnika, ki mora pri izbranem predmetu imeti opravljene vse predpisane obveznosti. Pogoj je tudi visoka skupna povprečna ocena in ocena pri predmetu, kjer želi demonstrator sodelovati.

Poglavitni namen in ključni cilji študentovega dela v vlogi demonstratorja so:

- pridobiti prve izkušnje s pedagoškim delom;
- razširiti svoje znanje in pridobiti nadaljnje izkušnje na področju študijskega programa študenta;
- prispevati k boljšemu razvoju kakovosti študija;
- krepiti obojestransko sodelovanje med študenti in profesorji.

Študentu demonstratorju je omogočeno izkustveno učenje, razvoj specifičnih kompetenc in drugačen način učenja. Iain (1995) omenja, da študent demonstrator razvija učne veščine, izboljša razumevanje predmeta, pri katerem sodeluje, poglablja razumevanje znanstvene metode, ki se uporablja pri tem predmetu, ter razvija prenosljive veščine, kot so organizacijske in opazovalne sposobnosti, ki so sestavni del izvajanja poskusov, projektov in terenskih vaj. Študent demonstrator nadalje razvija veščine javnega nastopanja in komuniciranja, timskega in skupinskega dela in sodelovanja, proaktivnega delovanja in prilagajanja udeležencem pedagoškega procesa, razvija sposobnost vzpostavljanja in grajenja interakcije, krepi medosebne odnose, gradi svojo osebnost in utrjuje samopodobo. Iain (1995, str. 42) poudarja, da je študent demonstrator eden "najdragocenejših virov, ki so na voljo študentom", še posebej, kadar ti potrebujejo nasvet ali spodbudo za študij. Enako dragocen je demonstrator tudi za profesorja in fakulteto. Tesno sodelovanje študentov in učiteljev omogoča obojestransko učenje in razvoj, ki presega "tradicionalni" zaprti tip učnega pogovora. Z vpeljevanjem "drznejše" metode poučevanja se poleg študentov in učiteljev razvija tudi fakulteta, kot pravi Starc

(2015, str. 141), v smeri visokošolske organizacije z visoko produktivno energijo, ki je osredotočena nase, na svojo ustvarjalnost, svoje aktivnosti in inovativnost. Takšno delovanje fakultete bi potencialno lahko preoblikovalo slovensko akademsko kulturo, ki je še vedno preveč usmerjena v raziskovalno in premalo v ustvarjalno pedagoško delo (Šarić, Košir, 2012, str. 148). Ker je demonstratorstvo osnovano na drugačni filozofiji izobraževanja (Holcar Brunauer, Deutsch in Cankar, 2017, str. 37), aktivno sodelovanje med učitelji in demonstratorji pomembno prispeva k dvigu kvalitete izobraževanja in učenja, s sodelovanjem študenta demonstratorja na predavanjih se ustvarja dodana vrednost pedagoškega procesa, omogočena je večja fleksibilnost, močno poudarjeni pa sta tudi diferenciacija in individualizacija poučevanja in učenja.

Študent demonstrator se v pedagoški proces lahko vključi na različne načine, odvisno od predmeta, dogovora z mentorjem, svojih želja, sposobnosti, razpoložljivosti in načrtovanih aktivnosti pri določenem predmetu. Čeprav se naloge študenta demonstratorja od predmeta do predmeta lahko zelo razlikujejo, so najpogostejše oblike sodelovanja v pedagoškem procesu, da študent:

- prevzame izvedbo dela učne ure (npr. uvodno motivacijo, ponavljanje in utrjevanje);
- samostojno izvede del predavanja;
- je pomočnik pri izvedbi dela v skupinah, kjer nadzoruje delo skupin, študente usmerja, daje pobudo;
- vodi in moderira diskusijo na določeno temo;
- s profesorjem izvede predavanje sinhrono v obliki timskega poučevanja;
- nudi povratno informacijo študentom o njihovem delu (popravlja študentske naloge).

Pri vseh oblikah vključevanja v pedagoški proces študent demonstrator postane samostojen in odgovoren sooblikovalec pedagoškega procesa, vanj se pod vodstvom in po priporočilih visokošolskega učitelja aktivno vključuje, ga podpira, usmerja, s profesorjem ga predhodno načrtuje. Aškerc (2016) poudarja, da je med študentom in profesorjem, ki sta partnerja v pedagoškem procesu, vseskozi potrebna konstruktivna interakcija in sodelovanje.

Sodelovanje študentov demonstratorjev v pedagoškem procesu se začne po objavi razpisa, ko mentor določi načine in obseg dela ter s študentom zastavi načrt izvedbe sodelovanja. Na FOV smo že v prvem študijskem letu uvedbe (2018/19) zapolnili vsa razpisana mesta, tj. osem, dve mesti na katedro. Z omejitvijo največ dveh študentov na katedro smo želeli zagotoviti enakomerno porazdelitev študentov demonstratorjev po študijskih področjih in smereh. Zanimanje študentov za delo demonstratorja je pri nekaterih predmetih preseglo pričakovanja, podobno pa velja tudi za pozitivne izkušnje demonstratorjev, ki jih bomo predstavili v nadaljevanju.

2 Metoda

Za raziskavo, s katero smo želeli zbrati mnenja študentov demonstratorjev o njihovem delu, sodelovanju s profesorjem ter dobiti globlji vpogled v njihove izkušnje in

zadovoljstvo, smo izbrali metodo intervjuja. Izvedli smo polstrukturirani poglobljeni intervju, pri katerem je pri vsakem vprašanju možnost za podrobnejši odgovor (Wilkinson in Birmingham, 2003). Intervju je obsegal deset vnaprej določenih vprašanj odprtega in alternativnega tipa. Vprašanja intervjuja so se navezovala na:

- zadovoljstvo z demonstratorstvom;
- vrste in oblike dela, izvedene v pedagoškem procesu;
- pozitivne izkušnje, prednosti in ključne izkušnje, ki so jih študenti pridobili;
- izzive in ovire, na katere so naleteli pri svojem delu;
- predloge za izboljšanje demonstratorstva in napotke za delo bodočih demonstratorjev.

Sodelujočim smo vprašanja zastavljali tako, da so bili pri odprtih vprašanjih možni odgovori, ki so dopuščali dodatna vprašanja; le-ta smo si zabeležili kot opomnik in jih zastavili med izvajanjem posameznega intervjuja kot potrebo po poglobljenih odgovorih in za bogatenje pridobljenih informacij. Intervjuje smo opravili v času od 15.06. do 15.12.2019. Intervjuja ni zavrnil nihče od študentov demonstratorjev (N = 8).

Polovica intervjuvancev je bila moškega, polovica pa ženskega spola. Razdelitev po programih študija in letnikih kaže pester nabor, in sicer sta bila dva študenta 2. letnika dodiplomskega študija, dva študenta 3. letnika dodiplomskega študija, dva študenta 1. letnika podiplomskega študija, en študent 2. letnika podiplomskega študija in en študent 1. letnika doktorskega študija. Demonstratorji so sodelovali pri predmetih: Angleški poslovni jezik, Metodologija usposabljanja kadrov, Marketing, Osnove kvantitativnih metod I, Matematika, Statistika, Metode in tehnike sistemske analize, Organizacija poslovnih procesov, Metode študija dela, Management oskrbovalnih verig, Praktikum inženiring poslovnih procesov, Računalništvo in informatika. Ker so mentorji nosilci več predmetov, so določeni študenti sodelovali pri več predmetih.

3 Rezultati in diskusija

V raziskavi nas je najprej zanimalo, kako zadovoljni so študenti demonstratorji s svojim delom in vključevanjem v pedagoški proces. Rezultati kažejo, da je 60 % vprašanih svoje delo označilo za pozitivno (zadovoljen), 40 % kot zelo pozitivno (zelo zadovoljen). Vsi študenti so svoje zadovoljstvo opisali, da "gre za pozitivno izkušnjo" oz. da je bilo demonstratorstvo "izredno pozitivna izkušnja". Zadovoljstvo lahko pripišemo različnim dejavnikom. Študenti so se sami javili za opravljanje demonstratorstva, vanj so bili pripravljeni vložiti potrebno energijo in čas, bili so visoko motivirani, aktivno so sooblikovali načrt dela in skupaj z mentorjem določili primarne naloge in poglavitne cilje, ki so jih želeli doseči; vključili so se v tisti del pedagoškega procesa, pri katerem so se čutili dovolj usposobljeni in suvereni.

V povezavi z vključevanjem študentov v pedagoški proces smo želeli izvedeti, na kakšne načine so v njem sodelovali. Največ demonstratorjev je sodelovalo na vajah (71 %), manj na predavanjih (57 %), enako število študentov (43 %) pa na e-predavanjih oz. e-vajah v učnem okolju Moodle. Študenti so bili v sklopu predavanj in/ali vaj zadolženi za del predavanj/vaj, prevzeli so izvedbo celotnih vaj, izvajali so kratka pre-

davanja, pomagali pri razlagi snovi, za študente pripravljali (dodatne) naloge, jim dajali navodila za izvedbo učnih aktivnosti, vodili diskusije, usklajevali delo v skupinah, študente so spodbujali, jim nudili dodatno pomoč in podporo pri pripravi na izpit (inštrukcije). Poleg tega so bili zadolženi za tehnično in administrativno podporo, poskrbeli so za pripravo tehnične opreme v predavalnici, za pripravo učnega gradiva, prosojnic za predavanja, pomagali so pri iskanju aktualnih člankov, vezanih na temo predavanja. Povzamemo lahko, da so imeli študenti aktivno in pomembno vlogo v visokošolskem pouku, saj so bili dejavno vključeni v zelo raznolike oblike dela v različnih fazah učnega procesa.

Visoko oceno zadovoljstva so pospremili pozitivni učinki, ki so jih intervjuvanci zaznali pri vključevanju v pedagoški proces. Prav vsi demonstratorji so prepričani, da so s svojim sodelovanjem pomembno prispevali k poteku in izvedbi pedagoškega procesa. Svoj doprinos v vlogi demonstratorja vidijo v tem, da so – tako meni kar 86 % študentov – prispevali k boljši učni klimi, zaznali so pozitivno energijo s strani študentov, več interakcije ter bolj sproščeno vzdušje. 57 % demonstratorjev meni, da so študenti na predavanjih/vajah pokazali večje zanimanje za predavano snov; enak odstotek jih odgovarja, da so zaznali več sodelovanja in interakcije med študenti. Bilo je tudi več sodelovanja s strani študentov v obliki vprašanj, kar demonstratorji utemeljujejo s tem, da se jih študenti manj "bojijo" nagovoriti in zastaviti vprašanje, saj so jim bližji kot profesor, ki jim vliva strahospoštovanje in predstavlja neke vrste nedostopno avtoriteto. Podobno ugotavlja Iain (1995), ki pravi, da so demonstratorji starostno bližje dodiplomskim študentom kot člani učnega osebja, zato jih študenti vidijo kot njim bližje in dostopnejše. Dodajmo še mnenje 43 % demonstratorjev, da so s svojim sodelovanjem prispevali k boljšim medosebnim in medgeneracijskim odnosom, kar pripisujejo boljšemu poznavanju svojih kolegov.

Študente demonstratorje smo nadalje povprašali po prednostih opravljanja demonstratorstva. Večina (75 %) jih meni, da so prednosti v pridobivanju novega znanja s področja predmeta oz. v obnovitvi, utrjevanju in širitvi znanja ter v pridobivanju novih izkušenj. Številni (65 %) so poudarili pomen spoznavanja pedagoškega dela. Kot je povedal eden od študentov, se je "skozi delo demonstratorja naučil, kako poteka proces dela in izobraževanja skozi perspektivo profesorjev". Svoje pozitivne vtise o izkušnji poučevanja in poglabljanju znanja so študenti demonstratorji strnili takole:

- Demonstrator 1: *"Demonstratorstvo je edinstvena priložnost za vključevanje študentov v proces izobraževanja ter je zelo učinkovit način povezovanja izkušenj in mnenj profesorjev ter študentov in s tem izoblikovanja karseda najboljšega procesa izobraževanja. Menim, da z vključevanjem študentov v proces izobraževanja študij pripeljemo še korak bližje študentom. V vlogi demonstratorke sem imela priložnost spoznati pedagoško delo z druge perspektive, in sicer delo priprave gradiva in priprave na predavanja ter vaje. Z možnostjo sodelovanja pri pripravi in izvedbi vaj sem razširila svoje znanje in ga celovito zaokrožila."*
- Demonstrator 2: *"Velika prednost je, da imaš priložnost sodelovati s profesorji in spoznati njihov predmet še z drugega vidika (predpriprava, pregled snovi, delo s študenti). Poleg tega dobiš veliko izkušenj in prakse, ki jo lahko uporabiš v svojem življenjepisu. Tako študentje kot profesorji te gledajo kot bolj odgovornega in zaupanja vrednega študenta. Ker dejansko potrebuješ vse našteto, če želiš to delo opra-*

vljati. Velika prednost demonstratorstva je, da si predavano snov lahko res dobro zapomniš, jo poglobiš ali jo raziskuješ širše od predavanega."

Demonstratorji k prednostim štejejo tudi tvorno sodelovanje s študenti, s katerimi so morda laže kot profesor vzpostavili stik, ali kot je rekla ena demonstratorka: "Zaradi svoje 'neizkušenosti' sem bila študentom nevede bolj dostopna. To se je kazalo v množičnem postavljanju vprašanj med in po predavanjih, včasih tudi takšnih, ki niso sodila v študijske klopi. Študentje so do mene pristopili samozavestno, brez večjih zadržkov." Demonstratorji so nasploh svojo vlogo videli v pozitivni luči, eden od njih je poudaril, da mu je ta "dovoljevala, da študente v predavalnici spodbudi k bolj aktivnemu sodelovanju na predavanjih in vajah". Pohvalili so tudi sproščeno in pozitivno učno klimo kot posledico dobrega sodelovanjem med študentom in profesorjem: "Na podlagi lastne ocene lahko rečem, da so se študentje na predavanjih hitreje sprostili, saj so imeli možnost opazovati aktivno sodelovanje med demonstratorjem in profesorjem." Prednosti demonstratorstva vidijo še v sodelovanju s profesorji in asistenti, v pridobivanju novih poznanstev, novih kolegih, v večji prepoznavnosti, v izpopolnjevanju retoričnih in komunikacijskih sposobnosti, pridobivanju samozavesti pri nastopanju ter podajanju znanj študentom.

Kljub številnim pozitivnim izkušnjam so študenti na vprašanje o slabostih demonstratorstva spregovorili tudi o vrsti pomanjkljivosti, izzivih in negativnih izkušnjah pri svojem delu. Ena od študentk jih je opisala takole: "*Vloga demonstratorja iz različnih razlogov ni preprosta, saj od študenta zahteva veliko dodatnega časa in poglobljenega znanja učne tvarine. Hkrati je potrebnega veliko poguma in samozavesti, da si kot leto ali dve starejši upaš izpostaviti pred svojimi vrstniki in si ob vsem tem pridobiti njihovo zaupanje. Veliko študentov je tudi napačno predpostavljajo, da jim lahko, ker sem v dobrih odnosih s profesorjem, nudim tudi 'skrite' informacije v povezavi z izpitom in spraševanjem.*" Druga študentka je spregovorila o zadregah in stiskah, ki jih je občutila pri vzpostavljanju odnosov s študenti: "*Ker si praktično enako izpostavljen kot profesor, sem se med opravljanjem dela soočila tudi z manj prijetnimi situacijami, kjer so študentje preizkušali meje mojega znanja in potrpljenja ter iskali moje pomanjkljivosti in šibke točke. Biti demonstrator predstavlja izziv tudi z vidika postavljanja mej do študentov. Pripravljen moraš biti, da med predavanji, kljub prijateljskim vezem, ohraniš določeno stopnjo profesionalnosti. Postaviti mejo ljudem, ki so ti blizu in se bodo čez nekaj ur s teboj družili, ni tako preprosto. Zelo hitro si lahko narobe razumljen, vrstniki te lahko ocenijo za vzvišenega in neiskrenega.*"

Študenti so pri sodelovanju v pedagoškem procesu in v stikih z vrstniki postavljeni v nove situacije, ki so velikokrat izven njihove cone udobja. Nehoteni pojavitvi razlik med vrstniki in določenim neprijetnostim v zvezi s tem se žal ni mogoče izogniti, dobro pa je, če je študent nanje pripravljen, pri čemer je pomembna učiteljeva usmerjevalna vloga in pomen (pred)priprave in svetovanja. V izogib neprijetnostim in kot pripravo na sodelovanje v pedagoškem procesu bi veljalo s študentom opraviti poglobljen pogovor, ga seznaniti ne le s pričakovanji, temveč tudi z morebitnimi pastmi poučevanja, obenem pa ga poučiti, kako ravnati v določenih kritičnih situacijah. Ker delo demonstratorja narekuje potrebo po študentu, ki je komunikativen in izkazuje dobršno mero potrpežljivosti, zavzetosti, odgovornosti, zrelosti in empatičnosti, torej po določenih značajskih lastnostih, bi pri odločanju, ali in v kolikšni meri bo študent zmožen opravljati to delo, koristil tudi test osebnosti, ki bi ga študent opravil ob prijavi na razpis.

Z vidika izvedbe je za študente največji izziv predstavljalo usklajevanje študijskih in demonstratorskih obveznosti, saj je od njih zahtevalo dodaten čas, energijo, več načrtovanja, dogovarjanja in koordiniranja s profesorjem. Eden od študentov je takole strnil svoje stališče: "*Na prvi pogled tipično študentsko delo, ki od študentov ne zahteva veliko truda, se že v prvem mesecu dela izkaže za veliko večji izziv. Biti v vlogi študenta demonstratorja za marsikoga ni bilo preprosto, saj od posameznika zahteva veliko zavzetosti, samodiscipline, aktivnega sodelovanja, odpovedovanja, komuniciranja z mentorjem ter usklajevanja dela in študija*."

K manj prijetnim izkušnjam demonstratorji štejejo tudi zahtevo po rednem mesečnem poročanju o opravljenem delu ter nizko plačilo. Tako se jim pisanje poročil in dnevnika zdi izguba časa; kar zadeva plačilo, pa se jim to v primerjavi s klasičnim študentskim delom zdi prenizko. Kot navaja Pravilnik (2017, 12. člen) je študent demonstrator za opravljeno delo upravičen do simbolične denarne nagrade. Urna postavka (2,07 evra) je določena na ravni univerze in se je morajo fakultete držati. Drži, da je v primerjavi z delom, ki ga študenti lahko dobijo na trgu dela, plačilo za demonstratorstvo nizko. Po drugi strani pa je treba poudariti, da gre pri tovrstnem delu bolj kot za zaslužek za dragoceno izkušnjo in pridobivanje novega znanja. V zvezi s plačilom bi veljalo razmisliti, ali bi fakulteta višje plačilo študentu morda lahko zagotovila iz lastnih sredstev, ali pa ga dodatno nagradila na kakšen drug način, npr. s praktičnimi nagradami, organizacijo team building dogodka za demonstratorje, z darilnimi boni in podobno. Večjo pozornost bi bilo treba nameniti poudarku, da je delo demonstratorja častno (kot pravi tudi zapis v pravilniku) in da so zanj izbrani le najboljši študenti; svoje mesto pa bi morala dobiti tudi javna pohvala in zahvala študentom za njihov prispevek (na spletni strani ali na javnem dogodku fakultete) in podelitev posebnih priznanj demonstratorjem. V večji meri bi bilo treba upoštevati tudi določbo pravilnika, da lahko študenti zaprosijo za priznanje dela strokovne prakse v ekvivalentnem obsegu opravljenega demonstratorskega dela, kar bi lahko sistemsko rešili tako, da bi vsak demonstrator ob zaključku študijskega leta dobil posebno priznanje in potrdilo o opravljeni praksi.

Poleg zgoraj navedenega se po navedbah demonstratorjev slabe strani demonstratorstva nanašajo tudi na obseg in naravo dela. Tako se je v nekaterih primerih zgodilo, da so profesorji svojo "desno roko" izkoristili in študentu naložili preveč dela oz. veliko več, kot ga je bil zmožen opraviti. Študenti so glede zadolžitev omenili tudi, da se "moraš veliko prilagajati in odpovedati svojim aktivnostim in prostemu času". En študent je omenil, da bi si želel izvesti več predavanj, drugi, da sodelovanje pri poučevanju ne bi bilo samo popoldne. Eden od demonstratorjev je obžaloval, da je moral opraviti toliko tehničnega in administrativnega dela in bi si želel več sodelovanja v neposrednem pedagoškem procesu. Obseg dela in časovni razpored sta seveda odvisna od mentorja, predmeta in dogovora s študentom pa tudi od vnaprejšnjega urnika predavanj in vaj pri predmetu, ki se ga med letom žal ne da spreminjati.

Na vprašanje, ali bi se študenti demonstratorji za to delo ponovno prijavili, je 88 % študentov odgovorilo pritrdilno. Bolj kot razlogi za so nas zanimali protiargumenti. Študent, ki se za delo demonstratorja ne bi več odločil oz. si ga ne želi ponovno opravljati, je povedal, da ima kljub temu, da delo prinaša določeno finančno stabilnost, izkušnje, znanje in možnost osebnostnega razvoja, določene pomisleke: "*Delo demonstratorja se zelo približa delu v podjetju, saj je študent fakulteti v večini primerov čuti pripadnost tako kot zaposleni svojemu podjetju, posledično čuti večjo odgovornost in večji pritisk,*

če dela ne opravi tako, kot bi moral. Študent se s svojim podpisom zavezuje, da bo svoje delo opravljal vestno, medtem ko takšne zaprisege ni treba skleniti za nobeno klasično študentsko delo. Prav tako študent demonstrator dela ne more kar tako preklicati. Predčasno prenehanje opravljanja dela v tem primeru ne pride v poštev, od študenta se pričakuje, da bo prevzel odgovornost za svoja dejanja in delo izpeljal do konca."

Na koncu smo demonstratorje povprašali še po pobudah za izboljšanje in povečano uspešnost demonstratorstva. V ospredju je bila pobuda za boljše plačilo, nanizali so tudi nekaj predlogov, ki so se navezovali bolj na tehnične in sistemske izboljšave izvedbe demonstratorstva kot pa na samo vsebino (čas objave razpisa, objava fotografij demonstratorjev na spletni strani fakultete). Bodočim študentom demonstratorjem so aktualni demonstratorji svetovali, naj se le prijavijo za to delo, "saj se lahko veliko naučijo in jim bodo izkušnje zelo pripomogle k nadaljnjemu razvoju". Demonstratorji predlagajo, naj si študent ob razpisu izbere predmet, ki ga res veseli, po drugi strani pa demonstratorstva ne priporočajo tistim, ki niso iznajdljivi, komunikativni in odgovorni. Glede vključevanja v pedagoški proces pa "nasvet, katerega bi podala bodočim demonstratorjem, naj se poskušajo čim bolj vključevati v proces priprave in izvedbe, predavanj in tudi vaj ter priprave prispevkov, saj si tem lahko pridobijo edinstvene izkušnje".

4 Zaključek

V prispevku smo predstavili primer vpeljave sistema demonstratorjev v pedagoški proces na Fakulteti za organizacijske vede in ugotovili, da so bili študenti demonstratorji zadovoljni s svojim sodelovanjem v pedagoškem procesu, da so pozitivno vplivali na učno klimo in motivacijo udeležencev učnega procesa, da so pomembno doprinesli k bolj sproščenemu vzdušju in večjemu zanimanju, aktivaciji in odzivnosti študentov. Po mnenju študentov je biti demonstrator izkušnja, ki poleg sodelovanja s profesorjem in študenti prinese številne druge koristi. Študent demonstrator s sodelovanjem v pedagoškem procesu izboljša razumevanje in poglablja znanje strokovnega predmeta, seznani se s pedagoškim procesom z druge perspektive, uči se predavati in nastopati, razvija sposobnosti učinkovite komunikacije, podpore, usmerjanja, organizacije, prilagajanja in usklajevanja.

Demonstratorstvo predstavlja enega od dejavnikov kakovostnega in gibkega izobraževalnega sistema, omogoča didaktične in kurikularne izboljšave, prinaša fleksibilnost in diverzifikacijo univerzitetnega poučevanja ter spreminja kulturo visokošolske ustanove. Če je eden od ciljev univerzitetnega izobraževanja stremenje k izoblikovanju kritičnih, kreativnih in radovednih umov, potem je eden od načinov, kako to doseči tudi tvorno sodelovanjem med profesorjem in študentom. Z demonstratorstvom je mogoče doseči prav to. Še več, menimo, da bi vpeljava demonstratorstva v vse visokošolske izobraževalne ustanove v Sloveniji prispevala k popestritvi duhamorne akademske tradicije franko-germanskega načina predavanj, ki ga danes po našem mnenju vse prevečkrat zasledimo na terciarni ravni izobraževanja. Predvsem imamo v mislih pasivno, ex cathedra podajanje znanja mnogih profesorjev, nelagodje ob postavljanju vprašanj, apatičnost in dolgočasje med predavanji. Z večjo participacijo študentov prek demonstratorstva bi se lahko popestrili načini univerzitetnega poučevanja, morebiti bi se nare-

dil preboj v dojemanju vloge profesorja, ki v večini primerov še vedno pooseblja pojem nedostopne avtoritete.

Področje demonstratorstva nedvomno ponuja nove izzive in odpira nova raziskovalna vprašanja. Tako bi veljalo raziskati, kako zadovoljni so s študenti demonstratorji udeleženci pedagoškega procesa – študentje, kakšna so njihova pričakovanja in v kakšni meri demonstratorstvo vpliva na njihov odnos do predmeta, učitelja in končno oceno. Zanimivo bi bilo dobiti globlji vpogled tudi v vlogo in zadovoljstvo učitelja – mentorja in raziskati različne prakse in modele sistemov študentov demonstratorjev na slovenskih in tujih univerzah. Z nadaljnjimi raziskavami bi bilo mogoče dobiti globlji vpogled v pomen prispevka študentov demonstratorjev za univerzitetno poučevanje, za določeno študijsko področje in visokošolsko področje nasploh.

Alenka Tratnik, PhD, Anja Vidmar

A Student Demonstrator as a Co-creator of the Educational Process in Higher Education

In the modern educational process, curriculum designers and educators are constantly looking for innovative and diverse teaching and learning methods and new ways to acquire and deepen students' knowledge. In order to improve the quality of teaching and learning, to increase the motivation of students and to meet their different learning needs and abilities, various methods and teaching approaches have been introduced over the last ten years, such as cross-curricular integration, team teaching (Peery, 2017), project work, formative assessment and reverse learning (Bergmann & Sams, 2014). In the tertiary education, an alternative form of teaching is known, the so-called system of student demonstrators or demonstratorship. Through this system, a student demonstrator becomes an active participant and a co-creator of the educational process by using various forms of collaboration between teacher and students.

The paper focuses on the introduction and implementation of demonstratorship in the educational process at the University of Maribor, Faculty of Organizational Sciences. It presents basic starting points and ideas for this kind of work, the main tasks and forms of cooperation between teachers and students, the advantages and disadvantages of such a system and the challenges in the first year of implementation. The paper also deals with the main purpose and objectives of the student demonstrators' work, namely:

- *to gain practical experience of the teaching and learning process;*
- *to broaden and deepen the content knowledge and experience in the student's field of study;*
- *to contribute to a better development of the quality of studies;*
- *to strengthen the mutual cooperation between students and university teachers.*

As Iain (1995) points out the student demonstrator also develops learning skills, improves understanding of the subject in which he or she is participating, deepens un-

derstanding of the scientific method used in the subject, and develops transferable skills such as organizational and observational skills.

A student demonstrator can participate in the educational process in different ways, depending on the subject, the agreement with the teacher, the wishes, abilities and skills of the student, availability, agreed teaching methods, the lesson and activity plan. Although the tasks of a student demonstrator can vary greatly from subject to subject, the most common forms of participation are for the student demonstrator:

- *conducting part of a lecture or tutorial;*
- *delivering a presentation on a specific topic;*
- *supporting, guiding, assisting and supervising students in group or pair work;*
- *moderating a discussion on a specific topic;*
- *conducting a lecture synchronously with the teacher in the form of team teaching;*
- *giving feedback to students on their work (correction, grading of student assignments).*

In all forms of student participation in the educational process, the student demonstrator becomes an independent and responsible co-creator of the educational process. Under the guidance and recommendations of the university teacher (mentor), the student actively participates in the educational process, supports, guides, plans it together with the mentor, and provides suggestions for it.

The core of the paper is the analysis and discussion of research findings on the satisfaction and experience of student demonstrators who participated in the educational process at the Faculty of Organizational Sciences in the academic year 2018/2019. For the research we chose the interview method, which we used to gather the opinions of the student demonstrators about their work and the cooperation with the teacher and to gain a deeper insight into their satisfaction and experience. We conducted a semi-structured in-depth interview with the possibility of a more detailed answer to each question (Wilkinson & Birmingham, 2003). The interview consisted of 10 open and alternative (yes/no) questions, most of which were predetermined. Additional questions were asked for each respondent to enrich the information received and clarify the level of the answer. The supplementary questions were added as a side note and asked during the interview. The research questions related to:

- *satisfaction with the student demonstrator system and participation in the educational process;*
- *forms of teacher-student of cooperation and types of activities carried out during the educational process;*
- *positive experiences and advantages gained by the student demonstrators;*
- *disadvantages, challenges and obstacles encountered by the students demonstrators;*
- *suggestions for improving the demonstrators;*
- *recommendations for the work of future student demonstrators.*

The interviews were conducted from 15 June to 15 December 2019.

All student demonstrators took part in the interview (N = 8). Half of the respondents were male and half female. The classification by course of study and year of study shows a colourful mixture, namely two students of the 2nd year of undergraduate study, two students of the 3rd year of undergraduate study, two students of the 1st year of postgraduate study, one student of the 2nd year of postgraduate study and one student of the 1st year of doctoral studies. The subjects in which student demonstrators participated were: Business English, Human Resource Management, Marketing, Fundamentals of Quantitative Methods I, Mathematics, Statistics, Methods and Techniques of Systems Analysis, Organization of Business Processes, Work Study Methods, Supply Chain Management, Practicum of Business Engineering Processes, Computing and Informatics.

According to the research findings, the system of demonstrators represents a welcome innovation in university teaching, which brings many tangible benefits both for the demonstrators as active co-creators of higher education instruction and for the students involved in the educational process. Among the beneficial and positive effects of the student demonstrators are first and foremost the acquisition of new and the deepening of already acquired knowledge, a better, more relaxed and positive learning environment, increased student motivation, the development of public speaking skills and the acquisition of new experiences. Other advantages include the creative and constructive cooperation of the student demonstrators with the university teacher and students, increased responsiveness and interaction skills of the students, making new acquaintances, improving rhetorical, public speaking and communication skills, and gaining self-confidence.

Concerning the satisfaction of the student demonstrators, the results of the survey show that the student demonstrators are satisfied with their work and their participation in the educational process, namely 60% of the respondents describe their work as positive (I was satisfied), 40% as very positive (I was very satisfied). All students describe their satisfaction with the words "it was a positive experience" or "an extremely positive experience". The student demonstrators believe that their participation enriched university teaching in a unique way and contributed significantly to creating a positive, stress-free and motivating teaching environment.

The analysis of the different forms of cooperation between teacher and students shows that the demonstrators were involved in the educational process in many ways. Most student demonstrators participated in tutorials (71%), less in lectures (57%), the same number of demonstrators (43%) participated in e-lectures and e-tutorials in the Moodle learning environment. During the the lectures and/or tutorials, the student demonstrators took over part of the lecture or the implementation of a learning activity, for example, they gave short lectures, helped to explain the topic, prepared (additional) tasks for the students, gave them instructions on how to carry out a certain activity or task, coordinated group work, led discussions, encouraged the students by offering them additional help and supported them in preparing for the exam through individual lessons. They also provided technical and administrative support, prepared technical equipment for the lecture hall, prepared teaching materials, slides, helped to find current articles for the lecture, etc.

Despite many good experiences, when asked about the disadvantages of their work and the student demonstrator system, the student demonstrators also spoke of a number of shortcomings of the system and negative experiences. The criticism mainly refers to the amount and type of work and the workload. Students felt that they had more work

to do than they could manage, which meant that they had to adjust their timetables considerably and give up much of their free time. Balancing the study and the obligations of demonstrators required additional time, energy, more planning, negotiation and coordination with the university teacher. They expressed their dissatisfaction with the low pay and unnecessary monthly reporting. According to students, the disadvantages of demonstrators also included from their fellow students and the use of acquaintances to obtain information about live exam questions.

The paper concludes with some views on the development of the student demonstrator system in the future, ideas for the work of future student demonstrators and suggestions for improving the system. With regard to the proposals to improve and increase the effectiveness of the student demonstrator system, the majority of student demonstrators made suggestions that were more related to technical rather than content improvements (e.g. earlier publication of the call for student demonstrators, publication of students' photos on the faculty website) and the initiative for higher payment.

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Vključevanje študentov v razvoj inovativnih izobraževalnih modelov

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Znanstveni članek

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KLJUČNE BESEDE: aktivna participacija, študenti, model inovativnega učenja, družbene spremembe, kakovosten študij, interkulturno izobraževanje

POVZETEK – Študij je vedno odvisen od časa in prostora, v katerem poteka, ter načina organizacije dela profesorjev. Postmoderna družba je družba nenehnih sprememb, ki zahtevajo prilagajanje le-tem tako s strani posameznikov kot organizacij. Zato je tudi študij, še posebej kakovost njegove izvedbe, močno odvisen tako od širših družbenih dogajanj kot tudi osebe (profesorja), ki je neposredno odgovorna za njegovo izvedbo. Kot protiutež profesorju je študent, torej oseba, željna novega znanja in dokazovanja svojih sposobnosti, spretnosti in znanja. Kot primer avtorji navajajo proces vključevanja študentov v razmislek in razvoj novih pristopov oz. modelov, ki sledijo družbenim spremembam in od njih hkrati terjajo nenehno prilagajanje in izpopolnjevanje. Tako v članku na podlagi relevantne literature in mednarodnih priporočil za interkulturno izobraževanje avtorji predstavijo poskus oblikovanja interkulturnega pristopa k vzgoji predšolskih otrok. Model je še vedno v nastajanju, strukturno pa temelji na štirih stebrih izobraževanja v 21. stoletju, ki so jim bile dodane nove vsebine in drugačen pogled na predšolsko vzgojo.

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KEYWORDS: active participation, students, innovative educational model, social changes, quality study, intercultural education

ABSTRACT – Academic studies depend on the time and the space in which they are carried out, and on how professors organise their work. The post-modern society is a society of constant change to which individuals and organisations have to adapt. That is why higher education, especially its implementation, strongly depends on broader social events and the person (professor) that is directly responsible for its implementation. The professor's counterpoint is the student, the person with the desire for new knowledge and the intent to prove his or her skills, abilities and knowledge. As an example, the authors present the process of the integration of students into the consideration and development of new approaches or models that follow social changes and, at the same time, require continuous adaptation and improvement. So, on the basis of relevant literature and international recommendations for intercultural education, the authors of the article present the example of the development of an intercultural approach to educating preschool children, which has been created in close cooperation with a student of the preschool education programme. The model is still in progress, but is based on the four pillars of education in the 21st century which we have supplemented with new content and a different take on preschool education.

1 Uvod

Resnik Planinc, Ilc Klun in Puklek Levpušček (2015, str. 5) izpostavljajo v letu 1988 sprejeto Resolucijo o evropski dimenziji v izobraževanju, ki poudarja spodbujanje zavesti o evropski identiteti, pripravo mladih na aktivno vlogo v družbi itd. "Zavedanje o globalni dinamiki in aktivno sodelovanje pri razvoju trajnostne družbe je pogojeno z vključitvijo izobraževanja za trajnostni razvoj v kurikul ter dejavnosti v vrtcih in osnovnih šolah. Ključnega pomena je, da otroci že v zgodnjih letih primarne in sekundarne

socializacije ponotranjijo vrednote trajnostnega načina življenja in razvijejo spoštljiv odnos do okolja in etnične/kulturne raznolikosti." (Vah Jevšnik in Toplak, 2011, str. 39). Državljani v novem tisočletju potrebujejo znanje, vedenje in veščine, ki so zahtevane v njihovih etničnih in kulturnih skupnostih ter tudi zunaj njihovih kulturnih meja. Pričakovano je, da sodelujejo v gradnji nacionalne državljanske kulture, ki vključuje demokratične ideale in vrednote, skladne z Univerzalno deklaracijo človekovih pravic (Banks, 2001). Pričakovati je, da bodo razvili ključne kompetence za aktivno državljanstvo, pri čemer je osnovno izhodišče, kot poudarja Leleux (1997), da bi v jutrišnji družbi lahko vsak živel skupaj z drugimi, osmišljal svojo eksistenco z avtonomnimi dejavnostmi in s kulturo v širšem pomenu (športno, estetsko, etično, politično …) ter sprejel iniciative, ki se nalagajo. Zdi se, da bi izobraževanje (humanistika) moralo biti bolj usmerjeno na svoje prvo poslanstvo, da vednost in kulturo naredi dostopno vsem in da razvija človeške kompetence, ki so potrebne za osebni razvoj in za sposobnost za avtonomno in svobodno dejavnost, družbeno sodelovanje in javno participacijo.

Referenčni okvir, ki ga je postavila Evropska komisija (Ključne kompetence za vseživljenjsko učenje – Evropski referenčni okvir 2007), izpostavlja osem ključnih kompetenc, za našo problematiko pa so v tem trenutku najpomembnejše tri, in sicer *sporazumevanje v maternem jeziku* in *sporazumevanje v tujih jezikih* (ki si na splošno deli osnovne sposobnosti s sporazumevanjem v maternem jeziku, hkrati pa sem uvrščamo tudi posredovanje in medkulturno razumevanje) in kot najpomembnejše še *medosebne, medkulturne in družbene kompetence*. Slednje pokrivajo vse vrste vedenj, ki jih ima posameznik pri učinkovitem in konstruktivnem sodelovanju v svojem družbenem in delovnem okolju, še posebej v naraščajočih raznolikih družbah. Prav tako so te sposobnosti pomembne pri reševanju konfliktov, ki iz tega izhajajo. Družbene sposobnosti omogočajo posamezniku, da intenzivno sodeluje in se udejstvuje v družbenem življenju. Ob tem je v Strategiji vseživljenjskosti učenja v Sloveniji (2007) zapisano, da je pomembno, da pri razvijanju kompetenc prodremo tudi do globljih "plasti", ki zadevajo osebnostne lastnosti, kot so: (avtentična) osebnost, identiteta, pojmovanja in prepričanja (npr. v različnih kulturah, narodih …) ter zmožnosti.

2 Metodologija

Namen članka je s pregledom relevantne literature ter sinteze in spoznanj prikazati pomen aktivne participacije študentov v raziskovalnem delu na primeru razvoja inovativnega izobraževalnega modela za področje vzgoje in izobraževanja v vrtcu kot odziv na nenehne družbene spremembe današnjega časa.

Članek je teoretična razprava o aktivnem vključevanju študentov v razvoj inovativnih izobraževalnih modelov kot odziv na nenehne družbene spremembe. Pri tem smo želeli:

- ugotoviti pomen vzgoje za aktivno državljanstvo za posameznika ter njeno vlogo v procesu družbenih sprememb,
- osvetliti pomen aktivne participacije študenta v študijskem procesu,
- oblikovati primer izobraževalnega modela za področje vzgoje in izobraževanja na ravni vrtcev.

3 Vzgoja za aktivno državljanstvo v času nenehnih družbenih sprememb

Vzgoja za aktivno državljanstvo in razvijanje ključnih kompetenc mora postati del vseživljenjskega učenja vsakega posameznika, ki naj se seveda začne od rojstva, v institucionalnem smislu pa od predšolske vzgoje (torej vrtcev) naprej. S tem se odgovornost prenaša tudi na vzgojitelje predšolskih otrok in njihove pomočnike, ki se v vrtcih srečujejo z različnimi otroki, pripadniki različnih kultur, nacionalnosti ... Kot poudarjajo Van Eyken in sodelavci (Vrečer, 2009), se namreč etika skrbi, ki je ključni del izobraževanja za trajnostni način življenja, nanaša tudi na odnose med ljudmi na splošno in zlasti na ljudi iz različnih kultur. Ker postajajo evropske družbe vse bolj kulturno raznolike, je zmožnost upravljanja etnične/kulturne raznolikosti v lokalnih skupnostih izjemnega pomena. Vzgojitelji morajo poznati dinamiko globalnih in lokalnih migracij, izoblikovati pa morajo tudi medkulturne kompetence za delo s kulturno raznolikimi skupinami. Slednje je nujno za razvoj družbe v smeri sprejemanja drugačnosti. Med medkulturne kompetence uvrščamo znanje, tolerantnost do nejasnih, nepredvidljivih situacij, fleksibilnost, zavedanje lastne kulturne identitete, odprtost za nove izkušnje, upoštevanje mnenj, sposobnost prilagajanja vrednotam drugih, etično vedenje, potrpežljivost, zavzetost, interpersonalne veščine, povnanjanje in samoizražanje, empatijo in občutek za humor. Bender Szymanski (v Blazinšek in Kronegger, 2008) med medkulturne kompetence uvršča tudi spodbujanje medkulturne komunikacije, prepoznavanje težav priseljencev, pomoč pri soočanju s temi težavami, poznavanje migracij in zmožnost ocenitve posledic priseljevanja in preseljevanja.

"Pojem multikulturalizem stroka pogosto uporablja le za opis stanja večkulturnosti v državi. Da bi bilo mogoče ciljem, ki jih narekuje multikulturalizem, zadostiti, je potreben stik med ljudmi, komunikacija med pripadniki različnih kultur. Pojem, ki je del multikulturalizma in že s svojo predpono nakazuje na pomen interakcije, sodelovanja, komunikacije med pripadniki različnih kultur, je interkulturalizem. Pojem interkulturalizem je torej uporabljen za opis akcije, ki iz tega stanja (multikulturalizma) izhaja." (Lukšič-Hacin, 1999, cit. po: Čančar, 2013, str. 3). Kot navajajo avtorji (Katunarić, 1994; Nieke, 2000; Čaćič-Kumpes, 2004), multikulturnost poudarja, predstavlja in promovira kulturno raznovrstnost, medtem ko se interkulturnost osredotoča na odnose med družbeno večino in njenimi manjšinami, torej na medsebojno interakcijo in izmenjavo kulturnih vrednot (Puzić, 2007). K. Ermenc Skubic (2010) interkulturnost v pedagogiki razume kot načelo, ki spodbuja: razvoj enakopravnejšega odnosa do drugih kultur/etnij; pogled na drugačnega kot na enakovrednega in ne deficitarnega; takšno vodenje pedagoškega procesa, ki omogoča realnejši uspeh manjšinskih skupin; razvoj skupnostnih vrednot.

Migracije so torej globalna tema, ki pa lahko, podobno kakor okolje, znatno vplivajo na lokalno družbo oziroma spremembe znotraj nje. Poznavanje migracijskih procesov, vključno s procesi integracije, je nedvomno pomemben dejavnik pri razvijanju medkulturnih kompetenc in sposobnosti za upravljanje etnične/kulturne raznolikosti, zato mora postati sestavni del izobraževalnih seminarjev za vzgojitelje na temo vzpostavljanja medkulturnega dialoga. Pomembno je, da vzgojitelji pridobijo znanje o globalnih migracijskih tokovih, poleg tega pa se seznanijo tudi z dinamiko lokalnih migra-

cij in postopoma začnejo razvijati kompetence za delo z otroki migranti različnih kultur in narodnosti. Z vključevanjem v vrtčevsko okolje in spodbujanjem medkulturnega dialoga med vzgojitelji in otroki migranti ter med otroki v oddelku se ustvarja pozitivno, spodbudno okolje za vse otroke ne glede na njihovo etnično ozadje ter tako prispeva k trajnostnemu razvoju lokalne in globalne družbe. Te cilje pa je mogoče doseči le, če vzgojitelji "razumejo trajnostni razvoj z vidika sistema in ne kot nov pristop, ki je zgolj del kurikula, politike ustanove ali vodstvenih praks" (Lukman, 2008).

Edukacija za svetovno državljanstvo se mora začeti zgodaj. Takoj ko se otroci lahko vključijo v pripovedovanje zgodb, lahko pripovedujejo zgodbe o drugih deželah in drugih ljudeh (Šimenc, 2013). Pomemben cilj državljanske vzgoje (tudi v vrtcih) je namreč razvijati *določene vrednote, odnose in ravnanja* (občutek za spoštovanje, strpnost, solidarnost itd.). K temu lahko prištejemo tudi učenje o spoštovanju in medsebojnem razumevanju, družbeni in moralni odgovornosti in razvijanje smisla za solidarnost z drugimi (EACEA, Eurydice, 2012).

4 Spodbujanje aktivne participacije študenta v študijskem procesu

Nenehne spremembe v znanosti, tehnologiji, kulturi, gospodarstvu in politiki prinašajo s sabo uvedbo sprememb tudi na področju vzgoje in izobraževanja. Ob tem zahtevajo vsakokratno preverjanje obstoječih in oblikovanje novih ciljev, strategij, programa, vsebine, metod in oblik dela, katerih izvajanje mora voditi k dvigu kakovosti vzgojno-izobraževalnega sistema (Rosić, 2009). Vzgoja in izobraževanje je namreč kompleksen pojav in predvsem proces, ki se mora kontinuirano in sistematično razvijati ter prilagoditi vsakokratnim družbenim in predvsem posameznikovim potrebam tako s pedagoškega kot didaktičnega in metodičnega vidika. Ob tem je pomembno izpostaviti, da se morajo začeti spremembe že v osnovi, pri samih akterjih vzgojno-izobraževalnega procesa, torej profesorjih in študentih. Saqipi in Vogrinc (2016, str. 104) poudarjata, da v kolikor želimo, da se bodo učitelji ukvarjali tudi z raziskovalnim delom, je bistveno, da že v času svojega študija spoznajo, da je proučevanje pedagoške prakse pomemben dejavnik v procesu ugotavljanja in zagotavljanja kakovosti vzgojno-izobraževalnega dela in njihovega profesionalnega razvoja. Raziskovalno delo mora biti hkrati del njihovega vsakdanjika in temu so se zadnja leta delno prilagodili tudi študijski programi, ki naj bi bili tudi raziskovalno usmerjeni, prav tako so se dvignili standardi izobraževanja.

Za države Evropske unije oz. podpisnice je obvezujoči zunanji dejavnik leta 2002 podpisana lizbonska strategija, katere glavni cilj je trud za dvig in izboljšanje kakovosti izobraževanja. V sporočilu Komisije svetu in Evropskemu parlamentu z naslovom Izboljšanje kakovosti izobraževanja učiteljev (2007) so zapisali, da je Evropski svet leta 2002 v Barceloni sprejel konkretne cilje v zvezi z izboljšanjem sistemov izobraževanja in usposabljanja, saj je kakovost poučevanja (in vzgoje) eden ključnih dejavnikov, s katerim lahko povečamo svojo konkurenčnost v svetu globalizacije. Ob tem je treba okrepiti reforme za zagotovitev visokokakovostnih izobraževalnih sistemov, ki so tako učinkoviti kot pravični. Izboljšanje kakovosti izobraževanja je torej pomemben cilj sistemov izobraževanja, da pridemo do hitrejšega napredka pri doseganju skupnih ciljev.

Marentič Požarnik (2000) ugotavlja, da živimo v času temeljnih sprememb, ko se povečujejo pričakovanja do izobraževalnih institucij in samega izobraževanja ter se profesorjeva vloga spreminja, predvsem postaja zahtevnejša. Ob tem deluje v težjih okoliščinah – naraščajoča tekmovalnost, finančna racionalizacija, centralizacije odločanja o kurikulih, standardih znanja na eni strani ter raznoliki in vse težje obvladljivi študenti na drugi strani. Vsi ti izzivi in grožnje terjajo od profesorja višjo stopnjo profesionalnosti.

Višja stopnja profesionalnosti profesorja med drugim pomeni tudi to, da v vzgojno-izobraževalni proces aktivno vključuje študente in jih spodbuja pri samostojnem delu in raziskovanju. Pri tem je bistveno izkustveno učenje, ki poudarja predvsem to, da je učenje celovito, da ni samo spoznavni proces, ampak predstavlja preplet razmišljanja, čustvovanja in dejavnosti. Izkustveno učenje se je pojavilo kot težnja, da bi se teorija in praksa tesneje povezali. "Rdečo nit v različnih pojmovanjih prepoznamo po eni strani s poudarjanjem neposredne aktivne vpletenosti posameznika v običajno, vsakdanjo, življenjsko situacijo, v kateri posameznik pridobiva izkušnje, po drugi strani pa z razmišljanjem (refleksijo) posameznika o pridobljenih izkušnjah." (Lepičnik Vodopivec, 2002, str. 65). Pomembno vlogo ima pri tem motivacija za učenje. Juriševič, Šorgo in Boh Podgornik (2017, str. 103) soglašajo z ugotovitvijo sodobnih avtorjev, ki ugotavljajo, da brez motivacije ni učenja, saj le-ta vpliva na čas učenja, na učni pristop oz. strategije učenja. Nezanemarljiv pa je tudi njen vpliv na razpoloženje učencev med učenjem in na raven učenčeve pozornosti.

Eden pomembnejših strokovnjakov s tega področja, David A. Kolb, pravi, da je "izkustveno učenje vsako učenje v neposrednem stiku z resničnostjo, ki jo proučuje […]. Gre za neposredno srečanje s pojavom, ne za razmišljanje o takem srečanju ali o možnosti, da bi kaj naredili v resnični situaciji." (Marentič Požarnik, 2003; cit. po Kolb, 1984, str. 38). Izkustveno učenje je torej proces, ki temelji na neposredni izkušnji, opazovanju in refleksiji, oblikovanju teorij in aktivnem eksperimentiranju. Ta proces poteka v različnih časovnih obdobjih, v formalnem ali neformalnem učnem okolju (Mijoć, 1995). Poleg neposredne akcije oziroma vpletenosti pa je pomembno, da v procesu izkustvenega učenja usmerimo ljudi v tako razmišljanje (refleksijo), ki jim bo pomagalo spremeniti izkušnjo v učenje. Znanje je (po Kolbu) rezultat transakcije med družbenim in osebnim znanjem v procesu, ki ga imenujemo učenje (Marentič Požarnik, 1992).

Kolbova klasifikacija značilnosti izkustvenega učenja zajema naslednje komponente (Kolb, 1984):

- *Učenje je razumljeno kot proces in ne kot rezultat.*
- *Učenje je kontinuiran proces, ki temelji na izkušnjah.*
- *Učenje je holistični proces adaptacije na svet.*
- *Učenje je proces oblikovanja znanja.*

Prav tako pomemben avtor na področju izkustvenega učenja, Tom Boydell, v knjigi Experiential learning (1976) ugotavlja skupni imenovalec vseh definicij izkustvenega učenja, ki poudarjajo dvoje:

- prvič, da vodi proces k smiselnemu učenju, in
- drugič, da gre za učenje, pri katerem učenec sam prihaja do spoznanj, prestrukturira svoje izkušnje in tako prihaja do vpogledov, do učenja.

To je bilo naše bistveno vodilo pri opredelitvi vloge študenta v vzgojno-izobraževanem procesu, kjer bo izhajal ne le iz formalnega izobraževanja, pač pa tudi iz neformalnega.

Veliko govorimo o pomembnosti vključevanja študentov v sam proces študija, a pri tem jim moramo profesorji ponuditi različne možnosti, načine in naloge. S tem jih spodbudimo, včasih prisilimo k delu, ki se ga morda številni ne bi lotili, saj je enostavneje samo poslušati profesorja in si njegove besede zapisovati. A s tem študentom ne nudimo možnosti aktivnega sodelovanja. Tudi ko študente spodbudimo, da s svojimi vprašanji in opažanji dopolnijo naša predavanja, je njihov odziv slab. Ne morejo namreč aktivno soustvarjati pedagoškega procesa, če o neki tematiki prvič slišijo. Zato je nujno, da študentom pripravimo različne naloge oz. izzive, s katerimi jih spodbudimo k lastnemu raziskovanju in razmišljanju o točno določeni strokovni problematiki (Hmelak in Lepičnik Vodopivec, 2015). Pozitivna in kakovostna pedagoška klima je namreč predpogoj za kar največji razvoj vsakega posameznika, vključenega v vzgojno-izobraževalno delo, pa tudi za doseganje ciljev kakovostnega izobraževanja. In sodobna šola mora razviti potrebo po praktičnih dejavnostih in aktivni odnos učencev do skoraj vseh vprašanj, težav in izzivov iz svojega okolja (Selimović, Opić in Selimović, 2018, str. 68).

Osredotočili smo se na študij predšolske vzgoje in študente, ki se pripravljajo oziroma izobražujejo za poklic vzgojitelja predšolskih otrok. Ta poklic že sam po sebi predvideva veliko lastnega raziskovanja, inovativnosti, konkretizacije, zato je še toliko pomembneje, da se študentje tega naučijo preko samostojnega raziskovanja in dela. Ob tem jih z ustreznimi napotki usmerjamo, dopolnjujemo in tudi popravljamo, če zaidejo. Ob vsaki nalogi študentje rastejo in se razvijajo tako strokovno kot osebnostno.

Pri pripravi nalog oz. izzivov vedno upoštevamo že omenjena Kolba in Boydella, ob tem pa je zaradi svojih spoznanj pomemben še Jan Amos Komensky oziroma njegova načela. Ob tem naj izpostavimo predvsem njegovo spoznanje, da naj naravni procesi potekajo od lažjega k težjemu. Po vzoru Komenskega tako začnemo z osnovami. Nato študente skozi vsa študijska leta spodbujamo k aktivni soudeležbi s pomočjo različnih nalog in izzivov. Od prve do zadnje vaje stopnjujemo zahtevnost in obsežnost pridobljenega znanja ter poglabljamo in nadgrajujemo poznavanje sebe, drugih in naše medsebojno sodelovanje, komuniciranje in razumevanje. S pomočjo različnih nalog s stopnjevano zahtevnostjo zadeve nadgrajujemo do te mere, da študentje ob koncu študija brez večjih težav uspešno pripravijo diplomsko nalogo z inovativno tematiko, ki je plod študentovega lastnega raziskovanja in povezovanja teorije z družbenimi spremembami aktualnega časa in tesnega raziskovalnega sodelovanja s profesorji raziskovalci.

5 Primer razvoja inovativnega izobraževalnega modela

Kakovosten študij bo študentom predšolske vzgoje omogočal aktivno soudeležbo, saj se od prihodnjega vzgojitelja vedno bolj pričakuje aktiven prispevek in tudi prevzemanje odgovornosti za lasten napredek, ki temelji na samoevalvaciji dela z otroki in sebe kot vzgojitelja oziroma svojih ravnanj. To mu omogoča pridobitev novih spoznanj in odpravo morebitnih nepravilnosti na področju predšolske vzgoje. Ob tem je pomembna podpora s strani profesorjev kot soustvarjalcev pedagoškega procesa ter

strokovnjakov izven vrtca. Podobne ugotovitve zasledimo pri številnih tujih avtorjih (MacNaughton in sod., 2001; Urban, 2008; Vonta, 2009; McMillan in Walsh, 2011; Peeters in Vandenbroeck, 2011; Competence Requirements in Early Childhood Education and Care, 2011), ki navajajo visoko usposobljene strokovne delavce kot enega od pogojev, ki vplivajo na uresničevanje visoko kakovostne predšolske vzgoje. Ob tem moramo poudariti, da visoko usposobljen kader vpliva tudi na boljše razvojne dosežke otrok (Sylva in sod.; 2004; Fukkink in Lont, 2007).

Zato smo se skupaj s študentom predšolske vzgoje lotili poskusa razvoja inovativnega izobraževalnega modela s posebnim poudarkom na interkulturnem izobraževanju ter ga aktivno vključili v proces sooblikovanja vzgojno-izobraževalne paradigme, ki predstavlja alternativo obstoječemu sistemu. Osredotočili smo se na področje predšolske vzgoje. "Programi predšolske vzgoje igrajo pomembno vlogo pri zmanjševanju oz. preprečevanju medgeneracijskega prenosa socialne prikrajšanosti oziroma socialno-ekonomskega statusa, saj se je učinek predšolske vzgoje pokazal kot dolgoročen tako na kognitivnem kot nekognitivnem razvoju ogroženih otrok." (Felefe in Lalive, 2010; cit. po Vonta, 2013, str. 107).

Najprej smo v osnovnih dokumentih, ki veljajo v RS Sloveniji kot temeljni za področje vzgoje in izobraževanja, iskali izhodišča in osnovo za nadgradnjo ali spremembe obstoječega sistema predšolske vzgoje. Temeljni dokumenti za področje vzgoje in izobraževanja v RS Sloveniji, ki smo jih vzeli kot izhodišče:

- *Ustava RS* temelji na človekovih pravicah, pravni državi, strpnosti, solidarnosti, na katerih temelji tudi celotna šolska zakonodaja, in kot taka predstavlja univerzalni vrednostni in normativni okvir. Ustava RS v svojem 57. členu opredeljuje: "Izobraževanje je svobodno. Osnovnošolsko izobraževanje je obvezno in se financira iz javnih sredstev. Država ustvarja možnosti, da si državljani lahko pridobijo ustrezno izobrazbo." Zagotavljanje enakih možnosti za izobraževanje vseh slovenskih državljanov nam torej nalaga že Ustava kot najsplošnejši, najvišji in temeljni pravni akt Republike Slovenije (Vonta in sod., 2011, str. 30).
- *Konvencija o otrokovih pravicah* – ocenjujemo, da je eden pomembnejših dokumentov, ki ga je Slovenija sprejela in se s tem zavezala k uresničevanju pravic otrok. Ta v 28. členu državam pogodbenicam nalaga, da priznavajo otrokovo pravico do izobraževanja in da na podlagi enakih možnosti zagotavljajo obvezno in vsem brezplačno osnovno šolanje ter zagotovijo dostopnost vseh ostalih oblik šolanja.
- *Bela knjiga o vzgoji in izobraževanju v RS* (2011) ima pomembno, izhodiščno vlogo vzgoje in izobraževanja na slovenskih tleh. S strokovnimi podlagami sistematično in strokovno utemeljeno preoblikuje in dograjuje sistem vzgoje in izobraževanja v Sloveniji. Pri tem izpostavljamo le nekaj predlaganih rešitev na področju kurikula za vrtce. V okviru poučevanja slovenščine in materinščine za otroke, katerih materinščina ni slovenščina, je treba ponovno pregledati in ustrezno posodobiti dodatke h kurikulu, ki se nanašajo na navedene ciljne skupine. Vrtec, kot navaja Bela knjiga o vzgoji in izobraževanju v Republiki Sloveniji (2011), mora ponuditi poučevanje tujega jezika, slovenščine kot tujega jezika (za otroke, katerih materinščina ni slovenščina), materinščine (za otroke, katerih materinščina ni slovenščina) ter dodatno učenje govora (za govorno šibke otroke iz socialno in kulturno manj ugodnega okolja).

- *Zakon o organizaciji in financiranju vzgoje in izobraževanja* (1996) ureja pogoje za opravljanje ter določa način upravljanja in financiranja vzgoje in izobraževanja na več področjih, tudi na področju predšolske vzgoje. Zakon v svojem 2. členu navaja cilje sistema vzgoje in izobraževanja v Republiki Sloveniji, med katerimi bomo izpostavili enega za nas ključnih ciljev: zagotavljanje optimalnega razvoja posameznika ne glede na spol, socialno in kulturno poreklo, veroizpoved, rasno, etnično in narodno pripadnost ter telesno in duševno konstitucijo oziroma invalidnost.
- *Zakon o vrtcih* (1996). Temeljne naloge vrtcev, kot jih določa 2. člen, so v pomoč staršem pri celoviti skrbi za otroke, za izboljšanje kakovosti življenja družin in otrok ter ustvarjanje pogojev za razvoj otrokovih telesnih in duševnih sposobnosti.
- *Vzgojo, ki jo izvajajo javni in zasebni vrtci*, ureja Zakon o vrtcih in določa, da je predšolska vzgoja v vrtcih sestavni del sistema vzgoje in izobraževanja ter poteka po načelih demokratičnosti, pluralizma, avtonomnosti, strokovnosti in odgovornosti zaposlenih, enakih možnosti za otroke in starše, upoštevaje različnosti med otroki, pravico do izbire in drugačnosti ter ohranjanje ravnotežja med različnimi vidiki otrokovega telesnega in duševnega razvoja.
- *Kurikulum za vrtce* (1999) je izhodiščni dokument za načrtovanje in izvajanje programov in vsebin predšolske vzgoje, ki kot dokument na eni strani spoštuje tradicijo slovenskih vrtcev, na drugi strani pa z novejšimi teoretskimi pogledi na zgodnje otroštvo in iz njih izpeljanimi drugačnimi rešitvami in pristopi dopolnjuje, spreminja in nadgrajuje dosedanje delo v vrtcih. Namenjen je vzgojiteljem, pomočnikom vzgojitelja, ravnateljem, svetovalnim delavcem; je dokument, ki ob rabi strokovne literature in priročnikov za vzgojitelje omogoča strokovno načrtovanje in kakovostno predšolsko vzgojo v vrtcu, ki se na ravni izvedbenega kurikula razvija in spreminja, pri tem pa upošteva neposredno odzivanje otrok v oddelku, organizacijo dela v vrtcu, vpetost vrtca v širše okolje. Posebna pozornost pa mora biti namenjena tudi tistim otrokom, ki jim slovenščina ni materni jezik, da lahko nadoknadijo morebitni primanjkljaj v znanju slovenščine.

V nadaljevanju predstavljen *primer razvoja inovativnega izobraževalnega modela* daje poudarek interkulturnemu pristopu in se pojavlja kot odgovor na prisotnost različnosti: narodov, kultur, jezikov, običajev in vrednot v pluralni družbi 21. stoletja.

Za oblikovanje interkulturnega pristopa k vzgoji predšolskih otrok smo najprej pregledali relevantno literaturo, se seznanili z vsebino priporočil za interkulturno izobraževanje in upoštevajoč smernice interkulturnega izobraževanja oblikovali pristop, ki različnost kultur in jezikov promovira in deklarira kot pozitivno komponento znotraj organizirane predšolske vzgoje. Osredotočili smo se na otroka, ki s svojim kulturnim ozadjem v sistem predšolske vzgoje prinaša številne izzive, za katere trenutne oblike predšolskih programov niso prilagojene vsaj do te mere, da bi lahko otrok svojo kulturo in jezik postavljal v interakcijo z večinsko kulturo in učnim jezikom (Rudaš, 2015).

Pri oblikovanju smo izhajali iz štirih stebrov učenja za 21. stoletje, s katerimi je J. Delors (1996) na pragu novega stoletja postavil izhodišča kot izzive za učenje v vedno bolj učeči se družbi. Tem smo dodali novo vsebino in drugačen pogled na predšolsko vzgojo kot odraz družbe, ki postaja s številnimi migracijami (želja po boljšem, uspešnejšem in človeka dostojnem življenju) vedno bolj multikulturna. Z vizijo, da otrokom z različnimi kulturno-jezikovnimi ozadji omogočimo kar se da odprt, kakovo-

sten in predvsem strpen pristop za ohranjanje, negovanje in razvijanje lastne kulturno-jezikovne identitete, pri čemer enakovredno pozornost namenjamo otrokom večinske kulture, ki se ob implementaciji različnosti v proces organizirane predšolske vzgoje učijo za življenje v družbi 21. stoletja. Premagovanje kulturno-jezikovnih razlik med otroki v zgodnjem otroštvu predstavlja odraščanje v strpnem okolju, kjer različnost ni ovira, temveč izziv za učenje.

Prvi steber interkulturnega pristopa *Učiti se, da bi vedeli* je usmerjen k pridobivanju informacij, zgledov in znanja iz ožjega in širšega okolja. S tem otroku omogočamo seznanjanje z različnostjo – pestrostjo in bogastvom družbe, ki jo že v zgodnjem otroštvu promoviramo v obliki jezika, kulture, navad in običajev, tako večinske kot manjšinske kulture (Rudaš, 2015). V tem primeru gre za prvi korak pri učenju strpnosti ob spoznavanju drugačnih. V predšolskem obdobju je to enostavneje, saj otroci še niso obremenjeni z bremeni družbe in različnosti ne doživljajo skozi prizmo predsodkov, diskriminacije in stereotipov.

Predmet povezovanja z različnostjo v interkulturnem izobraževalnem modelu predstavlja t. i. *interkulturna igralnica*, ki v naslednjem stebru zagotavlja interkulturne izzive za učenje v različnosti.

Interkulturni pristop *Učiti se, da bi znali delati*, predstavlja drugi steber. Zajema ustvarjanje pogojev za zagotavljanje spodbudnega učnega okolja, v katerem ima otrok možnost razvijanja veščin za soočanje z različnimi kulturno-jezikovnimi izzivi, ob katerih premaguje kulturne in jezikovne razlike. Pripravljeno spodbudno učno okolje poimenujemo interkulturni izziv, ki temelji na interkulturni igralnici kot pripravljenem spodbudnem učnem okolju, v katerem ima otrok možnost kulturne in jezikovne identifikacije z različnimi materiali in sredstvi za razvijanje kompetenc in veščin. Interkulturna igralnica kot interkulturni izziv postavlja otroka v interakcijo z različnimi prenosniki kulturne in jezikovne identitete, s pomočjo katerih raziskuje, preizkuša, primerja in povezuje (Rudaš, 2015).

Seznanjanje, opazovanje, raziskovanje, preizkušanje, primerjanje in povezovanje – v tem vrstnem redu poteka interakcija med otrokom in interkulturno igralnico, katere rezultat je vzpostavitev interkulturne komunikacije med različnimi deležniki v obliki sožitja.

Tretji steber interkulturnega pristopa *Učiti se sožitja* zagovarja zaznavanje medkulturnih in medjezikovnih razlik kot prednosti, s katerimi v zgodnjem otroštvu spodbujamo medkulturne in medjezikovne interakcije, ob katerih otrok različnost doživlja kot prednost in ne oviro. Zaznavanje različnosti in njeno smiselno povezovanje z obstoječimi izkušnjami iz otrokovega okolja gradi strpnejši in bolj odprt odnos do različnosti v družbi. Sožitje je oblika načina interkulturne komunikacije med vsemi deležniki interkulturnega partnerstva, ki se zavzemajo za socialno pravičnost v vzgojnem procesu in družbi (Rudaš, 2015).

Socialna pravičnost ni pomembna samo v smislu zavzemanja deležnikov interkulturnega partnerstva, temveč je enako pomembna tudi kot osnova, ki otroku omogoča dostopnost na različnih ravneh vključevanja v širše družbeno okolje. Je podlaga za razvijanje lastnega mnenja in soodločanja v za otroka pomembnih izzivih. Več o tem predstavljamo v naslednjem stebru.

Četrti steber interkulturnega pristopa *Učiti se biti* kot zadnji steber izpostavlja otrokovo soodločanje v izbiri prostora, časa, materialov in oblik dela. S tem otroka spodbuja k sprejemanju odločitev in zavedanju odgovornosti zanje. Otrok razvija pozitivno samopodobo in izraža svoje osebno mnenje, prepričanje in stališča do določenih tem. Četrti steber se osredotoča tudi na usposabljanje otroka za samostojno in suvereno reševanje konfliktov in ponuja podlago za uveljavljanje lastnega mnenja. Razvija otrokovo čustveno inteligenco, da zna upravljati s čustvi in razvija empatijo, ki je ključna za osnovno razumevanje kulturnih kontekstov otrok, ki prihajajo iz različnih kultur in so rojeni govorci jezika, ki se razlikuje od učnega jezika (Rudaš, 2015).

Za uresničevanje vseh štirih stebrov interkulturnega pristopa je treba skrbno načrtovanje ciljev, ki izhajajo iz dejanskega stanja, so merljivi, fleksibilni in temeljijo na načelih.

Poglavitni namen oblikovanja omenjenega pristopa je širše zavedanje prisotnosti različnosti narodov, kultur in jezikov ter ustvarjanje optimalnih pogojev v zgodnjem otroštvu za medkulturno in medjezikovno učenje preko interakcij. Spodbujati implementacijo večjezičnosti in večkulturnosti v neposredno pedagoško prakso pomeni, da se zavedamo prednosti različnosti v družbi. Interkulturni pristop k vzgoji predšolskih otrok je s svojimi cilji usmerjen v *skrb za socialno pravičnost, v zagotavljanje pogojev za razvijanje in negovanje pozitivne osebne, jezikovne in kulturne identitete posameznika, v zagotavljanje pogojev za oblikovanje stimulativnega večkulturnega in večjezičnega učnega okolja, v bogatenje predšolske vzgoje z uvajanjem večjezičnosti; v opolnomočenje deležnikov interkulturnega partnerstva pri uporabi in sodelovanju v interkulturni komunikaciji* (Rudaš, 2015).

Temeljno načelo pristopa je *načelo interkulturnosti – interkulturalizma*, iz katerega izhajajo naslednja načela: *načelo jezikovne in kulturne diverzifikacije, načelo vzajemnosti, načelo jezikovno-kulturne recipročnosti, načelo interkulturne komunikacije, načelo individualizacije in fleksibilne diferenciacije, načelo odprtosti in dostopnosti za različnost, načelo vzpostavljanja interkulturnega partnerstva z deležniki* (Rudaš, 2015).

V grobem smo postavili tudi izhodišča za načrtovanje in oblikovanje dejavnosti, katerih temelj predstavljajo kurikularni izzivi interkulturnega pristopa, poimenovani tudi vzgojno-učni izzivi.

V nadaljevanju predstavljamo primere področij oziroma kurikularne/vzgojno-učne izzive interkulturnega pristopa, s katerimi spodbujamo, sooblikujemo in vplivamo na vsestranski razvoj predšolskega otroka. Kurikularni/vzgojno-učni izzivi (še) niso vsebinsko opredeljeni, saj je za kakovostno vsebino treba v oblikovanje vključiti strokovnjake s posameznega področja. Osnovni vzgojno-učni izzivi so (Rudaš, 2015):

- motorični izzivi (senzomotorični, grafomotorični, gibalno-športni),
- jezikovno-govorni izzivi (izzivi porajajoče se pismenosti, jezikovni, govorni, izziv večjezičnosti),
- izzivi v umetnosti (glasbeni, likovni, plesni, dramski),
- kulturni izzivi (odnos do sveta, dialoga, prehranjevanja, multikulturnosti/interkulturalizma),
- naravoslovni izzivi (delovanje okolja, eksperimentiranje, biologija, kemija, fizika, varovanje okolja),
- matematični izzivi (številski, geometrijski, matematično-naravoslovni),

- senzorični izzivi (vid, sluh, tip, voh, okus),
- izzivi državljanske vzgoje (identiteta, pripadnost),
- izzivi medijske pismenosti (otrok in mediji, mediji kot sredstvo zaznavanja sveta) in
- tehnični izzivi.

Podobno idejo o interkulturnem pristopu kot inovativnem modelu, kar smo prikazali za področje predšolske vzgoje, je K. Ermenc Skubic (2007, str. 129–130) razvila za področje osnovnošolskega izobraževanja. Razvila je idejo o interkulturnosti kot o enem od temeljnih pedagoško-didaktičnih načel, ki bi ga morali upoštevati v celotni zasnovi, izvedbi in vrednotenju pouka. To načelo pa zajema štiri temeljne sestavine:

- spodbujati mora razvoj enakopravnejšega odnosa do drugih kultur/etnij;
- spodbujati mora pogled na drugačnega kot na enakovrednega in ne deficitarnega;
- spodbujati mora takšno vodenje pedagoškega procesa, ki omogoča realnejši uspeh manjšinskih skupin;
- spodbujati mora razvoj skupnostnih vrednot.

6 Sklep

Spremljanje aktualnih družbenih sprememb smo dokaj hitro zaznali na celotni vertikali vzgoje in izobraževanja, tudi v vrtcih. Vzgojitelji v vrtcih so tako vedno pogosteje v interakciji z otrokom, katerega materni jezik ni jezik večinske družbe in katerega kulturne in moralne vrednote se razlikujejo od večine. Otrokom se je treba znati približati in s starši vzpostavljati dialog. S tem sta strpnost do različnosti in sožitje kultur kot pomembni vrlini interkulturnega pristopa v zgodnjem otroštvu dobili še večji pomen, predvsem pa sta začeli živeti v praksi. Ker pa na sistemski ravni spremembe potekajo počasneje, kot se pojavljajo družbene spremembe in izzivi, ki jih le-te prinašajo s sabo, smo se odločili oblikovati primer inovativnega izobraževalnega modela s posebnim poudarkom na interkulturalizmu in medkulturnem izobraževanju ter ga aktivno vključiti v proces sooblikovanja vzgojno-izobraževalne paradigme, ki predstavlja alternativo obstoječemu sistemu. "Cilj medkulturnega izobraževanja ni samo ozaveščanje o človekovih pravicah, multikulturnosti, integraciji in diskriminaciji, temveč tudi ozaveščanje o lastnem delovanju in vrednotah. Gre za izogibanje pasivnosti in uporabo pridobljenega znanja in veščin v vsakdanjem življenju. To je eden od glavnih ciljev izobraževanja za trajnostni razvoj. Dodati je tudi treba, da izobraževanje za trajnostni razvoj samo po sebi še ne zagotavlja harmonije v družbi in razrešitve vseh sporov. Vendar pa komunikacija med različnimi in drugačnimi skupinami, ki jo izobraževanje spodbuja, omogoča uspešno ponotranjanje vrednot trajnostnega razvoja." (Vah Jevšnik in Toplak, 2011, str. 43).

V primeru pričujočega interkulturnega pristopa oz. modela k vzgoji predšolskih otrok smo poudarili t. i. vzgojno-učni izziv, tj. dražljaj, ki v otroku zbudi zanimanje in je sestavljen iz spoznavne ter didaktične komponente. Ločimo več vrst izzivov, med njimi so za naš pristop pomembnejši kurikularni izzivi z vzgojno in učno vsebino ter didaktično komponento; medkulturni in medjezikovni izzivi, ki vsebujejo komponento

kulturnega ali jezikovnega konteksta in so spoznavne narave; ter izzivi za življenje, ki zajemajo področje učenja oz. opolnomočenja za življenje v širši družbi (Rudaš, 2015).

Aktivna participacija študenta predšolske vzgoje v razvoj primera modela se je izkazala za pomembno in konstruktivno, saj gre za osebo, željno novega znanja in praktičnega preizkušanja ter dokazovanja svojih sposobnosti, spretnosti, znanj. Izkazalo se je, da si študentje ne samo resnično želijo takšnih aktivnih oblik dela, pač pa so jih v sodelovanju z ostalimi akterji tudi sposobni izpeljati.

Ob tem je bistveno spoznanje tudi to, da je pri poskusih razvoja alternativnih izobraževalnih modelov mogoče (in nujno) izhajati iz obstoječih opredelitev in usmeritev na področju institucionalne predšolske vzgoje ter jih postaviti v nov družbeni kontekst, kjer so družbene spremembe stalnica.

Maja Hmelak, PhD, Aljoša Rudaš, Jurka Lepičnik Vodopivec, PhD

Involvement of Students in the Development of Innovative Educational Models

Education for active citizenship and development of basic skills have to become part of the lifelong learning of each individual which, of course, should start from birth, or, in institutional terms, from preschool (i.e. kindergarten) onward. By doing so, the responsibility is transferred also onto preschool children's teachers and their assistants in kindergartens, who meet different children, members of different cultures, nationalities, etc. Namely, as pointed out by Van Eyken and his colleagues (Vrečer, 2009), the ethics of care, which is a key part of education for a sustainable way of life, also concerns relationships among people in general, and in particular among people of different cultures. Since European societies are becoming increasingly culturally diverse, the ability to manage ethnic/cultural diversity in local communities is of the utmost importance. Educators have to be aware of global and local migration trends, and they also have to formulate intercultural competencies to work with culturally diverse groups. The latter is essential for the development of societies in terms of accepting diversity. Intercultural competencies include knowledge, tolerance in ambiguous, unpredictable situations, flexibility, awareness of one's own cultural identity, openness to new experience, considering opinions, the ability to accommodate the values of others, ethical behaviour, patience, commitment, interpersonal skills, externalisation and self-expression, empathy, and a sense of humour. Bender Szymanski (Blazinšek & Kronegger, 2008) mentions the following intercultural competencies: fostering intercultural communication; identifying the problems of immigrants; helping to deal with these problems; knowledge of migrations; the ability to estimate the effects of immigrations and migrations.

Education for global citizenship should start early. As soon as children can engage in storytelling, they can tell stories about other countries and other people (Šimenc, 2013). Namely, an important aim of civic education (also in kindergartens) is to develop specific values, attitudes and behaviours (a sense of respect, tolerance, solidarity, etc.). These can be further complemented by learning about respect and mutual understand-

ing, social and moral responsibilities, and developing a spirit of solidarity with others (EACEA, Eurydice, 2012).

One of the major experts in the field, David A. Kolb, says that "experiential learning is any learning in direct contact with the reality it examines ... It concerns a direct encounter with the phenomenon, not thinking about such an encounter or about the possibility to do anything in a real situation" (Kolb, 1984, as cited in Marentič Požarnik, 2003, p. 38). Experiential learning is therefore a process, which is based on direct experience, observation and reflection, formulating theories, and active experimentation. This process takes place in a different time period, in a formal or informal educational environment (Mijoć, 1995). In addition to direct action or engagement, it is essential to guide people in the process of experiential learning to such thinking (reflection) that will help them to transfer the experience into learning. Knowledge is (according to Kolb) a result of the transaction between social and personal knowledge in the process called learning (Marentič Požarnik, 1992).

We focused on the study of preschool education, and on the students who are preparing and educating themselves for the profession of a preschool educator. This profession entails a lot of original research, innovation, concretisation; therefore, it is even more important that students learn about this through independent research and work. In doing so, we guide them with appropriate guidelines, complement them, even correct them, if they lose their way. Each task helps students to grow and develop, both professionally and personally.

High-quality studies, therefore, will enable students of preschool education courses to participate actively, because future educators are increasingly expected to contribute actively and to take responsibility for their own progress based on a self-evaluation of their work with children and of themselves as educators and their practices, respectively. This enables them to gain new understanding and to notice any irregularities in the field of preschool education. In this process, it is important to have the support of teachers as co-creators of the educational process, and of experts outside kindergartens. Similar findings are found in a number of works by foreign authors (MacNaughton et al., 2001; Urban, 2008; Vonta, 2009; McMillan & Walsh, 2011; Peeters & Vandenbroeck, 2011; Competence Requirements in Early Childhood Education and Care, 2011), who indicate highly qualified professional workers as one of the conditions that affect the realisation of high-quality preschool education. It should be pointed out that highly qualified personnel also influence better development achievements in children (Sylva et al., 2004; Fukkink & Lont, 2007).

This is why we, together with a student of the preschool education course, undertook an attempt to develop an innovative educational model, with special emphasis on intercultural education, and to involve the student actively in the process of co-creating an educational paradigm that represents an alternative to the existing system. We focused on the field of preschool education. "Preschool education programmes have an important role in reducing or preventing the intergenerational transmission of social deprivation or social and economic status, because preschool education has proved to have a long-term effect, both on the cognitive and non-cognitive development in deprived children" (Felefe & Lalive, 2010, as cited in Vonta, 2013, p. 107).

First of all, we were looking for the grounds and the basis for an upgrade or change in the existing system of preschool education in the basic documents applicable in the Republic of Slovenia as fundamental documents in the field of education.

The example of the development of an innovative educational model presented below places emphasis on an intercultural approach and appears as a response to the presence of diversity: nations, cultures, languages, traditions and values in the plural society of the 21st century.

In order to develop an intercultural approach to the education of preschool children, we first examined the relevant literature, became familiar with the contents of the recommendations for intercultural education and, by taking into account the guidelines for intercultural education, we developed an approach, which promotes and declares the diversity of cultures and languages as a positive component within the organised preschool education. We focused on children who, through their cultural background, bring many challenges to the system of preschool education, to which the current forms of preschool programmes are not adapted, at least not to the extent that would allow the children's culture and language to interact with the prevailing culture and language of instruction (Rudaš, 2015).

We based the development of the approach on the four pillars of learning for the 21st century, which were used by Delors (1996) at the dawn of the new century to set up the foundations for facing the challenges in learning in an increasingly learning society. We complemented them with new content and a different perspective on preschool education, as a reflection of society which is becoming increasingly multicultural through numerous migrations (the desire for a better, more successful and dignified life). Our vision was to provide children with different cultural and linguistic backgrounds with as open, high-quality, and, above all, tolerant approach as possible, in order to preserve, cultivate and develop their own cultural and linguistic identity. In doing so, however, we pay equal attention to children of the majority culture who are learning how to live in the society of the 21st century through introducing diversity to the process of organised preschool education. Overcoming cultural and linguistic differences among children in early childhood means growing up in a tolerant environment where diversity is not an obstacle but a challenge in learning. We also set a rough baseline for planning and designing activities, the foundation of which are curricular challenges of the intercultural approach, also called educational challenges.

An idea for an intercultural approach as an innovative model, similar to the one that we have shown in the field of preschool education, was developed by Skubic in the field of primary education. Namely, she developed the idea of interculturalism as one of the fundamental pedagogical and didactic principles, which should be taken into account in the overall design, implementation, and evaluation of teaching. This principle includes four basic elements:

- *It has to promote the development of a more equal attitude towards other cultures/ethnicities;*
- *It has to encourage a consideration of the different as an equal and not as a deficit;*
- *It has to promote such management of the pedagogical process that enables a more realistic success of minority groups;*
- *It has to promote the development of community values.*

In the case of the present intercultural approach to or model of the education of preschool children, we emphasised the so-called education and learning challenge; a stimulus that wakes up interest in a child, and consists of cognitive and didactic components. We distinguish several types of challenges. The challenges, which are important for our approach, include: curricular challenges with educational contents and a didactic component; intercultural and interlingual challenges, which include the component of cultural or linguistic context and are of a cognitive nature; and the challenges for life, covering the areas of learning or empowerment for life in the broader society (Rudaš, 2015).

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Effectiveness of the Moodle System in Acquiring the Academic Skills of Students

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KLJUČNE BESEDE: sistem Moodle, tehnološke posledice, akademske spretnosti, inovativne metode v procesu učenja in poučevanja

POVZETEK – Sistematično uvajanje e-učenja prispeva h kakovosti visokošolskega izobraževanja, ki temelji na učnih rezultatih, s študenti v središču izobraževalnega procesa, pa tudi razvoju ustreznih inovativnih metod poučevanja in učenja, ki lahko dvignejo motivacijo študentov za študij, razvoj akademskih veščin ter ustvarjalnih in raziskovalnih del. Trg dela se nenehno spreminja, prav tako pa tudi potrebne spretnosti, sposobnosti in kvalifikacije. Tako študenti z razvojem veščin pridobivajo in razvijajo svoje življenjske in poklicne kompetence, zavzemajo svoje mesto v družbi in postanejo konkurenti na trgu dela. Akademske spretnosti so potrebne, da lahko študentje uspešno zaključijo študij, ustvarijo kariero in so sposobni vseživljenjskega učenja, delujejo na trgu dela in imajo motivacijo za razvoj podjetniškega učenja. Raziskava ugotavlja, katere kategorije akademskih veščin se pri učencih najbolj razvijajo z uporabo sistema Moodle pri poučevanju. Glavni cilj te raziskave je prikazati odnos študentov pedagogike na Filozofski fakulteti v Osijeku do uporabe sistema Moodle.

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KEYWORDS: Moodle system, technological consequences, academic skills, innovative methods, learning and teaching

ABSTRACT – The systematic introduction of e-learning contributes to the quality of higher education and is based on learning outcomes, with students in the center of the educational process; the development of appropriate and innovative teaching and learning methods, which can stimulate student motivation for learning; and academic skills development and creative and research work. The labor market is constantly changing, as are the skills, abilities and qualifications required. Academic skills are necessary for students to successfully complete their studies, build a career, be capable of lifelong learning, enter the labor market, and be motivated for developing entrepreneurial learning. The research will determine which categories of academic skills are most developed by students while using the Moodle system in their classes. Thus, the main purpose of this research will be to show the attitudes of students of Pedagogy at the Faculty of Humanities and Social Sciences in Osijek, according to the use of the Moodle system in teaching.

1 Introduction

We live in a fascinating time which shows a swift progress in technology and an information revolution, during which it is necessary, now more than ever, for each individual and for the entire society to continuously and quickly adjust to any changes. Knowledge derived from the STEM fields (Science, Technology, Engineering and Mathematics) turns the wheel of change soaring on the wings of technological progress. Any society which does not want to remain on the margins of progress in the modern world must understand the importance of investing in STEM disciplines because the key to the progress of every country and nation lies in them. Nowadays, we are witnesses of an invisible hand of the market which simply erases the traditional industries and

businesses which did not know how to or did not want to adapt to new circumstances and realities. For those reasons, it is crucial to become aware of the importance of connecting e-entrepreneurial learning and encouraging the development of academic skills within the limits of a new age of e-learning (Nadrljanjski, Nadrljanjski & Bilić, 2007).

Higher education could be seen as a focal point of knowledge and its application; an institution which makes a great contribution to economic growth and development through fostering innovation and increasing higher skills. It is viewed as a way to improve the quality of life and address major social and global challenges. Higher education is broadly defined as one of the key drivers of growth performance, prosperity and competitiveness, especially for eastern Croatia, i.e. the Slavonia-Baranja County. UNESCO says its social role provides the link between the intellectual and educational role of universities on the one hand and the development of society on the other. Enhancing skills holds the key to higher living standards and well-being. Investing in knowledge creation and enabling its diffusion is the key to creating high-wage employment and enhancing productivity growth. Here is an overview of the most important roles of higher education in today's economy:

- creating a quality workforce,
- supporting business and industry,
- carrying out research and promoting technologies.

Higher education is a technology and innovation driver. One of the missions of modern universities is to find solutions to big challenges and to conduct research within global priority areas, contributing to social outcomes such as health and social engagement. It is often aimed at designing technologies that result in new products and supplying advanced technology for use. It is for these reasons that people are being made aware of the impact of new e-learning platforms such as the Moodle system.

E-learning systems play an important role in education and are almost indispensable in today's education and the development of entrepreneurial learning. It has been proven that the quality of teaching in educational institutions with implemented e-learning solutions rises significantly compared to a traditional approach to teaching (Prensky, 2001). There are several advantages that e-learning brings as a part of the education system, primarily flexibility, easier access to information, increased interaction and motivation among students (Arkorful, 2014, Lasić-Lazić, 2014). A consequence of the implementation of IT technologies in everyday life is a transformation from an industrial to an information society which is becoming a society based on knowledge. Using e-learning as a complementary teaching method, a widely accepted blended learning model (Singh, 2003) is successfully achieved, through which learning methods are improved and entrepreneurial learning sources are expanded especially among students attending faculties of teacher education. The e-learning system enables, in many ways, the advancement of the teaching process, i.e. the learning and teaching methods.

The significance of the Moodle system for furthering academic skills

By analyzing the processes which develop in higher education, the key elements that are carried out as part of the e-learning system are distinguished, such as implementation, i.e. the introduction of the Moodle system to higher education institutions. A key change comes from the need to redefine the education system as a whole. Old

education paradigms are becoming inefficient in the modern world of innovations for which we need to prepare our younger generations from an incredibly young age (Eisenberg, 2008).

The labor market is constantly changing, thus also changing the necessary skills, capabilities and qualifications. Academic skills are necessary for students to successfully finish their studies, build a career, become capable of lifelong learning, enter the labor market, and be motivated for the development of entrepreneurial learning. The topic of this study arose out of those reasons, namely to indicate the significance of a purposeful connection between e-learning, academic skills and the influence of the Moodle system on developing entrepreneurial learning to more easily integrate students into the labor market and to suppress grey economy, especially concerning the labor market of the Slavonia-Baranja County.

A new paradigm of higher education institutions which is frequently appearing in the European area and beyond is the entrepreneurial university which is entrepreneurial in every sense of the word, from the leadership and the organization of the institution, the orientation of the education process which awakens the entrepreneurial spirit in its students, the support for entrepreneurial ideas and ventures, the digital transformation of archaic processes, the efficient exchange of knowledge and cooperation, internationalization, and impact measurement. These determinants are the characteristics of future universities that redefine the purpose of universities, their goals, mode of operation, and their effect on society. This study proceeds from the basic hypothesis which assumes that the Moodle system can be used to facilitate the development of students' academic skills.

Academic skills are a set of skills that include knowledge and capabilities in the areas of listening, memorization and retention, reading comprehension, note-taking, organization and time management, motivation, teamwork, controlling test anxiety and the like. These skills are essential for students if they are to successfully finish their studies, build a career, and be capable of lifelong learning. Hardworking and active students who are prepared to invest additional time and effort to work in a team in order to successfully complete a given task have well-developed academic skills. It is exactly those qualities, such as diligence, perseverance, investment, motivation, time management and the capability to work in a team, that make them more competitive on the labor market and allow them faster employment (Boone, 2013). All this leads to the development of management skills which include conceptual skills, technical skills, social and people skills, leadership skills, planning, organization, controlling, shaping skills, etc. which can become a preventive measure against the influence of grey economy and, for ease of reference, in a world heavily dependent on the labor market. This study starts with the basic hypothesis which assumes that the Moodle system can, as a form of e-learning, help students and promote the skills which enable them to successfully achieve their goals and organizational assignments during their studies in order to successfully finish their studies in time through entrepreneurial learning.

2 Methodology

The research was conducted at the Faculty of Humanities and Social Sciences Osijek on undergraduate and graduate students of Pedagogy in the period from 20 November to 20 December 2019. The survey method utilized the Google Docs application in which the students filled in the survey online. A quantitative methodology was used as part of SPSS data processing. The following descriptive statistics methods were used: frequency analysis and calculation, percentage analysis and calculation, chi-squared test (χ^2) and the correlation coefficient (Cramer's V (ρc) Coefficient). In total, 112 respondents were included, 99 % of whom were female respondents and 1 % male respondents. The average age of the respondents at the time of examination was from 19 to 23 years old. The basic descriptive data was calculated for each variable used in the study.

Research goal

The research undertaken aimed to affirm which categories of academic skills were developed the most by students who were using the Moodle system during their course. Therefore, the main goal of this research is to present the results of the opinions of pedagogy students, attending the Faculty of Humanities and Social Sciences Osijek, on the usage of the Moodle system during their studies. The research attempted to gain insight into the frequency of teachers' use of the Moodle system. This research will be used not only by professors as a representation of skill development in students, so that in their future work they can work more on the development of poorly developed skills, but also by various centers dealing with lifelong education. Education raises people's productivity and creativity, and promotes entrepreneurship and technological advances. In addition, it plays a crucial role in securing economic and social progress, and improving income distribution.

3 Results and discussion

In this part of the study the most significant results of the research will be presented.

Table 1. Respondents' data displayed according to their dual degree

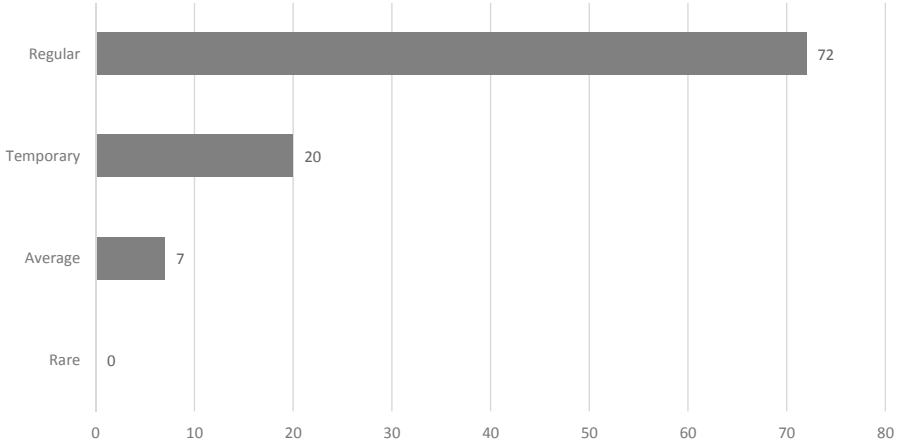
Dual Degree	*English Language – Pedagogy*	*Croatian Language – Pedagogy*	*Hungarian Language – Pedagogy*	*Sociology and Pedagogy*	*History and Pedagogy*	*N*
	35 %	38 %	8 %	6 %	12 %	100 %

Table 1 indicates that most students have enrolled in or study Croatian Language and Literature with Pedagogy (38 %, M = 0.37, SD = 0.44), followed by English Lan-

guage and Literature with Pedagogy (35 %, M = 0.47, SD = 0.64), then History and Pedagogy (12 %, M = 0.44, SD = 0.39).

A statistically significant correlation was indicated ($\chi^2 = 139.12$, df = 2, $p < 0.05$, Cramer's V = 0.19) where students who study the combination of English Language and Literature with Pedagogy are more aware of the role and significance of the Moodle system for the promotion and development of academic skills compared to other fields of study. Furthermore, by testing the statistical significance, it was shown that most students believe that the Moodle system was a very important investment in education as a form of e-learning, which was important for faculties of teacher education in order to reduce the unemployment rate, at a level of statistical significance less than 1 % ($p \leq 0.01$).

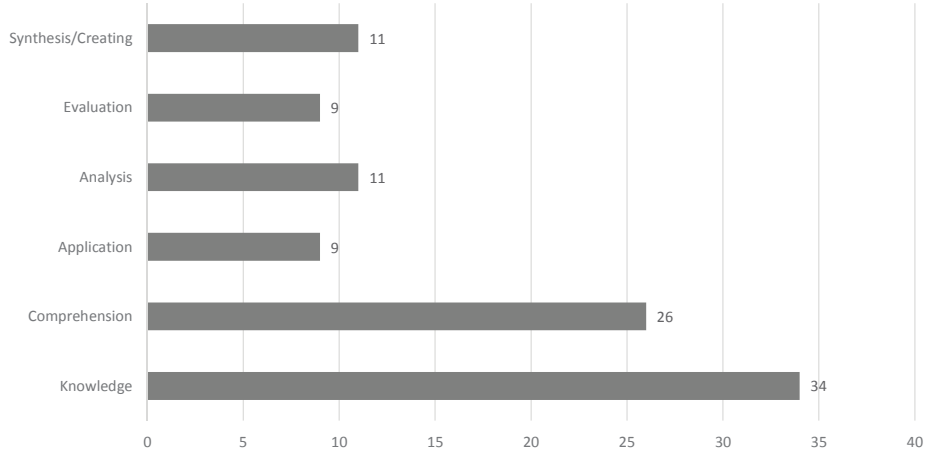
Graph 1. Respondents' assessment of the use of the Moodle system as part of their education during their studies



Graph 1 indicates respondents' opinions on the frequency of use of the Moodle system in teaching during their studies. Most students are thought to regularly use the Moodle system in their studies (73 %, M = 0.61, SD = 0.5).

A statistically significant correlation ($\chi^2 = 149.12$, df = 3, $p < 0.05$, Cramer's V = 0.017) was obtained between students who realized the significance of the influence of Moodle on adopting and promoting academic skills in the study field variable; that is, students who study Croatian Language and Literature and Pedagogy are more aware that the Moodle system can help develop academic skills than are students in other fields. All of the above may be indicators that teachers in the Departments of Pedagogy and Croatian Language and Literature use the e-learning method through the Moodle system more often and thus contribute to the development of students' academic skills.

Graph 2. Review of satisfaction data (quantity and quality of information) obtained in the course provided by students from Moodle



Graph 2 indicates that the majority of students are generally satisfied (34%, M = 0.74, SD = 0.6) with the amount and quality of the information received in the course from Moodle. The following data refers to the respondents' opinions on certain professional competencies that they consider essential for the auxiliary professions. The data is presented in Table 2.

Active listening (paraphrasing and reflecting) (51.92%, M = 0.41, SD = 0.49) is very important in first place, followed by establishing a quality relationship with professors in second place (23.07%, M = 0.31, SD = 0.51).

A statistically significant correlation ($\chi^2 = 127.12$, df = 4, $p < 0.05$, Cramer's V = 0.13) was obtained between students studying another foreign language in combination with pedagogy. Thus, students who study English or Hungarian with Pedagogy have become more aware of the role of active listening as a very important variable of assistive proficiency compared to students who do not study a foreign language.

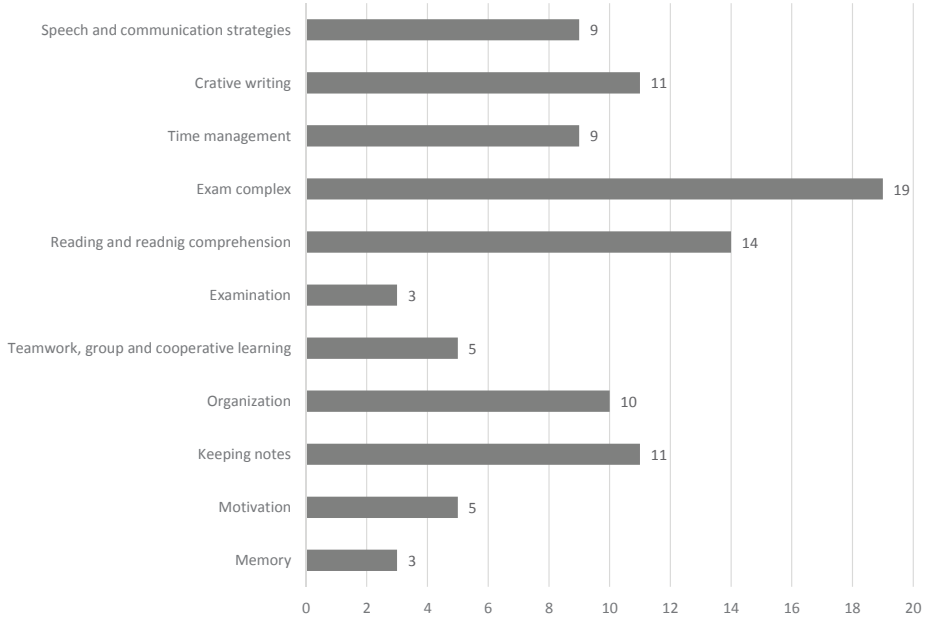
All of this points to the fact that teachers from all departments should use the Moodle system more actively to help develop students' academic skills and to realize the importance of changing educational paradigms with the help of information and communication technologies. Today, more than ever, interdisciplinarity and interconnection between professions, especially in the technical, social and artistic fields, is needed to create new values and products (Etherington, 2008).

Table 2. Respondents' opinions on the importance of professional competencies for the auxiliary profession

Variable	*1*	*2*	*3*	*4*	*5*	*N*	x^2	**df*	**p*
Establishing a quality relationship with professors	17.30%	17.30%	11.53%	30.76%	23.07%	100%	14.236	4	0.051
Active listening (paraphrasing and reflecting)	5.76%	9.61%	12.50%	20.19%	51.92%	100%	19.236	1	0.032
Approaching the user with empathy and understanding	9.61%	10.57%	23.07%	15.38%	21.15%	100%	54.234	5	0.054

Note: An original Likert-type scale with anchors was used for each statement: 1 – strongly disagree, 2 – mostly disagree, 3 – neither agree nor disagree, 4 – mostly agree and 5 – completely agree, agree.

Graph 3. Respondents' self-assessment of the types of academic skills where the Moodle system assisted in their acquisition



Note: For each skill, students determined the degree of agreement: 1 – I totally disagree; 2 – I mostly disagree; 3 – I neither agree nor disagree; 4 – I generally agree; 5 – I totally agree.

Although technological innovations and the amount of data that surrounds us are developing at an exponential rate, humans are still, with all their biological and cultural limitations, a factor that determines how well one can follow such changes and how one will adapt to them.

Without the cooperation of STEM fields with socially oriented professions, such as economics, sociology, psychology, law and other social sciences, it is impossible to start a successful business, find a need to be solved, develop a market, and find customers and make them happy. Graph 3 indicates respondents' self-assessment of the types of academic skills where the Moodle system assisted in their acquisition.

Graph 3 indicates that 19 % of students ($M = 0.24$, $SD = 0.14$) think that the type of academic skills the Moodle system helped develop is their Exam complex, followed by Reading and reading comprehension (14 %, $M = 0.66$, $SD = 0.37$), and then Keeping notes and Creative writing (11 %, $M = 0.41$, $SD = 0.67$) which were the least affected by Moodle.

A statistically significant correlation was obtained ($\chi^2 = 147.12$, $df = 3$, $p < 0.05$, Cramer's $V = 0.21$) whereby students studying Croatian Language and Literature and Pedagogy were more aware of the significance of the influence of the Moodle system on the development of certain academic skills and thus contributing to the development of the economy and society. Furthermore, statistical testing has shown that most students find it very important to invest in e-learning to increase teachers' interest in using the Moodle system as much as possible in their teaching in order to develop academic skills; the statistical significance level was less than 1 % ($p \leq 0.01$). Furthermore, a statistically significant correlation was obtained ($\chi^2 = 144.12$, $df = 1$, $p < 0.05$, Cramer's $V = 0.19$) among undergraduate and graduate students. Graduate students are more aware of the importance of connecting new technologies for development.

Changing the paradigm and role of higher education institutions towards entrepreneurship also leads to a change in the paradigm of learning and teaching (Garrison; Kanuka, 2004). Although theoretical knowledge is an important and necessary basis for training a qualified expert in any field, in today's age of rapid obsolescence of knowledge, especially in the high-tech sector, the overemphasis on theoretical knowledge alone does not properly prepare students for the challenges of an entrepreneurship-based economy.

The research also analyzed the issue of students' recommendations and their ideas for teachers in using the Moodle system. The question was open-ended and the most up-to-date answers were provided; some of them are:

- All professors should use it, not just a few.
- I'm not saying Moodle isn't good, but it bothers me that it's kind of opaque. -Professors should date their lectures, so we can print them. - Helps me prepare for the lesson.
- I think that all professors should use Moodle to make all their lectures and teaching materials accessible to all. This would make it easier for students, especially freshmen, to handle everything in one place.
- To get more teachers involved in using the Moodle system, since a number of professors are already using it and it is useful for downloading literature and the like.

- To get all teachers to Moodle and put in class materials and presentations because some professors do not use Moodle at all.
- Colloquium over Moodle.
- Use Moodle more in teaching as it helps improve learning.
- Colloquium via Moodle.
- Moodle can hold a lot of useful materials, which are not necessarily related to the required and additional literature; for example, some additional things or useful websites.
- To me personally, this is just an easier way for professors to send us materials, results, assignments, etc., but it doesn't help me acquire any competencies and skills.
- It would be helpful for teachers to update the presentations on Moodle that were processed that week so that I could revise the contents regularly.
- Moodle is a very good system, but unfortunately very few professors use it. Learning materials are mostly sent by regular e-mail. Moodle is definitely great and makes it easy for everyone.
- To use it more, because hardly anybody uses it, so I can't even say much about it.

With regard to the second problem posed in the research, an independent samples t-test was performed to determine which approach to learning is used to a greater extent by female students. The results of the t-test are shown in Table 3.

Table 3. Differences in using a gender-based approach to learning with Moodle

Access to learning	*Gender*	*N*	*M*	*SD*	*t*	*SS*	*Relevance*
Frontal / traditional	female	99.0%	55.43	9.416	3.041	353	0.003
	male	1%	56.45	8.126			
Hybrid approach / Moodle	female	99.0%	57.62	7.125	–0.654	353	0.050
	male	1%	53.25	8.521			

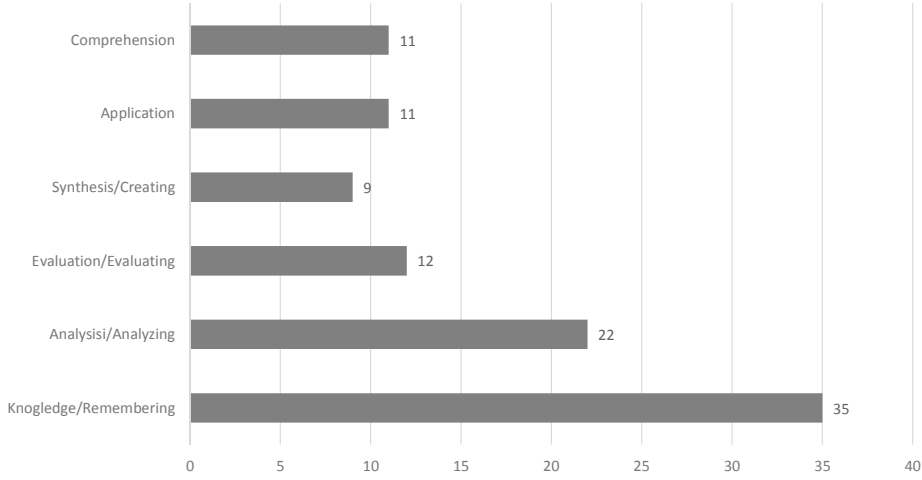
Note: N-number of participants, M-arithmetic mean, SD-standard deviation, SS-relevance.

Leven's test of homogeneity of variance of both variables is not significant; therefore, a homogeneity of variance of both variables can be assumed. Considering the results of the t-test, it can be concluded that there is a statistically significant difference in the application of an in-depth approach to learning among students with respect to the gender variable.

By comparing arithmetic means, it can be concluded that female students are more likely to adopt a hybrid approach to Moodle learning than male students. It must be borne in mind that the proportion of male respondents amounted to 1%. Education raises people's productivity and creativity, and promotes entrepreneurship and technological advances. In addition, it plays a crucial role in securing economic and social progress, and improving income distribution (Ozturk, 2008).

On the occasion of the forthcoming accession to the EU, efforts are being made in Croatia to stimulate the development of entrepreneurial competence as a key factor in promoting economic growth and competitiveness. Entrepreneurial competence, in addition to stimulating the growth of new businesses, influences the development of an entrepreneurial mindset and a more effective use of the creative potential of existing knowledge and skills. Therefore, the interest in educational programs that encourage and develop entrepreneurial competence is increasing, and it is through the introduction of Moodle that the basics for developing academic skills that lead to the development of entrepreneurial skills can be acquired.

Graph 4. Respondents' views on the impact of Moodle on the development of learning outcomes



Legend: Knowledge/Remembering: define, list, recognize; Comprehension/Understanding: characterize, describe, explain, identify, locate, recognize, sort; Application/Applying: choose, demonstrate, implement, perform; Analysis/Analyzing: analyze, categorize, compare, differentiate; Evaluation/Evaluating: assess, critique, evaluate, rank, rate; Synthesis/Creating: construct, design, formulate, organize, synthesize.

Graph 4 shows the results of students' opinions on the impact of the Moodle system on promoting and developing learning outcomes. Graph 4 indicates that 35 % of students (M = 0.44, SD = 0.64) think that Moodle mostly affected the development of Knowledge/Remembering, Analysis/Analyzing (22 %, M = 0.56, SD = 0.71) and Evaluation/Evaluating (12 %, M = 0.64, SD = 0.55).

4 Conclusion

Education is the future; it is necessary to advocate for its improvement and a more frequent implementation of the Moodle system as a part of the higher education system which encourages science and its relationship with the economy. Above all, it is necessary to systematically introduce e-learning which contributes to the quality of higher education and which is founded on the outcomes of learning. Academic skills are necessary for students to successfully complete their studies, build a career, be capable of lifelong learning, find their place in the job market, and gain the motivation for developing entrepreneurial learning. The research identified which categories of academic skills were most developed in students through the use of the Moodle system in teaching. The most developed skill is short writing, followed by teamwork, group and cooperative learning skills; speech and communication strategies are in third place, followed by the critical thinking and critical analysis skills. Moodle influenced the development of the skill of time management the least. A statistically significant correlation was obtained between students studying another foreign language in combination with pedagogy. Academic success is statistically significantly positively correlated with a hybrid and strategic approach to learning. Correlations are low to moderate.

Thus, students who study English or Hungarian with Pedagogy have become more aware of the role of active listening as a very important variable of assistive proficiency compared to students who do not study a foreign language. All of this indicates that teachers from all fields should use the Moodle system more actively to help develop students' academic skills and to realize the importance of changing educational paradigms with the help of information and communication technologies. This research is important not only for the benefit of college students, but also for investing in educational centers engaged in entrepreneurial learning for the benefit of the economy. The paper has pointed out the level of skills development among students, the importance of further development of skills through the use of ICT, and the need to sensitize teachers to the use of e-learning in teaching and the introduction of expert teaching systems and other modern teaching methods based on information and communication technology. As the labor market is constantly changing, so are the required skills, abilities and qualifications. It is through the development of skills that students acquire and develop their life and professional competencies, that is, they take their place in society and become competitors in the labor market, and thus can help with the development of economies, especially in the Osijek-Baranja County, suppressing emigration and the grey economy. They can also help with the development of motivation for a major change in educational paradigms, which should be based on the STEM area. Knowledge is the true basis of higher education; its production via research, its transmission via teaching, its acquisition and use by students. Hence, excellence must remain the prime objective of any institution of higher education, including universities in any country. These institutions are focusing resources on quality education, encouraging students and taking account of students' profiles and specific needs, strengthening teacher training and exposure to best working practices, and creating incentives to attract the most experienced teachers. Clearly the educational provisions within any given country represent one of the main determinants of the composition and growth of that country's output and exports, and constitute an important ingredient in a system's capacity to borrow foreign technology effectively.

Dr. Mirela Müller, Vlasta Svalina

Učinkovitost sistema Moodle pri pridobivanju akademskih veščin študentov

Pomembna značilnost informacijske dobe je nov odnos do znanja. Za informacijsko dobo je značilno vrednotenje informacij in znanja kot virov. Informacije so bile vedno potrebne in prisotne v znanosti, izobraževanju, umetnosti, kulturi in gospodarstvu. Vendar je sprememba, ki jo prinaša informacijska doba, hitrost njihovega pretoka, razpoložljivost in povezovanje v mrežo, ki jih omogoča tehnologija. Tradicionalni sistem poučevanja je vedno bolj zastarel in novi časi zahtevajo, da poučevanje in učni proces postaneta bolj aktivna in temeljita na pridobivanju novih kompetenc, ki jih bodo študenti potrebovali za preživetje na trgu dela. V informacijski dobi ustvarjanje znanja ni več izključno povezano s formalnim okoljem, ki ga npr. predstavljajo izobraževalne ustanove. Informacijsko dobo spremlja sprememba paradigme izobraževanja, kjer se fokus preusmeri iz učitelja na učenca. V sodobni informacijski dobi ni vprašanje, ali in kdaj naj informacijsko in komunikacijsko tehnologijo vključimo v izobraževanje, ampak kako. Uspešna integracija IKT pomeni vključevanje IKT v proces učenja in poučevanja ter v poslovni proces šole. Vključevanje IKT v proces učenja in poučevanja mora upoštevati dejstvo, da današnji učenci in njihovi učitelji spadajo v različne generacijske kategorije. Za spremljanje uspešnosti integracije IKT je treba razviti merilne instrumente in opredeliti kazalnike uspešnosti.

IKT ponuja številne možnosti prilagajanja učnih metod posameznim potrebam študentov. Uporaba novih tehnologij v procesu učenja in poučevanja odpira nove perspektive, ponuja nove priložnosti, hkrati pa predstavlja tudi dobro motivacijsko orodje pri poučevanju in s tem spreminja vzgojno paradigmo. Ena izmed novih perspektiv in priložnosti, ki jo prinaša nova tehnologija, je zagotovo koncept učenja na daljavo prek različnih platform, kot je Moodle. Platforma Moodle je že prisotna na številnih visokošolskih zavodih Republike Hrvaške. Vse večja uporaba IKT v izobraževanju je morala pripeljati do nekaterih sprememb v šolskem sistemu. Didaktične vsebine, ki se jih naučijo z uporabo IKT, postajajo zanimivejše, informacije so študentom lažje dostopne, metode poučevanja in učenja pa vse bolj raznolike, dinamične in ustvarjalne. To je prišlo do izraza po celem svetu v trenutni situaciji, ko so se morali učitelji in učenci zaradi covida-19 čez noč prilagoditi novemu načinu učenja. Uporaba IKT v izobraževanju je privedla do spremembe pedagoških vlog učiteljev in učencev. Vloga učitelja se je močno razširila in njegov pomen za vključitev IKT v pouk je velik, najpomembnejša sprememba vloge učencev pa je v povečanju in pomembnosti njegove samostojnosti. Pandemija covida-19 je privedla do velikih sprememb, zlasti v načinu delovanja univerz. Te spremembe na visokošolskih zavodih so vidne ne le v načinu delovanja izobraževalnega okolja, ampak tudi v delovanju samih profesorjev. Vse te spremembe, zlasti potreba po vseživljenjskem učenju, so pripeljale do druge spremembe, in to je v načinu poučevanja. Hiter življenjski slog in vse večja uporaba IKT v izobraževanju sta pripeljala do razvoja izobraževanja na daljavo in e-učenja (engl. e-learning). To je situacija s covidom-19 tudi pokazala in dokazala.

Izobraževalni sistem bi nas moral že od malih nog učiti, kako se spoprijeti s temi izzivi in kako uporabiti tehnologijo, ki nam je na voljo za premagovanje vseh ovir, s katerimi se bomo spoprijeli. A pogosto se zgodi, da tudi sami učitelji niso dovolj seznanjeni z možnostmi, ki nam jih ponuja tehnologija. Učitelji se pogosto soočajo s težavo pri izbiri tehnologije, ki bo na koncu olajšala, pospešila in obogatila njihov učni proces. Akademske veščine so interdisciplinarni predmet, ki vključuje znanje in tehnične spretnosti z več ožjih in širših znanstvenih in strokovnih področij, ki vključujejo, vendar ne izčrpno, poglavja iz uporabne splošne psihologije učenja, pozornosti, poslušanja, motivacije, spomina, upravljanja, logistike organizacije učenja, spretnosti tehnike timskega dela, osnovne komunikacijske spretnosti, teoretična in praktična znanja, povezana z upravljanjem časa (upravljanje s časom) ter razvojem kritičnega mišljenja in kritične analize. Izjemno pomembne so za prihodnost poklica in zadovoljstvo z delovnim mestom, saj spodbujajo tudi razvoj delovnih vrednot med študenti.

Takšna sistematična uvedba e-učenja prispeva h kakovosti visokošolskega izobraževanja na podlagi učnih rezultatov s študenti v središču izobraževalnega procesa, pa tudi k razvoju ustreznih in inovativnih metod poučevanja in učenja, ki lahko dvignejo motivacijo študentov za študij, razvoj akademskih veščin, ustvarjalno in raziskovalno delo. Trg dela se nenehno spreminja, prav tako pa tudi potrebne spretnosti, sposobnosti in kvalifikacije. Študenti z razvojem veščin pridobivajo, razvijajo svoje življenjske in poklicne kompetence, zavzemajo svoje mesto v družbi in postanejo konkurenčni na trgu dela. Akademske spretnosti so potrebne, da lahko študentje uspešno zaključijo študij, ustvarijo kariero in so sposobni vseživljenjskega učenja, vključevanja na trg dela in so motivirani za razvoj podjetniškega učenja. Sistemi upravljanja učenja (LMS) so aplikacije, ki služijo kot posredniki v procesu e-učenja. Namen sistema LMS je uporabiti obstoječe vire za zagotavljanje čim boljšega in najboljšega učnega okolja, zlasti za spodbujanje akademskih veščin. Nekateri od trenutno najbolj uporabljenih sistemov LMS v izobraževanju so: Blackboard Learning System (prej WebCT), Edmodo, Schoology, D2L (prej Desire2Learn) in Moodle. Filozofska fakulteta v Osijeku že vrsto let uporablja sistem Moodle. Sodobni splet ponuja nešteto možnosti, toda ravno sistemi za upravljanje učenja so se izkazali kot ključni del te nove tehnologije, zasnovane tako, da olajša proces organiziranja poučevanja in učenja. Med njimi se je sistem Moodle uveljavil kot eden vodilnih sistemov za upravljanje učenja, katerega naloga je olajšati proces poučevanja in učenja, in to je bilo dokazano med epidemijo covida-19. Ena najpomembnejših prednosti sistema Moodle je, da spodbuja sodelovanje in interakcijo med študenti, pa tudi sodelovanje učiteljev in študentov. Poleg tega Moodle spodbuja neodvisnost študentov in študentom pomaga pri samoocenjevanju svojega znanja. Študentu omogoča samostojno delo in učenje s hitrostjo, ki mu ustreza, na koncu pa mu omogoča izvajanje raziskav in ustvarjanje neodvisnih projektov. Trenutno še ni raziskav o učinkovitosti sistema Moodle pri pridobivanju akademskih znanj študentov, zlasti na pedagoških šolah, kjer se izobražujejo študenti, ki bodo delali na pedagoškem področju. To je bil glavni namen te raziskave. Vse z razlogom, ker sodobno izobraževanje spodbuja razvoj veščin vseživljenjskega učenja, v katerem ima pomembno vlogo samoregulacija kot samousmerjen postopek, s katerim študentje duševne sposobnosti pretvorijo v akademske spretnosti.

Raziskava bo določila, katere kategorije akademskih veščin se pri študentih pedagogike najbolj razvijajo z uporabo sistema Moodle pri poučevanju. Glavni cilj te

raziskave bo torej prikazal odnos študentov pedagogike na Filozofski fakulteti v Osijeku do uporabe sistema Moodle pri poučevanju, skušali pa bodo dobiti vpogled v to, kako pogosto učitelji uporabljajo sistem Moodle. Vse z razlogom, da bi študentom, bodočim strokovnjakom, zagotovili kakovostno delo na njihovem področju, da bodo lahko v prihodnosti preživeli na trgu dela in se naučili, katere vrste akademskih znanj lahko pridobijo med študijem po sistemu Moodle.

Hrvaška akademska in raziskovalna mreža (CARnet) je leta 2013 ustvarila programsko orodje Loomen, ki temelji na sistemu Moodle, s čimer je omogočila ustvarjanje digitalnih učnih gradiv in spletnih tečajev ter učenje na daljavo vsem učiteljem, profesorjem in drugim izobraževalnim delavcem v republiki. Hrvaška je zelo pomagala pri vzdrževanju e-učenja med epidemijo covida-19. Ker se Moodle uporablja v 232 državah po vsem svetu, je razumljivo, da obstaja veliko raziskav, ki obravnavajo uporabo sistema Moodle pri poučevanju in zadovoljstvo uporabnikov z njim. Raziskavo so na Filozofski fakulteti v Osijeku izvedli študenti pedagoške smeri na dodiplomski in podiplomski ravni, in sicer v obdobju od 20. novembra do 20. decembra v akademskem letu 2019/2020. V raziskavi je bila uporabljena metoda ankete prek aplikacije Google Docs in je bila zaključena prek spleta.

Izobraževalne ustanove morajo spremeniti in na novo določiti svojo vlogo. Informacijske in komunikacijske tehnologije spreminjajo način poslovanja, način učenja, mnenja in medosebne odnose. Nova vloga visokošolskih zavodov je ustvariti ekonomijo znanja, kajti osnovna gospodarska vira družbe nista več kapital in delo, temveč so znanje, akademske spretnosti in sposobnosti študentov, ki omogočajo družbi blaginjo. Znanstveniki se tudi strinjajo, da je ta generacija študentov v virtualnih okoljih socialno močno povezana, v skupinah se radi družijo, ustvarjajo in se učijo. To je namen te raziskave.

Rezultati kažejo, kakšna je vloga sistema Moodle za pridobivanje in spodbujanje akademskih veščin študentov pedagogike. Zato je v tem prispevku dan poudarek stopnji razvoja spretnosti pri učencih, pomembnosti nadaljnjega razvoja veščin z uporabo IKT in senzibiliziranju učiteljev za uporabo e-učenja pri poučevanju ter uvedbi strokovnih učnih sistemov in drugih sodobnih učnih metod, ki temeljijo na informacijski in komunikacijski tehnologiji.

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Calling at Work – Important Predictor of Job Satisfaction in University Teachers

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Znanstveni članek

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KLJUČNE BESEDE: zadovoljstvo pri delu, poslanstvo, pozitivni psihološki kapital, delovni zanos, visokošolski učitelji

POVZETEK – V raziskavi sva proučevali povezanost občutka poslanstva pri delu, psihološkega kapitala in poslanstva pri delu z delovnim zadovoljstvom na vzorcu visokošolskih učiteljev in asistentov. Raziskave kažejo, da je zadovoljstvo zaposlenih eden izmed pomembnih napovednikov uspešnosti organizacij, tudi vzgojno-izobraževalnih. Visokošolski učitelji in sodelavci so redko proučevana skupina, ki pa ima pomemben vpliv na kakovost visokošolskega izobraževanja. Namen raziskave je bil proučiti, kako posamezni notranji pozitivno-psihološki viri visokošolskih učiteljev (občutek poslanstva pri delu, pozitivni psihološki kapital in delovni zanos) prispevajo k njihovemu delovnemu zadovoljstvu. Na vzorcu 142 visokošolskih učiteljev in sodelavcev različnih habilitacijskih nazivov (od asistentov do rednih profesorjev) sva ugotovili, da se vse proučevane spremenljivke statistično pomembno pozitivno povezujejo z delovnim zadovoljstvom. Izmed vseh spremenljivk pa se je izkazal kot najpomembnejši napovednik delovnega zadovoljstva občutek poslanstva pri delu.

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KEYWORDS: job satisfaction, calling, psychological capital, work flow, university teachers, higher education

ABSTRACT – We examined the relationship between the sense of calling at work, psychological capital, work flow and job satisfaction among university teachers. Job satisfaction influences organizational quality and leads to positive organizational outcomes in educational institutions. In Slovenia, research on the university population is rare, so we wanted to study some characteristics of a specific population of university teachers. We wanted to investigate how some internal psychological resources (a calling at work, positive psychological capital and work flow) can contribute to the job satisfaction of university teachers. The sample consisted of 142 university teachers of different affiliations, namely 91 women and 51 men from the University of Ljubljana, the largest university in Slovenia. All internal psychological resources were significantly related to the job satisfaction of university teachers, with the sense of calling being the most important predictor.

1 Introduction

When observing a trend in the research studies on teachers, there is an interesting finding that the number of studies decreases as we move up the educational vertical (Habe & Tement, 2016b). University teachers are rarely studied as a specific research population, although the nature of their work is specific and consists of several work tasks. According to Oshagbemi (2000), their main tasks are teaching, research, administration and management, while, according to Aškerc (2014), they are scientific research, teaching, and professional work. Another interesting observation is that research on university teachers focuses mainly on competencies and less on the core characteristics that define excellent teachers. Attention in educational research has been focused mainly on

cognitive outcomes, especially on academic achievement (Rutter & Maughan, 2002). On the other hand, Toker (2011) listed several research studies by other authors on the job satisfaction of academic staff. However, internal positive psychological resources, such as the sense of calling, psychological capital and work flow, have rarely been studied in a university population.

Our research topic falls into the field of positive psychology, where research studies are organized into three main areas: positive emotions, positive traits and positive institutions (Seligman & Csikszentmihalyi, 2000). The first area focuses on the well-being and positive emotions of individuals, the second on the promotion and development of positive personality traits (e.g. character strengths), and the third on organizations that facilitate positive emotions and strive to develop positive traits (Huebner et al., 2009). Universities or other tertiary educational institutions should become positive organizations in which positive emotions of students and employees can be stimulated or enabled, and positive personality traits can be systematically or spontaneously encouraged and developed. The first step towards this goal is the scientific investigation of factors that contribute to the well-being of students and staff in higher education, apart from being mainly focused on academic achievement or other cognitive outcomes. Psychosocial factors, which are rooted in the core personality characteristics, play an important role in the quality of education even at the tertiary educational level (Peklaj & Pečjak, 2015). Higher education institutions in which the management understands the importance of human capital management are also more successful and more sought-after by students (Starc, 2015).

Our main research objective was to investigate some positive psychological concepts which, according to previous research studies, contribute significantly to work efficiency and job satisfaction (e.g. Verbrugge, 2015) and lead to a better quality of the educational process (Klaver & Ganzevoort, 2015).

Positive organizational behaviour in the educational context

Through the lens of positive psychology, researchers investigate factors that contribute to the well-being of people in different environments. Adults often spend more than a third of their days at work, so it is an important question of how to develop positive organizational behaviour (POB) that can reduce stress and lead to a perceived subjective well-being of employees (Luthans & Youssef, 2009). The aim of Luthans (2002), who first described the concept of positive organizational behaviour, was to shift the focus of research from the study of negative factors, such as stress and the dysfunctional behaviour of employees, towards the optimal functioning of an individual in an organization. POB is defined as "the study and application of positively oriented human resource strengths and psychological capacities that can be measured, developed and effectively managed for performance improvement in today's workplace" (Luthans, 2002, p. 59).

Universities are organizations with a specific organizational structure and particular characteristics. University teachers are pedagogical staff who teach at universities (e.g. teaching assistants, assistant professors, associate professors and professors, lecturers, lectors, instructors, etc.). They represent a population that is rarely studied from the

perspective of the working environment and its influence on their well-being. As mentioned above, they work on different tasks. They can also be important role models for future professionals in various fields, such as teachers, engineers, lawyers, doctors, scientists, economists, social workers, humanists, politicians, etc.

Positive psychological capital

Luthans, Youssef & Avolio (2007) identified four constructs that are linked together in the concept of positive psychological capital (PsyCap): self-efficacy, optimism, hope and resilience. Psychological capital represents a positive psychological developmental state which is characterized by an individual who

- takes on challenging tasks in order to achieve success (self-efficacy),
- has positive expectations of his or her success in the present and future (optimism),
- is committed to his or her goals and finds new ways to achieve them in case of obstacles (hope), and
- is able to effectively manage problems and unpleasant conditions in order to achieve success (resilience) (Luthans, Youssef & Avolio, 2015).

Even if psychological capital is relatively stable over time, it has a high potential for change, i.e. it can be developed under the right conditions. It is related to a specific area (Avey, 2014), which means that a person can be optimistic about being successful in his or her personal life, but not to the same extent in his or her professional life.

The psychological capital has also been examined in the educational context. Research shows that it plays an important role in maintaining teachers' motivation to work and is an important predictor of work engagement (Schoor, 2015). It has a positive influence on teachers' job satisfaction and their commitment to the organization (Youssef & Luthans, 2007), on performance quality (Ganotice et al., 2015; Luthans, Youssef & Avolio, 2007), and is positively related to teachers' psychological well-being (Ganotice et al., 2015).

Less research can be found on university employees. In a study by Shen et al. (2014), PsyCap was negatively associated with depressive symptoms and partially mediated the link between occupational stress and depressive symptoms. Aftab, Rashid & Asghar Ali Shah (2018) investigated the interaction between personality (extraversion and conscientiousness) and organizational citizenship behaviour. Zehra & Husain (2015) found that the spiritual values of university employees (teachers and non-lecturers) were positively related to PsyCap. In a study by Jun, Hanpo, Ruiyang & Jinyan (2017) PsyCap was negatively associated with job burnout among university teachers. Heng, Ming, Zou, Li & Castaño (2020) found a moderating role of PsyCap between the teaching vs. research conflict among university teachers and job burnout. Youngzhan (2018) reported that the PsyCap of university teachers positively predicted their sense of meaning in life and well-being. In summary, some studies focus on a relationship between PsyCap and the negative aspects of work (e.g. burnout, depression), and fewer on the positive internal resources (e.g. meaning of life, values).

Work flow

Flow is a mental state of operation in which a person is fully immersed in a feeling of energized focus, full involvement and success in the process of an activity (Csikszentmihalyi, 2002). In the organizational environment, Bakker (2005) defines work flow as a short-term peak experience at work characterized by absorption, work and intrinsic work motivation. Absorption refers to a total concentration and immersion in the activity; work enjoyment indicates a very positive judgement of the quality of working life; and intrinsic motivation refers to the need to perform a particular job-related activity with the aim of experiencing inherent pleasure and satisfaction in the activity (Bakker, 2005; Deci & Ryan, 1985).

In a study of teachers, Bakker (2005) found that work flow in music teachers correlated positively with work flow in their students. Furthermore, in a study of secondary school teachers, Salanova et al. (2006) found reciprocal relationships between personal resources (e.g. self-efficacy beliefs), organizational resources (including social support, climate and clear goals), and work-related flow.

In a sample of Slovenian university teachers, optimism, variety and autonomy were the most important predictors of the work flow, with autonomy being the most important predictor for all dimensions of the work flow (absorption, work and inner motivation) (Habe & Tement, 2016a). The authors suggested that university teachers should consider how they could increase their own autonomy and job variety. Taking into account the control variables (gender, academic rank and age), women and teachers with higher academic ranks experienced greater absorption and intrinsic work motivation.

Teachers' calling at work

Teachers often report that they feel a calling at work (Bullough & Hall-Kenyon, 2012; Dinham & Scott, 2000; Gradišek, Pečjak, Rijavec & Jurčec, 2020). Such teachers feel that their work contributes to their personal fulfilment and that their work has a positive effect on others – on their students or on society in general (Bellah et al., 2008; Hall & Chandler, 2005; Wrzesnievski, 2003; Wrzesnievski et al., 1997). Some find their personal contribution to society more important than the material benefits of their work; teaching makes these teachers happy and is one of the key areas in their lives. Therefore, they are willing to take on some additional responsibilities and tasks (Lobene & Meade, 2013; Serow, 1994; Wrzesnievski, 2003; Wrzesnievski et al., 1997). Research shows many positive aspects of the perception of teaching as a calling, such as commitment to students and energetic, enthusiastic teaching (Buskist, Benson & Sikorski, 2005); the awareness of having a positive influence on students (Day, Sammons, Stobart, Kington & Gu, 2007); and a greater focus on student's well-being (Bullough & Hall-Kenyon, 2012). Such teachers have high expectations of their professional role and set themselves high work goals. They strive for improvement (Bullough & Hall-Kenyon, 2012). Research shows that teachers with a sense of calling are more satisfied with life and work (Wrzesnievski et al., 1997); work more efficiently (Serow, 1994); are more committed to their organization and less inclined to change jobs (Lobene & Meade, 2013); and have a positive attitude towards work (Willemse & Deacon, 2015).

Aims of the study

Previous research suggests that positive psychological capital, work flow and a sense of calling at work correlate positively with several positive outcomes in different workplaces and in different working populations. For example, positive psychological capital (Luthans et al., 2007; Youssef & Luthans, 2007) and work flow (Bishay, 1996; Demerouti, 2006; Habe & Tement, 2016a; Weis & Cropanzano, 1996) are positively associated with job satisfaction and with the perception of work as a calling (Gradišek, 2014; Hall & Chandler; 2005; Lobene & Meade, 2013; Wrzesnievski et al., 1997).

Job satisfaction represents a subjective evaluation of one's own life in the work domain (Diener, Suh, Lucas & Smith, 1999). It comprises the perception of one's own working environment and an interpretation of the working conditions (Johnson & Johnson, 2000). Among other things, job satisfaction is positively linked to work efficiency and negatively linked to the propensity to change jobs (Lobene & Meade, 2013), and thus represents an important aspect of one's own perception of work. University teachers play an important role in achieving the goals of a higher education institution (Capelleras, 2005). Since job satisfaction is related to performance, organizational productivity and other positive outcomes, employee satisfaction should be a desirable attribute in higher education institutions.

The aim of the present study is therefore to

- investigate the relationship between the sense of calling at work, positive psychological capital and work flow, and
- examine the relationship of these three variables to job satisfaction in a sample of university teachers.

2 Method

Participants

The participants in the study were 142 university teachers (91 female and 51 male) employed at the University of Ljubljana, Slovenia. The age range was 24–66 years (M = 47.27). Table 1 shows the structure of the sample in terms of academic titles.

Table 1. Structure of the sample according to academic title

Academic title	*%*
Assistant professor	25
Full professor	24
Associate professor	22
Teaching assistant	11
Teaching assistant with a PhD	10
Other (lector, lecturer, etc.)	8

Instruments

Participants filled-in the following instruments:

- The Psychological Capital Questionnaire (PCQ; Luthans, Avolio, Avey & Norman, 2007; translation into Slovenian language by Smole, 2015), which consists of 24 items, grouped in 4 scales: hope, efficacy, resiliency, and optimism. We used a 5-point Likert scale (from 1 = strongly disagree, to 5 = strongly agree), although the authors used a 6-point response scale.
- The Work-Related Flow Inventory (WOLF; Bakker, 2008; translation into Slovenian by Habe & Tement, 2016a). There are 12 items in the inventory that are rated on a 5-point scale (1 = never, 5 = often).
- The Work-Life Questionnaire (WLQ; Wrzesniewski et al., 1997; translated into Slovenian for the purpose of this study). The questionnaire can be used either in the form of a scenario in which the participants assess the correspondence with the description of work as a job, a career and a calling; or in a 10-item set in which 7 items measure the perception of work as a job or a calling (these items usually load on one job/calling factor), and a career (3 items). In the present study, only 7 items were used to measure the perception of work as a calling. We used a 5-point response scale (1= not at all like me; 5 = completely like me).
- Job satisfaction was measured with the adapted version of the widely used Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen & Griffin, 1985) for the work domain (Gradišek, 2014). There were 5 items, rated on a 5-point scale (1 = totally disagree, 5 = totally agree).
- Perceived work efficiency was assessed with one item: "How efficient do you perceive yourself at work?" on a 10-point scale (1 = inefficient, 10 = efficient).

Procedure

The data was collected in June 2018 in the form of an on-line survey. Contact persons at the faculties of the University of Ljubljana were asked to forward the online survey by e-mail to their university teachers. The participants received an invitation letter with a link to the questionnaire via their faculty e-mail address. Participation in the study was anonymous and voluntary. The data were analysed in the statistics programme IBM SPSS 22.

3 Results

University teachers reported the presence of a sense of calling at work (M = 3.74), as well as psychological capital and flow, with all means being above average (around M = 3.70). This means that they recognize their internal resources in their work. Their job satisfaction is slightly lower compared to other variables, but still above average (M = 3.41). They perceive their work efficiency as very high (M = 8.06).

Table 2. Descriptive statistics

	N	*Min*	*Max*	*M*	*SD*
Calling	142	2.00	5.00	3.74	0.53
Efficiency (PsyCap)	142	1.50	5.00	3.78	0.62
Hope (PsyCap)	142	2.00	5.00	3.76	0.58
Resilience (PsyCap)	142	2.33	5.00	3.79	0.46
Optimism (PsyCap)	142	2.17	4.83	3.69	0.54
Flow	142	1.83	4.67	3.67	0.49
Job satisfaction	142	1.00	4.80	3.41	0.67
Work efficiency	142	3.00	10.0	8.06	1.18

Table 2 shows the correlations between the measured variables. The age of the participants correlated positively with the self-reported work efficiency and with the work flow. The PsyCap scales correlated with each other, with the highest correlation between resilience and optimism ($r = 0.600$) and the lowest between efficiency and resilience ($r = 0.461$). Calling correlated positively with all variables except age; the highest with flow ($r = 0.623$) and the lowest with resilience ($r = 0.193$). Flow correlated with all variables; the lowest correlation was with age ($r = 0.207$). Job satisfaction also correlated with all measured variables except age.

Overall, calling, psychological capital scales and flow correlated significantly with job satisfaction and self-perceived work efficiency.

Table 3. Pearson's correlations between measured variables

	1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*
1	Age	0.180*	0.225	0.091	0.082	0.034	0.165	0.041	0.207*
2	Work efficiency		0.585**	0.464**	0.420**	0.335**	0.478**	0.586**	0.472**
3	Efficiency (PsyCap)			0.489**	0.461**	0.463**	0.411**	0.382**	0.410**
4	Hope (PsyCap)				0.563**	0.590**	0.286**	0.454**	0.424**
5	Resilience (PsyCap)					0.600**	0.193*	0.434**	0.337**
6	Optimism (PsyCap)						0.277**	0.467**	0.380**
7	Calling							0.468**	0.623**
8	Job satisfaction								0.487**
9	Flow								

Note: * $p < 0.05$; ** $p < 0.01$

To investigate the extent to which calling, psychological capital and flow contribute to job satisfaction, we conducted a hierarchical multiple regression analysis. In the first step we added gender and age as demographic variables; in the second step we added psychological capital (four psychological capital scales – efficiency, hope, resilience and optimism); and in the third step we added calling and flow (Table 3).

Table 4. Results of a hierarchical multiple regression

Step		R^2	*Job satisfaction*	*B*
1	Demography	0.004	Gender	–0.047
			Age	0.036
2	Psycap	0.297***	Gender	–0.053
			Age	–0.027
			Efficiency (PsyCap)	0.114
			Hope (PsyCap)	0.193*
			Resilience (PsyCap)	0.149
			Optimism (PsyCap)	0.214
3	Calling And Flow	0.406***	Gender	–0.036
			Age	–0.071
			Efficiency (PsyCap)	0.002
			Hope (PsyCap)	0.129
			Resilience (PsyCap)	0.166
			Optimism (PsyCap)	0.159
			Calling	0.257**
			Flow	0.166

The psychological capital explained 30 % of the variance in the job satisfaction of university teachers. After adding calling and flow as independent variables in step 3, a further 11 % of the variance in job satisfaction was explained. This was a significant contribution ($F(2.133) = 12.21$, $p < 0.001$)). Overall, all variables (psychological capital, calling and flow) explained 41 % of the variance in job satisfaction. However, calling was the only significant predictor in the third model, which means that the perception of work as a calling contributes more to the job satisfaction of university teachers than psychological capital or flow.

4 Discussion

In the present study, we investigated the relationship between some internal resources of university teachers – positive psychological capital, work flow and the sense of calling at work – and their relationship to job satisfaction.

In line with previous research (e.g. Luthans et al., 2007; Luthans, Youssef & Avolio, 2007), the scales of positive psychological capital (efficacy, resilience, hope and optimism) in our sample of university teachers were positively related to job satisfaction and to self-reported work efficiency. University institutions are labour-intensive and their effectiveness often depends on their staff (Toker, 2011), so job satisfaction is an important organizational characteristic of university institutions. An important feature of psychological capital is that it can be fostered and developed; therefore, it could be used as an intervention variable to achieve higher job satisfaction among university teachers.

The work flow is another important factor in job satisfaction. Interestingly, in our sample of university teachers, the work flow increases with age. Absorption, work enjoyment and intrinsic work motivation are key elements of the work flow (Bakker, 2005); therefore, we can speculate that university teachers enjoy their work more with age, are more motivated, and more absorbed in their work. Their competence in research and (hopefully) teaching also increases with age. An interesting research finding in higher education is a positive relationship between the work flow of music teachers and the work flow of their students (Bakker, 2005). It would be interesting to investigate whether such a relationship also exists in other areas of research. However, one could speculate that the flow of a university teacher during teaching contributes to the intrinsic motivation, absorption and enjoyment of students in their studies, at least in the classes of teachers with a higher work flow.

Teachers' perception of teaching as a calling brings several positive benefits (e.g. Bellah et al., 2008; Gradišek, 2014; Hall & Chandler, 2005; Wrzesnievski, 2003; Wrzesnievski et al., 1997). To the best of our knowledge, teaching as a calling in higher education has not yet been investigated in a sample of university teachers. Therefore, it is an important finding that university teachers, when they perceive their work as a calling, report higher job satisfaction and higher self-perceived work efficiency.

Moreover, of the several internal positive psychological resources studied in our research (calling, work flow and positive psychological capital scales – efficacy, hope, optimism, resilience), the sense of calling at work has contributed most to the job satisfaction of university teachers. The positive outcomes of teachers' perception of teaching as a calling include feeling the joy of teaching, setting high professional goals, effective teaching, and showing enthusiasm in a classroom (Bullough & Hall-Kenyon, 2012; Buskist, Benson & Sikorski, 2005; Lobene & Meade, 2013). In addition, teachers with the sense of calling are aware that through their work they have an important influence on their students (Bellah et al., 2008; Day et al., 2007; Hall & Chandler, 2005; Wrzesnievski, 2003) and contribute to the well-being of their students (Bullough & Hall-Kenyon, 2012). According to our study, we can expect these characteristics to apply to university teachers who consider teaching an important part of their work. In this way, university teachers who perceive their work as a calling, can positively influence future generations of students of different disciplines. We believe that the sense of calling is particularly important for university teachers who teach students whose future professions will be closely linked to working with others, e.g. future teachers, counsellors, nurses, doctors, as they are important role models for their students. Research shows that future teachers in Slovenia and Croatia choose the pedagogical profession mainly on the basis of psychological factors (e.g. a student's personality and interests) (Devjak, Devjak & Polak,

2014) and are intrinsically motivated for taking up the teaching profession (Skupnjak, Tot & Pahić, 2018). Students "put their needs, interests and desires for pedagogical profession in the forefront" and find that "working with people, youth and children affects their personal development and their development" (Devjak, Devjak & Polak, 2014, p. 17). Skupnjak, Tot & Pahić (2018, p. 160) stated that "the most important factors in choosing the teaching profession were those reflecting intrinsic motivation, such as working with students, autonomy at work, and interest in the profession". Important elements of the sense of calling can be recognized in these findings. Therefore, it is meaningful to start to intentionally foster a sense of calling among future teachers during their studies. But the sense of calling is also important for those who teach at other universities, e.g. technical ones, at least because of the positive effects it has on the students' well-being, their willingness and enthusiasm to learn, and its positive contribution to the personal development of students, regardless of their future profession. Therefore, fostering the emotional intelligence of university teachers could also bring positive benefits for students. Čotar Konrad & Kukanja Gabrijelčič (2014) stressed the important role of emotional intelligence in the professional development of teachers; they stated that "emotional intelligence is a prerequisite for high-quality performance in the educational field" (Čotar Konrad & Kukanja Gabrijelčič, 2014, p. 13) – in our opinion, this is also true of higher education. However, in the context of research and teaching in higher education, research activity is often perceived as more important, while "the pedagogical work and within it the pedagogical training and qualifications of the individual are in a subordinate position" (Aškerc, 2014, p. 177). If the perception of the work of university teachers as a calling is a desirable attribute due to the positive outcomes mentioned above, appropriate attention should be paid to the pedagogical training and qualifications of university teachers.

Some limitations of the study must be acknowledged. The sample was not representative and all participants work at the same university. We contacted other Slovenian universities, but received a low response rate. In future studies it would be interesting to investigate other variables that might contribute to the job satisfaction of university teachers, such as perceived meaning at work, values, or family-work balance; and to investigate how internal psychological resources of university teachers influence their students – the teacher-student relationship, student well-being, motivation to study, and academic performance.

Dr. Polona Gradišek, dr. Katarina Habe

Poklicno poslanstvo – pomemben napovednik zadovoljstva pri delu visokošolskih učiteljev

Visokošolski učitelji in sodelavci (v nadaljevanju: visokošolski učitelji) so redko proučevana skupina, kljub temu da imajo pomemben vpliv na cele generacije študentov, njihovo delo pa je ključno za doseganje kakovosti visokega šolstva. Izhajajoč iz ugotovitev predhodnih raziskav, ki kažejo, da delovno zadovoljstvo pomembno vpliva na organizacijsko kakovost, sva želeli avtorici proučiti nekatere pozitivno-psihološke

konstrukte, kot so občutek poslanstva pri delu, pozitivni psihološki kapital in delovni zanos ter proučiti, kako prispevajo k delovnemu zadovoljstvu visokošolskih učiteljev.

V raziskavi izhajava iz perspektive pozitivne psihologije, v okviru katere raziskovalci proučujemo dejavnike, ki prispevajo k dobremu, izpolnjujočemu življenju, pri čemer se osredotočamo na pozitivna čustva, pozitivne lastnosti in pozitivne institucije, ki omogočajo doživljanje pozitivnih čustev in razvijanje pozitivnih lastnosti (Seligman in Csikszentmihalyi, 2000). Posebno področje znotraj pozitivne psihologije, ki sega na področje psihologije dela in organizacije, predstavlja t.i. pozitivno organizacijsko vedenje, ki se usmerja na proučevanje pozitivnih dejavnikov v organizacijah oz. na delovnem mestu. S tem konceptom je Luthans (2002), njegov utemeljitelj, želel preusmeriti raziskovalno pozornost z negativnih dejavnikov, kot sta stres na delovnem mestu in odklonsko vedenje zaposlenih, v smer optimalnega delovanja posameznika v organizaciji. V okviru pozitivnega organizacijskega vedenja so Luthans, Youssef in Avolio (2007) identificirali štiri konstrukte, ki so jih združili v nadredni koncept pozitivnega psihološkega kapitala: samoučinkovitost, optimizem, upanje in rezilientnost. Pozitivni psihološki kapital predstavlja pozitivno psihološko razvojno stanje, za katerega je značilno, da se je posameznik pripravljen lotiti zahtevnih nalog in si prizadeva za svoj uspeh (samoučinkovitost); da goji pozitivna pričakovanja do svojega uspeha (optimizem); da vztraja pri doseganju ciljev in v primeru ovir uspešno najde nove poti za doseganje istega cilja (upanje) ter da se učinkovito spoprijema s težavami (rezilientnost). Psihološki kapital lahko preko učenja spodbujamo in tudi spreminjamo, čeprav je relativno stabilen v času.

Zanos je stanje, v katerem je posameznik popolnoma zatopljen v aktivnost in ob tem doživlja občutke energije, vključenosti in uspeha pri aktivnosti (Csikszentmihalyi, 2002), delovni zanos pa je kratkotrajno vrhunsko doživetje na delovnem mestu, za katerega so značilni zatopljenost, zadovoljstvo pri delu in notranja delovna motivacija (Bakker, 2005). V eni od raziskav so ugotovili, da se zanos glasbenih učiteljev povezuje z zanosom, ki ga doživljajo njihovi učenci (Bakker, 2005). V slovenski raziskavi pa sta K. Habe in S. Tement (2016a) ugotovili, da so delovni zanos visokošolskih učiteljev najbolje napovedovali optimizem, raznolikost delovnih nalog in avtonomija ter da obstaja interaktivni učinek optimizma in raznolikosti dela pri napovedovanju zadovoljstva pri delu in notranje motivacije.

Pomemben vidik učiteljevega doživljanja dela je občutek poslanstva pri delu. Številne raziskave kažejo na pozitivne koristi doživljanja občutka poslanstva pri učiteljih – ti učitelji občutijo, da jih delo izpolnjuje, da s svojim delom pozitivno vplivajo na druge (na svoje učence in na širšo družbo), pripravljeni so vlagati več truda in časa v delo, so predani študentom, energični in entuziastični, pomembno jim je dobro počutje učencev (npr. Bullough in Hall-Kenyon, 2012; Hall in Chandler, 2005; Lobene in Meade, 2013). Učitelji, ki pri svojem delu občutijo poslanstvo, so bolj zadovoljni z življenjem in pri delu (Wrzesnievski idr., 1997).

Raziskave kažejo, da se pozitivni psihološki kapital, delovni zanos in občutek poslanstva pri delu pozitivno povezujejo s številnimi pozitivnimi izidi na različnih delovnih mestih in v različnih delovnih populacijah. Tako se na primer pozitivni kapital (Luthans idr., 2007; Youssef in Luthans, 2007) in delovni zanos (Bishay, 1996; Demerouti, 2006; Habe in Tement, 2016a; Weis in Cropanzano, 1996) povezujeta z delovnim zadovoljstvom in z doživljanjem poslanstva pri delu (Gradišek, 2014; Hall in Chandler; 2005;

Lobene in Meade, 2013; Wrzesnievski idr., 1997). Delovno zadovoljstvo predstavlja subjektivno oceno posameznikovega življenja, ki je povezano z njegovim delom (Diener idr., 1999) in predstavlja pomemben vidik dela, saj se povezuje z delovno učinkovitostjo, produktivnostjo organizacije, manj željami po menjavi delovnega mesta in drugimi pozitivnimi vidiki dela. Visokošolski učitelji pomembno prispevajo k doseganju ciljev visokošolskih zavodov, zato je pomembno, da so pri svojem delu zadovoljni.

Cilj pričujoče raziskave je bil proučiti povezanost med doživljanjem občutka poslanstva pri delu, pozitivnim psihološkim kapitalom in delovnim zanosom ter ugotoviti, kako se te tri spremenljivke povezujejo z delovnim zadovoljstvom visokošolskih učiteljev. V raziskavi je sodelovalo 142 visokošolskih učiteljev in sodelavcev (91 žensk in 51 moških), zaposlenih na Univerzi v Ljubljani, starih med 24 in 66 let. V vzorcu je bilo največ docentov (25 %), sledili so redni profesorji (24 %) in docenti (22 %), nato še asistenti (11 %), asistenti z doktoratom (10 %) in drugi (npr. lektorji, višji predavatelji; 8 %). Udeleženci so izpolnili vprašalnik psihološkega kapitala (Luthans idr., 2007), vprašalnik delovnega zanosa (Bakker, 2008), vprašalnik o doživljanju poslanstva pri delu (Wrzesniewski idr., 1997), vprašalnik delovnega zadovoljstva (Diener idr., 1985; Gradišek, 2014) in ocenili svojo zaznano delovno učinkovitost. Zbiranje podatkov je potekalo junija 2018 v obliki spletne ankete.

Rezultati so pokazali, da visokošolski učitelji v precejšnji meri doživljajo občutek poslanstva pri delu in delovni zanos ter imajo izražen pozitivni psihološki kapital. Delovno zadovoljstvo ocenjujejo nekoliko nad povprečjem, svojo delovno učinkovitost pa zaznavajo kot visoko.

Z delovnim zadovoljstvom in z zaznano delovno učinkovitostjo so se pozitivno povezovali občutek poslanstva pri delu, vse lestvice pozitivnega psihološkega kapitala in delovni zanos. Starost udeležencev se je pozitivno povezovala z zaznano delovno učinkovitostjo in delovnim zanosom. Občutek poslanstva pri delu se je pozitivno povezoval z vsemi proučevanimi spremenljivkami (razen s starostjo), najvišje z delovnim zanosom in najnižje z rezilientnostjo. Tudi delovni zanos se je povezoval z vsemi spremenljivkami, najnižje s starostjo in najvišje s poslanstvom.

Za boljše razumevanje odnosa med proučevanimi spremenljivkami smo izvedli hierarhično multiplo analizo. V prvem koraku smo vključili spol in starost kot demografski spremenljivki, v drugem koraku smo vključili psihološki kapital (štiri lestvice psihološkega kapitala) in v tretjem koraku občutek poslanstva in delovni zanos. Psihološki kapital je pojasnil 30 % variance delovnega zadovoljstva visokošolskih učiteljev iz našega vzorca. Ko smo dodali še poslanstvo in zanos, smo pojasnili dodatnih 11 % variance delovnega zadovoljstva, kar je predstavljalo statistično pomemben doprinos. Proučevane spremenljivke so torej skupno pojasnile kar 41 % variance delovnega zadovoljstva. Kot najpomembnejši napovednik pa se je izkazal občutek poslanstva pri delu, kar pomeni, da k delovnemu zadovoljstvu visokošolskih učiteljev prispeva pomembneje kot psihološki kapital ali delovni zanos.

Skladno z ugotovitvami predhodnih raziskav so se tudi v naši raziskavi lestvice pozitivnega psihološkega kapitala (samoučinkovitost, rezilientnost, upanje in optimizem) pozitivno povezovale z delovnim zadovoljstvom visokošolskih učiteljev in z njihovo samo-oceno delovne učinkovitosti. Pomemben vidik pozitivnega psihološkega kapitala je ta, da ga lahko spodbujamo in razvijamo, zato bi ga lahko smiselno uporabili kot in-

tervencijsko spremenljivko pri doseganju delovnega zadovoljstva pedagoških delavcev v visokošolskih ustanovah. Njihovo delovno zadovoljstvo je namreč pomemben organizacijski vidik, saj učinkovitost visokošolskih ustanov pogosto temelji na delu njihovih zaposlenih.

Tudi delovni zanos je pomemben dejavnik, ki prispeva k delovnemu zadovoljstvu. V našem vzorcu se je zanos pozitivno povezoval s starostjo, kar kaže na to, da visokošolski učitelji s starostjo vse bolj uživajo pri svojem delu, so bolj notranje motivirani in zatopljeni v delo. Zanimivo bi bilo proučiti, kako zanos univerzitetnih učiteljev vpliva na njihove študente – ali gre za pozitivno povezanost, kot je bila ugotovljena v raziskavi Bakkerja (2005) pri učiteljih glasbe. Predvidevava, da lahko delovni zanos visokošolskih učiteljev med poučevanjem pomembno vpliva na notranjo motivacijo njihovih študentov, na njihovo uživanje med pedagoškim procesom; predvsem pri tistih učiteljih, ki med poučevanjem izkazujejo visok delovni zanos.

Visokošolski učitelji, ki so sodelovali v raziskavi, so poročali o precejšnji izraženosti občutka poslanstva pri delu, ki prinaša številne pozitivne koristi za učitelje, za druge in za kakovost dela. Do sedaj nisva zasledili raziskave, ki bi proučevala doživljanje poslanstva med visokošolskimi učitelji, zato je pomembna ugotovitev, da občutek poslanstva pomembno prispeva k delovnemu zadovoljstvu visokošolskih učiteljev in k njihovi samo-zaznani delovni učinkovitosti. Izmed vseh v tej raziskavi proučevanih spremenljivk je ravno občutek poslanstva najpomembneje napovedoval delovno zadovoljstvo. Glede na ugotovitve te in predhodnih raziskav sklepamo, da za visokošolske učitelje in sodelavce, ki doživljajo poslanstvo pri svojem delu, velja, da občutijo veselje ob poučevanju, so motivirani in si postavljajo visoke delovne cilje, so učinkoviti pri svojem delu in se zavedajo svojega pomembnega vpliva na blagostanje študentov in tudi na njihove učne dosežke. Avtorici izpostavljava, kako pomemben vpliv imajo visokošolski učitelji na študente različnih študijskih programov. Meniva, da je izrazit občutek poslanstva pri delu še posebej pomemben za tiste visokošolske učitelje, ki poučujejo študente, ki bodo delali neposredno z ljudmi, npr. učitelji, zdravniki, medicinsko osebje, pravniki, svetovalci … Prav tako pa je občutek poslanstva pomemben tudi pri visokošolskih učiteljih drugih disciplin, saj lahko pomembno vplivajo na počutje študentov, na njihovo psihično blagostanje, na njihovo pripravljenost za učenje, navdušenje nad študijskim področjem in na njihov osebni razvoj. Visokošolski učitelji vplivajo na študente predvsem preko poučevanja, čeprav njihovo delo obsega tudi raziskovalno in strokovno delo, zato se nama zdi ključnega pomena, da visokošolski učitelji ne dojemajo poučevanja kot manj pomembnega vidika njihovega dela ter da poskušajo pri sebi razvijati in negovati občutek poslanstva pri delu.

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