PSIHOLOŠKA OBZORJA

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(uradna revija Društva psihologov Slovenije)

Glavna in odgovorna urednica
izr. prof. dr. Cveta Razdevšek Pučko

Gostujoča urednica
doc. dr. Mojca Juriševič

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Psihološka obzorja so indeksirana v PsycINFO, svetovni bibliografski bazi psihološke literature.

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Vsebina

Novi doktorati

Poročila

Obvestila

Contents

New PhD theses

Reports

Notes

Uvodnik

Pred nami je tretja, tematska številka Psiholoških obzorij v letošnjem letu. Kot urednica te številke ocenjujem, da vsebine vključenih prispevkov dobro izražajo relativno pestro in dinamično znanstveno-raziskovalno dogajanje na področju pedagoške psihologije, ki pa je žal še premalokrat predstavljeno v slovenski psihološki javnosti. Krajša ilustrativna analiza, ki sem jo naredila med premisleki o nastanku te številke je namreč pokazala, da so prispevki s področja pedagoške psihologije v Psiholoških obzorjih v zadnjih desetih letih zastopani v manj kot četrtinskem deležu. Natančneje, v zadnjih 46 številkah revije je bilo med 255 objavljenimi znanstvenimi raziskovalnoempiričnimi in teoretsko preglednimi prispevki 41 ali 16 % takih, v katerih se je prevladujoča tema vsebinsko nanašala na pedagoško psihologijo oziroma njena posamezna področja, med njimi najpogosteje na naslednja: ocenjevanje znanja (17 %), socialno-emocionalni dejavniki učne uspešnosti (12 %), motivacija za učenje (15 %), učna samoregulacija (9 %) in napovedovanje učne uspešnosti (7 %); nekatera druga področja, denimo sposobnosti za učenje, družinski dejavniki učne uspešnosti ali karierna orientacija pa so bila v teh prispevkih redkeje zastopana. Podoben odstotek prispevkov s področja pedagoške psihologije v istem obsegu številk revije sem zasledila tudi pri objavi empiričnih in preglednih strokovnih člankov (12 od 72 prispevkov)[1] Čeprav pedagoški psihologi danes objavljamo v različnih, tudi bolj vzgojno-izobraževalno usmerjenih revijah ter v tujini, so objave v Psiholoških obzorjih izjemno pomembne, saj uokvirjajo osnovno referenco za slovenske psihologe in zato omogočajo učinkovito izmenjavo in transfer novosti znotraj psihološkega prostora in širše.

V številki je zbranih sedem prispevkov, ki posegajo na različna področja pedagoške psihologije, od uravnavanja procesov učenja in raziskovanja individualnih razlik do doživljanja učiteljev.

V uvodnem prispevku *Razvoj in perspektive pedagoške psihologije v Sloveniji* Drago Žagar in Mojca Juriševič v kontekstu razvoja pedagoške psihologije v mednarodnem prostoru dokumentirata nastajanje te discipline v Sloveniji; izpostavita ključna znanstveno-raziskovalna dela s področja ter kritično ocenita možnosti in poti njenega nadaljnjega razvoja. Naslednji trije prispevki so s področja samouravnavanja oziroma samoregulacije učenja. Cirila Peklaj in Sonja Pečjak v prispevku *Čustva, motivacija in samoregulacija fantov in deklet pri učenju matematike* predstavljata rezultate raziskave, v kateri sta preučevali odnos emocionalnih in motivacijskih procesov s samoregulacijo dijakov in dijakinj pri matematiki ter

[1] Vsebinska analiza prispevkov je bila narejena na osnovi naslovov, ključnih besed in povzetkov prispevkov, objavljenih na spletni strani Društva psihologov Slovenije (http://psy.ff.uni-lj.si/iGuests/Obzorja/default.html) in v bazi Cobiss (http://www.cobiss.si/).

ugotavljata pomembne razlike v merjenih spremenljivkah med spoloma. Karin Bakračević in Marto Licardo v prispevku z naslovom *Starostne razlike v samoregulaciji učenja* zanima razvoj različnih področij samoregulacije v obdobju mladostništva in zgodnje odraslosti, ki po njunih empiričnih ugotovitvah kaže nesinhronost glede na starost in spol preizkušancev. Ameriški kolegici Ljubica Chatman in Bettsy Sparrow svoje delo predstavljata v obliki teoretsko preglednega članka z naslovom *Ravni analize občutka "dejavnega sebe" – Vplivi zaznanega nadzora na učenje*, v katerem analizirata oblikovanje samoregulacije v socialnokognitivnem kontekstu ter raziskujeta, kakšen je njen vpliv na kognitivno funkcioniranje posameznika pri učenju. Drugi sklop teoretskega dela so trije prispevki, povezani s socialnimi zaznavami učencev in/ali učiteljev v vzgojno-izobraževalnem kontekstu. Katja Košir predstavlja raziskavo z naslovom *Spol in starost učencev kot dejavnika razlik v učiteljevi naklonjenosti, zaznani podpori učitelja ter učni uspešnosti*, s katero empirično potrdi razlike med spoloma v učni uspešnosti in učiteljevi naklonjenosti (oboje v prid učenkam oz. dijakinjam), ne pa tudi v stopnji podpore, ki jo učenci zaznavajo od učitelja. Socialne zaznave učencev so tudi predmet teoretsko preglednega prispevka avstralskih kolegic Marjorie Seaton in Rhonde G. Craven z naslovom *Od žab k ribi: preučevanje učinka »velike ribe v majhnem ribniku«*, v katerem avtorici predstavljata razvoj modela BFLPE ter ga kritično analizirata v kontekstu vpliva (zunanje) diferenciacije na učno samopodobo učencev, s tem pa posledično tudi na njihovo učenje in učno uspešnost. V prispevku *Analiza izvorov stresa osnovnošolskih učiteljev* Katja D. Steiner poseže na področje psihosocialnih dejavnikov poklicnega tveganja pri osnovnošolskih učiteljih; z inovativnim pristopom merjenja ugotavlja, da so učitelji pri svojem delu izpostavljeni delovanju različnih stresorjev po moči in pogostosti, zlasti delovni obremenjenosti, vedenju in motiviranosti učencev ter nekaterim elementom šolskega sistema.

Številko še dodatno strokovno bogatita dve vsebini: intervju z Joan Freeman, eno od vodilnih strokovnjakinj na področju raziskovanja nadarjenosti v svetu ter ocena nove knjige *»Psihološki vidiki bralne pismenosti: od teorije k praksi«* priznane slovenske raziskovalke in strokovnjakinje Sonje Pečjak.

Posebna značilnost te številke revije je, da je nastala v času, ko prof. dr. Drago Žagar praznuje sedemdeset let in hkrati v času upokojitve druge generacije slovenskih pedagoških psihologov, ki so pomembno krojili razvoj te discipline v Sloveniji zadnjih trideset let. V mislih imam prof. dr. Barico Marentič Požarnik, neumorno znanstvenico na področju visokošolske didaktike, izobraževanja učiteljev in preučevanja konceptualnih vidikov učenja in poučevanja, prof. dr. Cveto Razdevšek Pučko, raziskovalko na področju kognicij učiteljev in priznano strokovnjakinjo za področje izobraževanja učiteljev ter uvajanje inovacij v šolo ter prof. dr. Draga Žagarja, dolgoletnega predstojnika katedre za pedagoško psihologijo na Oddelku za psihologijo Filozofske fakultete v Ljubljani in avtorja temeljnih psiholoških raziskav s področja individualnih razlik in preučevanja dejavnikov

učne uspešnosti. Z vsemi tremi sem imela tudi sama priložnost, čast in srečo sodelovati; v različnih vlogah in vsak na svoj način so prispevali k moji današnji pedagoškopsihološki usmerjenosti. Številka je posvečena njihovemu delu, mlajšim kolegicam in kolegom pa naj bo v spodbudo za nadaljevanje, razvijanje in razširjanje pedagoške psihologije v prihodnje.

Hvala avtorjem prispevkov za odzivnost in recenzentom za natančne kritične ocene.

Mojca Juriševič

Editorial

Before us is the third, thematic edition of *Psihološka obzorja* (Horizons of Psychology) in the present year. As the editor of the edition, I believe that the content of the articles included is a good reflection of the relatively varied and dynamic scientific-research activity in the field of educational psychology, an area that is, unfortunately, still too seldom presented to the Slovene psychology community. A brief illustrative analysis that I undertook while reflecting on the emergence of the present edition showed that in the last 10 years articles from the area of educational psychology represent less than a quarter of the articles published in *Psihološka obzorja*. More precisely, amongst the 255 scientific research-empirical and theoretical review articles published in the last 46 editions of the journal, there are 41, or 16%, in which the prevailing theme relates to educational psychology or its individual areas in terms of content, amongst which the most frequent themes are: assessment of knowledge (17%), socio-emotional factors in academic achievement (12%), motivation for learning (15%), learning self-regulation (9%) and predicting academic achievements (7%); certain other areas, such as abilities for learning, family factors in learning achievements or career orientation, were more rarely represented amongst these articles. In the same range of editions of the journal, I found a similar percentage of articles from the area of educational psychology amongst the published empirical and review professional articles (12 out of 72 articles)[1]. Although articles concerning educational psychology are today published in various journals, including those with a more educational orientation as well as journals published abroad, publications in *Psihološka obzorja* are extremely important, as they establish the basic reference for Slovene psychology, thus enabling the efficient exchange and transfer of innovation both within the sphere of psychology and further afield.

The present edition brings together seven articles that engage with various areas of educational psychology, from the regulation of learning processes and research into individual differences to the experience of teachers.

In the introductory article *Razvoj in perspektive pedagoške psihologije v Sloveniji* (Development and perspectives of educational psychology in Slovenia), Drago Žagar and Mojca Juriševič document the emergence of educational psychology in Slovenia within the context of the development of the discipline in the international sphere; they emphasise the key scientific-research works from the field and critically evaluate the possibilities and paths of its further development. The following three articles are from the field of the self-regulation of learning. In their article *Čustva, motivacija in samoregulacija fantov in deklet pri učenju*

[1] The content analysis of the articles was undertaken on the basis of the titles, keywords and abstracts of articles published on the website of the Slovenian Psychological Association (http://psy.ff.uni-lj.si/iGuests/Obzorja/default.html) and in the Cobiss database (http://www.cobiss.si/).

matematike (Emotions, motivation and self-regulation in boys' and girls' learning mathematics), Cirila Peklaj and Sonja Pečjak present the results of research in which they studied the relationship between emotional and motivational processes and the self-regulation of students in mathematics, determining important gender differences in the measured variables. In an article entitled *Starostne razlike v samoregulaciji učenja* (Age differences in self-regulation of learning), Karin Bakračević and Marta Licardo are interested in the development of various areas of self-regulation in the period of adolescence and early adulthood, which, according to their empirical findings, demonstrates non-synchronisation with regard to the age and gender of the test subjects. Our American colleagues Ljubica Chatman and Bettsy Sparrow present their work in the form of a theoretical review article entitled *Ravni analize občutka "dejavnega sebe" – Vplivi zaznanega nadzora na učenje* (The feeling of doing across levels of analysis – The effects of perceived control on learning), in which they analyse the formation of self-regulation in the socio-cognitive context and research its influence on the cognitive functioning of the individual in learning. The second section of the theoretical part is made up of three articles connected with the social perception of students and/or teachers in the educational context. Katja Košir presents research entitled *Spol in starost učencev kot dejavnika razlik v učiteljevi naklonjenosti, zaznani podpori učitelja ter učni uspešnosti* (Pupils' Gender and Age as Factors of Differences in Teacher's Liking, Perceived Teacher's Support and Academic Achievement), in which she empirically confirms gender differences in academic achievement and in the teacher's goodwill (both in favour of female students), but not in the level of support that students perceive from the teacher. The social perceptions of students are also the subject of a theoretical review article by our Australian colleagues Marjorie Seaton and Rhonda G. Craven entitled *Od žab k ribi: preučevanje učinka »velike ribe v majhnem ribniku«* (From frogs to fish: The Big-Fish-Little-Pond Effect then and now), in which the authors present the BFLPE development model and critically analyse it in the context of the influence of (external) differentiation on the learning self-concept of students, and consequently on their learning and learning success. In her article *Analiza izvorov stresa osnovnošolskih učiteljev* (Analysis of Primary Teacher Stress' Sources), Katja D. Steiner engages with the area of the psychosocial factors of professional risk in primary school teachers; employing an innovative approach to measurement, she finds that in their work teachers are exposed to the operation of various stressors in terms of strength and frequency, particularly work burden, the behaviour and motivation of pupils and certain elements of the school system.

The present edition is further professionally enriched by two supplementary contributions: an interview with Joan Freeman, one of the world's leading experts in the area of the research of giftedness, and a review of the new book *Psihološki vidiki bralne pismenosti: od teorije k praksi* (Psychological aspects of reading literacy: From theory to practice) by recognised Slovene researcher and expert Sonja Pečjak.

A special feature of this edition of the journal is that it has been prepared during the time that Prof. Dr Drago Žagar celebrates his 70th birthday, as well as coinciding with the retirement of the second generation of Slovene educational psychologists, who have made an important contribution to moulding the development of this discipline in Slovenia in the last 30 years. Here I am referring to Prof. Dr Barica Marentič Požarnik, a tireless scientist in the area of higher education didactics, teacher education and the study of conceptual aspects of learning and teaching; Prof. Dr Cveta Razdevšek Pučko, a researcher in the field of cognitions of teachers and a recognised expert in the area of teacher education and the implementation of innovations in school; and Prof. Dr Drago Žagar, the longstanding head of the chair of educational psychology at the Department of Psychology of the Ljubljana Faculty of Arts and the author of fundamental psychological research from the area of individual differences and the study of factors of academic achievement. I myself have had the opportunity, honour and good fortune to cooperate with all three of these psychologists; in various roles, and each in his or her own way, they have all contributed to my educational-psychological orientation today. The present edition is dedicated to their work; may it be a stimulus to our younger colleagues in the continuation, development and expansion of educational psychology in the future.

I would like to express my gratitude to the authors of the articles for their responsiveness and to the reviewers for their precise critical evaluations.

Mojca Juriševič

Profesor dr. Drago Žagar – sedemdesetletnik

V teh dneh praznuje pomemben življenjski jubilej redni profesor dr. Drago Žagar. Leta 1968 je diplomiral na Filozofski fakulteti v Ljubljani iz psihologije in pedagogike. Za doktorja psiholoških znanosti je bil promoviran leta 1979 z disertacijo "Različni načini mišljenja v povezavi s šolskim uspehom in nekaterimi osebnostnimi lastnostmi učencev". Na Filozofski fakulteti v Ljubljani se je redno zaposlil leta 1969, najprej kot strokovni sekretar pri mednarodni raziskavi »Coping styles and achievement: A cross-national study of school children«, leta 1971 kot asistent, nato pa kot učitelj za pedagoško psihologijo in psihologijo za učitelje za študente pedagoških programov na Filozofski fakulteti. Na tem delovnem mestu je ostal vse do svoje nedavne upokojitve.

Skupaj s prof. dr. Leonom Zormanom sta bila začetnika razvoja pedagoške psihologije na Oddelku za psihologijo Filozofske fakultete. V 70-ih letih preteklega stoletja sta z mednarodnimi raziskavami, v katerih sta sodelovala, postavila znanstvene temelje katedri za pedagoško psihologijo, jo uveljavila v pedagoški praksi, v 80-ih letih pa tudi kadrovsko okrepila.

V letih od 1988 do 1992 je bil profesor Žagar predstojnik Oddelka za psihologijo in ima velike zasluge za to, da je Oddelek pričel leta 1990 s specialističnim študijem psihologije s področja vzgoje in izobraževanja. Zavzeto in z entuziazmom je več kot tri desetletja sodeloval na izobraževanjih za pridobitev pedagoško andragoške izobrazbe in mnogim generacijam učiteljem pomagal k razvoju njihove kompetentnosti za poučevanje. Hkrati je bil mentor številnim doktorantom, magistrantom, specializantom šolske psihologije, da ne omenjamo stotnije študentov-diplomantov, katerim mentor je bil. Pomemben je tudi njegov prispevek k uveljavitvi psihologije kot izbirnega predmeta na maturi, bil je tudi prvi predsednik Republiške maturitetne komisije za psihologijo.

Plodno je bilo tudi njegovo delovanje na znanstveno-raziskovalnem področju, pri čemer je bil njegov raziskovalni interes od osemdesetih let dalje usmerjen predvsem v preučevanje ustvarjalnosti in nadarjenosti učencev. Omeniti velja njegovo sodelovanje pri pripravi bibliografije s področja razvoja kreativnosti, pod vodstvom E. P. Torranca, ki je rezultirala v obsežni publikaciji »International Bibliography on Stimulating Creativity« (1983), v kateri je profesor Žagar zbral in predstavil najpomembnejša dela in avtorje s področja ustvarjalnosti v tedanjem jugoslovanskem prostoru. V devetdesetih letih je pod njegovim vodstvom nastal »Koncept odkrivanja in dela z nadarjenimi«, ki si od leta 1999 uspešno utira pot v šolsko prakso v Sloveniji, hkrati pa koncept omenjajo in preučujejo tudi v mednarodnih strokovnih krogih. V devetdesetih letih je kot član interdisciplinarnega tima raziskoval psihosocialne in telesne vidike šolske obremenjenosti učencev, rezultat česar je leta 1995 objavljena znanstvena monografija

»Obremenitve osnovnošolcev: vzroki in posledice« (skupaj s Heleno Novak, Jankom Strelom in drugimi).

Sodeloval je tudi v procesu prenove osnovne šole, bil je kritičen in konstruktiven član Kurikularne komisije za prenovo osnovne šole. Na začetku tretjega tisočletja, po uvedbi devetletne osnovne šole, je njegovo raziskovalno zanimanje pritegnila uvedba nivojskega pouka kot ene od oblik diferenciacije učencev v devetletni osnovni šoli, pri čemer je kot vodja evalvacijske študije »Organizacija nivojskega pouka, stališča učencev, učiteljev in staršev do te oblike diferenciacije ter njeni učinki na učence« izpostavil tako prednosti kot slabosti te oblike diferenciacije, ki so se pokazale pri implementaciji tega koncepta v tretjem triletju osnovne šole.

Njegovo bogato znanje s področja dokimologije je bilo nadvse dragoceno v začetkih delovanja Državne komisije za vodenje nacionalnih preizkusov znanja.

Velike zasluge ima tudi za izdelavo merskih instrumentov: za izdelavo zbirke testov znanja iz različnih predmetov za učence 4. in 8. razreda osnovne šole in nekaterih vprašalnikov za merjenje učnih navad, motivacije in počutja učencev v 70-ih letih preteklega stoletja ter za priredbo Torrancovih testov ustvarjalnega mišljenja za otroke in mladostnike v slovenski jezik (2003), pri kateri je sodeloval kot svetovalec.

Leta 2003 je za svoje pedagoško in znanstveno-raziskovalno delo prejel veliko nagrado Filozofske fakultete.

Njegovi sodelavci še posebno cenimo njegovo široko znanje, njegovo analitično misel in osebno držo pri iskanju strokovnih rešitev, pri katerih je vedno postavljal stroko na prvo mesto. Zelo pa tudi cenimo njegovo odkritost in poštenost v odnosu do sodelavcev.

Spoštovani profesor Žagar, še veliko novih izzivov in ustvarjalne energije pri soočanju z njimi, vam želimo.

Sonja Pečjak in Cirila Peklaj

Psihološka obzorja / Horizons of Psychology, 20, 3, 15–32 (2011)

Strokovni pregledni prispevek

Razvoj in perspektive pedagoške psihologije v Sloveniji

*Drago Žagar[1] in Mojca Jurišević[2]**
[1]Oddelek za psihologijo, Filozofska fakulteta Univerze v Ljubljani
[2]Oddelek za temeljni pedagoški študij, Pedagoška fakulteta Univerze v Ljubljani

Povzetek: V prispevku je predstavljen razvoj pedagoške psihologije kot znanstvene discipline v svetu, nato pa je natančneje opisano njeno nastajanje v Sloveniji. Izpostavljena so ključna znanstveno-raziskovalna in strokovna področja delovanja pedagoških psihologov. Dejstvo je, da ima pedagoška psihologija v širšem evropsko-ameriškem psihološkem prostoru razmeroma dolgo tradicijo, v Sloveniji pa precej krajšo. Kljub temu analiza različnih virov kaže, da se pedagoška psihologija v Sloveniji s svojimi prispevki suvereno umešča v sodobne mednarodne tokove, tako po področjih obravnavanih pedagoškopsiholoških problemov kot po metodologiji njihovega raziskovanja. Slovenski pedagoški psihologi danes s svojim raziskovalnim, pedagoškim in strokovnim delom pomembno prispevajo k razumevanju, kakovosti in razvoju pedagoške prakse.

Ključne besede: pedagoška psihologija, pedagoški psihologi, Slovenija, vzgoja, izobraževanje

Development and Perspectives of Educational Psychology in Slovenia

*Drago Žagar[1] and Mojca Jurišević[2]**
[1]University of Ljubljana, Faculty of Arts, Department of Psychology, Ljubljana, Slovenia
[2]University of Ljubljana, Faculty of Education, Department of Educational Studies, Ljubljana, Slovenia

Abstract: In the paper the development of educational psychology as a scientific discipline is presented, and the history of its development in Slovenia is described in detail. The key scientific research and professional areas of educational psychologists are outlined. The fact is that the educational psychology in the broader Euro-American psychological context has a relatively longer tradition than in Slovenia. However, the analysis of various sources shows that the Slovene educational psychologists with their contributions have established a strong position in the modern international flows, both in the areas of educational psychological issues as well as in the methodology of the research. Nowadays Slovene educational psychologists with their research results, teaching and professional work offer an important contribution to the understanding, quality and the development of educational practice.

Key words: educational psychology, educational psychologists, Slovenia, education

CC = 3500

* Naslov / Address: Mojca Jurišević, Oddelek za temeljni pedagoški študij, Pedagoška fakulteta Univerze v Ljubljani, Kardeljeva ploščad 16, 1000 Ljubljana, mojca.jurisevic@pef.uni-lj.si

Razvoj pedagoške psihologije kot znanstvene discipline v evropsko-ameriškem prostoru

Pedagoška psihologija (*angl*. Educational Psychology, *nem.* Pädagogische Psychologie) je samostojna znanstvena disciplina v psihologiji, ki vključuje razvoj in uporabo psiholoških načel na področju vzgoje in izobraževanja ter s psihološkega vidika prispeva k razumevanju in izboljševanju učenja in poučevanja (Berliner, 1993; Glover in Ronning, 1987; Hilgard, 1996; Mayer, 2008; Reynolds in Miller, 2003; Wittrock, 1989). Pri preučevanju psiholoških vprašanj v vzgojno-izobraževalnem kontekstu se vzajemno povezuje z drugimi psihološkimi disciplinami, zlasti z razvojno, socialno in klinično psihologijo in tudi z nekaterimi nepsihološkimi disciplinami, kot so to denimo pedagogika, sociologija in nevrofiziologija (Zorman in Žagar, 1983; Thorndike, 1910; Walberg in Haertel, 1992).

Zaradi prepoznane pomembnosti za vzgojno-izobraževalno prakso jo je Ellwood Cubberly v začetku prejšnjega stoletja imenoval »vodilna znanost o šoli« (Mayer, 1992), v današnjem času pa je vloga psihologije na področju vzgoje in izobraževanja ocenjena podobno kot vloga, ki jo ima biologija v medicini (EFPA/ N.E.P.E.S. Report, 2010).

Zanimanje za temeljne probleme pedagoške psihologije, učenje in poučevanje, sega že v antično Grčijo (Platon, Aristotel), pa tudi v dela evropskih in ameriških humanistov (Rousseau, Pestalozzi, Herbart, Froebel, Harris, Parker) (Berliner, 1993; Glover in Ronning, 1987; Hilgard, 1996), ki so, sicer na različne načine, razmišljali o podobnih psiholoških problemih vzgoje in izobraževanja oziroma iskali odgovore na podobna pedagoškopsihološka vprašanja: o naravi učenja, pomenu učenčeve aktivnosti med učenjem, vlogi čustev, interesov in predznanja za učenje, pomembnosti učenja z razumevanjem, vlogi učitelja ter individualizaciji poučevanja.

Ti problemi so zaradi vitalnega pomena, ki ga imajo za vzgojo in izobraževanje, v različnih zgodovinskih obdobjih ohranjali pozornost v psiholoških in nepsiholoških krogih, odgovori nanje pa so skozi desetletja »gradili most« med psihološko znanostjo na eni ter umetnostjo poučevanja na drugi strani (Hilgard, 1996; Mayer, 1992; Walberg in Haertel, 1992). Prav zaradi omenjene vpetosti pedagoške psihologije v širše vzgojno-izobraževalne tokove je težko natančno določiti temeljno obeležje nastanka pedagoške psihologije kot znanosti.

V različnih virih, ki zgodovinsko obravnavajo nastajanje pedagoške psihologije zahodnega sveta (Berliner, 1993; Glover in Ronning, 1987; Hall, 2003; Hilgard, 1996; Walberg in Haertel, 1992), se kot ključno najpogosteje omenja obdobje ob prelomu iz devetnajstega v dvajseto stoletje. Leta med 1890 in 1920 Hall (2003) imenuje »zlato obdobje pedagoške psihologije« (str. 3); to t.i. prvo obdobje v nastajanju znanstvene pedagoške psihologije namreč sovpada s povečanimi potrebami zahodne družbe na področju vzgoje in izobraževanja, obenem pa tudi z nastajanjem znanstvene psihologije v Evropi in Ameriki. Pomembni psihologi tistega časa, denimo William James, so se namreč ukvarjali s problemi pedagoške psihologije, saj

so ti v kontekstu širitve tehnološkega in znanstvenega razvoja predstavljali konkretne načine za izboljševanje življenja, ki so ga še posebno ob prelomu stoletja zaznamovale velike socialne, gospodarske in politične spremembe. Za osnovo konceptualizaciji pedagoške psihologije sta bila po oceni Berlinerja (1993) poleg slovitega Jamesa ključna še dva psihologa, in sicer Jamesov doktorand Stanley Hall in njegov »učenec« John Dewey. Nekateri (npr. Hall, 2003) k sloviti trojici prištevajo še Charlesa Judda, ki pa je za razliko od predhodnih treh doktoriral v Evropi, in sicer pri u. Skupno vsem omenjenim je bilo, da so v svojih delih vsak s svojega zornega kota poudarjali pomembnost psihologije za razumevanje vzgoje in izobraževanja, pri čemer so se naslanjali na psihološka, filozofska in pedagoška spoznanja tistega časa. Zimmerman in Schunk (2003, str. vii) v predgovoru h knjigi *Educational Psychology: A century of contributions*[1]. razlagata, da so bila v tem prvem, t.i. »obdobju nastajanja pedagoške psihologije« (str. vii), po oceni sekcije za pedagoško psihologijo pri ameriški psihološki zvezi (Division 15, APA) poleg že omenjenih psihologov za njen razvoj zelo vplivna tudi dela Alfreda Bineta, Lewisa M. Termana, Marie Montessori in Edwarda L. Thorndikea. Predvsem slednjega imajo različni poznavalci pedagoškopsiholoških zgodovinskih dejstev za očeta zahodne pedagoške psihologije (npr. Berliner, 1993).

Edward Lee Thorndike (1874–1949) je bil Jamesov učenec, na njegov znanstveni pristop pa je vplival tudi škotski psiholog James Sully s svojimi razmišljanji v knjigi *Outlines of Psychology: With Special Reference to the Theory of Education* iz leta 1889, v kateri je Sully jasno poudaril prispevek psihologije za premišljeno pedagoško delo, ki ga po njegovem prepričanju lahko dobro opravljajo le dovolj sposobni in razmišljujoči učitelji (Berliner, 1993; Hilgard, 1996)[2]. Podobno kot James in Sully je tudi Thorndike pozitivistično verjel, da bo psihološka znanost pomembno izboljšala prakso na področju vzgoje in izobraževanja, in sicer na osnovi empiričnih dejstev ter dobrih merskih inštrumentov (Thorndike, 1910). Na kolidžu za učitelje znotraj Univerze Columbia, na katerem je Thorndike deloval dobrih 40 let, je raziskoval različne procese in zakone pri učenju (pozornost, pomnjenje, pozabljanje, učne navade, vpliv časovne dimenzije učenja), vlogo povratne informacije in podkrepitev, pomen individualnih in skupinskih razlik, statistične metode na področju vzgoje in izobraževanja in psihologije, uporabo testov znanja in testov inteligentnosti, pripravo učnih gradiv in besednjak pri otrocih (Thorndike, 1910; Walberg in Haertel, 1992). Za razliko od Deweya, s katerim ga nekateri radi primerjajo (npr. Hilgard, 1996), je bil Thorndike v prvi vrsti eksperimentator in od vsega začetka bolj usmerjen v psihološke kot vzgojno-izobraževalne vidike pedagoške psihologije, s katerimi pa se je ukvarjal pragmatični Dewey (npr. vzgojno-

[1] Delo je najverjetneje najtemeljitejše delo na področju zgodovinske obravnave razvoja znanstvene pedagoške psihologije (op. avt.).

[2] James in Sully sta bila raziskovalno, pedagoško in publicistično naravnana, predavala sta tudi učiteljem. Sully je leta 1886 za učitelje izdal knjigo z naslovom *Teacher's Handbook of Psychology*, 13 let kasneje pa tudi James, in sicer *Talks to the Teachers*.

izobraževalne politike, progresivna pedagogika). Ta razlika med njima je na tem mestu vredna omembe zato, ker je bila v bistvu povod za razvoj t.i. dvodisciplinarne usmerjenosti znotraj pedagoške psihologije. Predstavlja prevladujočo usmerjenost bodisi v teorijo in merjenje (razumevanje vedenja) bodisi v praktične aplikacije (izboljševanje šol), ki se nujno ne izključujeta. Pedagoška psihologija na zahodu je v tem pogledu bolj sledila Thorndikeovi kot Deweyevi smeri (McCaslin in Hickey, 2001; O'Donnell in Levin, 2001)[3].

Za eno temeljnih obeležij pedagoške psihologije danes velja Thorndikeova knjiga *Educational Psychology* iz leta 1903, kot prva na tem področju[4]. Poleg tega pa je Thorndikeov pionirski korak v nastajanju pedagoške psihologije tistega časa pomenila tudi ustanovitev revije Journal of Educational Psychology leta 1910, ki naj bi predstavljala »stičišče« za izmenjave med psihologi in drugimi strokovnjaki na področju vzgoje in izobraževanja po eni strani ter mesto »razčiščevanja« pogledov na odnos med psihologijo in področjem vzgoje in izobraževanja na drugi strani (Editorial, 1910). Prvi članek prve številke te revije z naslovom *The contribution of psychology to education* je podpisal Thorndike sam; v njem je jasno izpostavil svojo znanstveno usmerjenost in utemeljil meritornost pedagoške psihologije za vzgojo in izobraževanje. Vlogo pedagoške psihologije na področju poučevanja je poudaril na treh ravneh, ki so danes ravno tako relevantne kot so bile pred sto leti. Te ravni so: (1) raven uporabe metod poučevanja, ki so utemeljene s psihološkimi spoznanji o človeškem delovanju, (2) raven uporabe konkretnih življenjskih izkušenj pri izbiri metod poučevanja, pri čemer ima psihologija razlagalno vlogo pri razumevanju uspešnosti določenih metod ter pri spodbujanju nadaljnjega razmišljanja ter odpiranju novih perspektiv mišljenja o metodah in (3) raven uporabe psihološkega znanja s področja merjenja in ocenjevanja za verifikacijo uporabljenih metod poučevanja (Thorndike, 1910).

Če povzameva, je »zlato obdobje« k razvoju pedagoške psihologije prispevalo predvsem njeno umestitev v vzgojno-izobraževalni kontekst ter znanstveno usmeritev pedagoškopsihološkega preučevanja problemov vzgoje in izobraževanja, ki je spodbudila razvoj prvih teorij učenja in merjenja (predvsem inštrumentov na področju merjenja intelektualnih sposobnosti), izpostavila pomen individualnih razlik za učenje ter pravičnost izobraževanja v smislu obetajočih idej progresivne pedagogike (Hall, 2003; O'Donnell in Levin, 2001).

Obdobje, ki je sledilo med leti 1920 in 1960, sta Zimmerman in Schunk (2003) imenovala »obdobje vzpona pedagoške psihologije« (str. vii). Med vplivnimi avtorji

[3] Zdi se, da je ta »dvojna« usmerjenost vidna tudi v pedagoški psihologiji v Sloveniji, če denimo mislimo jasno empirično zasnovano raziskovalno dejavnost psihologov v okviru katedre za pedagoško psihologijo na Oddelku za psihologijo Filozofske fakultete UL v primerjavi z bolj Deweyevsko naravnanostjo nekaterih posameznikov na drugih fakultetah znotraj vseh treh univerz, predvsem na področju izobraževanja učiteljev.

[4] Knjiga *Educational psychology*, ki jo je Thorndike izdal v treh volumnih leta 1914, je po Hilgardovi oceni njegovo najvplivnejše delo; Thorndike je bil izjemno produktiven avtor; napisal je 50 monografij ter okrog 400 člankov (Hilgard, 1996).

sta – v duhu časa po oceni sekcije za pedagoško psihologijo pri ameriški psihološki zvezi (Division 15, APA) izpostavila Leva S. Vygotskega, Burrhusa F. Skinnerja, Jeana Piageta, Leea J. Cronbacha in Roberta M. Gagneja. Tudi to obdobje so zaznamovale pomembne družbeno-politične spremembe, ki so vplivale na nadaljnji razvoj pedagoške psihologije. Po oceni Ascherja (2003) so ameriški psihologi tistega časa delovali predvsem na nadaljnjem razvijanju teorij učenja, psihološkega merjenja ter statističnih metod, medtem ko so se evropski raziskovalci usmerili na področja preučevanja percepcije, kognicije in jezika, ki so prispevala izjemna spoznanja k razumevanju človekovega razvoja in učenja. Kljub opisanemu napredku pa je Grinder (1989, cit. v Mayer, 1992; Hilgard, 1996) kritično opozoril, da je bilo nekje na polovici prejšnjega stoletja zaznati, da pedagoška psihologija »izgublja« vodilno pozicijo na področju vzgoje in izobraževanja. Do te situacije je po njegovem mnenju prišlo zato, ker so se pedagoški psihologi odmaknili od aktivne vloge pri oblikovanju vzgojno-izobraževalnih politik, niso zavzeli enotne teoretske perspektive ter niso raziskovali praktičnih problemov vzgoje in izobraževanja v naravnih okoljih. Na te težave je vizionarsko opozoril že James 1892. leta (Mayer,1992), ki je poleg tega svaril tudi pred poenostavljenim razumevanjem učiteljev glede uporabe pedagoškopsiholoških spoznanj v vzgojno-izobraževalni praksi in posledično njihovimi razočaranji in nezaupanju do pedagoške psihologije, ki ni mogla izpolniti njihovih visokih pričakovanj, hkrati pa opozarjal na možnost neučinkovitosti komunikacije med učitelji in psihologi zaradi razlik v njihovem mišljenju. Po Jamesovem mnenju so namreč prvi bistveno bolj konkretni, drugi pa abstraktni in analitični (Berliner, 1993). Mayer (1992) ocenjuje, da se je pedagoška psihologija v drugi polovici prejšnjega stoletja ponovno okrepila. K temu je prispevala aktivna vpetost v vzgojno-izobraževalno politiko, paradigmatski premik od behavioristične k kognitivni paradigmi učenja in poučevanja ter bolj avtentično raziskovanje, ki se je premaknilo iz laboratorijev v konkretne učne situacije. K ohranjanju pomembnosti pedagoške psihologije na področju vzgoje in izobraževanja pa je nenazadnje (predvsem v ZDA) v tem času prispeval tudi odziv ameriških oblasti na prevlado ruskih znanstvenikov z izstrelitvijo Sputnika v vesolje leta 1957. Kot posledica tega dogodka se je intenziviralo raziskovanje sposobnosti za učenje ter učnih pristopov, ki vodijo k ustvarjalnosti in gospodarski konkurenčnosti (Hilgard, 1996).

Tretje pomembno obdobje v razvoju pedagoške psihologije, od leta 1960 do danes, Zimmerman in Schunk (2003) imenujeta »obdobje sodobne pedagoške psihologije« (str. vii). Zaznamuje ga pomemben paradigmatski premik od behavioristične h kognitivni paradigmi učenja in poučevanja; med avtorji pa - po oceni sekcije za pedagoško psihologijo pri ameriški psihološki zvezi (Division 15, APA) imena kot so Benjamin S. Bloom, Nathaniel L. Gage, Jerome Bruner, Albert Bandura in Ann L. Brown. Pressley in Roehrig (2003) v poglobljenem opisu obdobja tem velikanom pedagoške psihologije dodajata še vrsto drugim imen oziroma pomembnih del pedagoških psihologov, ki so izboljšala razumevanje učnega vedenja in dinamike vzgojno-izobraževalnih procesov ter usmerila nadaljnji razvoj discipline na področjih

raziskovanja kognicije, vedenjskega učenja, vloge sociokulturnega konteksta, socialnih odnosov na področju vzgoje in izobraževanja, razvoja, motivacije, individualnih razlik, psiholoških osnov kurikuluma, poučevanja in pouka, vzgojno-izobraževalnih medijev (IKT) ter raziskovalnih metod oziroma ocenjevanja.

Ker je v tem obdobju nastajala tudi pedagoška psihologija v Sloveniji, se bova v nadaljevanju natančneje posvetila njenim začetkom in nadaljnjemu razvoju.

Začetki in razvoj pedagoške psihologije v Sloveniji

Razvoj pedagoške psihologije v Sloveniji je povezan z ustanovitvijo Oddelka za psihologijo na Filozofski fakulteti v Ljubljani leta 1950. Z raziskovanjem te psihološke panoge je začel Mihajlo Rostohar na področju branja, ki je na osnovi preučevanja zaznavnih procesov razvil analitično metodo učenja branja (Rostohar, 1961). Do hitrejšega razvoja pedagoške psihologije je prišlo v sedemdesetih letih, ko je bila na oddelku ustanovljena katedra za pedagoško psihologijo leta 1966 (Zorman in Žagar, 1983; Žagar, 1992).

Prvi je na Oddelku za psihologijo na Filozofski fakulteti v Ljubljani začel predavati pedagoško psihologijo kot samostojni predmet Ivan Toličič leta 1963. Leta 1966 je predavanja iz tega predmeta prevzel Leon Zorman. Kasneje, leta 1971 je bil na katedri kot asistent nastavljen Drago Žagar. Z njegovo izvolitvijo v učiteljski naziv se je predmet razdelil v dva premeta, pedagoško psihologijo I in II, na katedro pa sta prišli dve novi asistentki, najprej za krajše obdobje Mojca Kosec, nato pa leta 1986 Sonja Pečjak in Vlasta Zabukovec. S to kadrovsko zasedbo dveh učiteljev in dveh asistentov je katedra zapolnila takratne kadrovske potrebe. Enaka kadrovska zasedba je bila že nekoliko prej tudi na ostalih dveh aplikativnih katedrah, na katedri za klinično psihologijo in na katedri za industrijsko psihologijo (sedaj katedra za psihologijo dela in organizacije) (Žagar, 1992).

Poleg pedagoške psihologije se je v okviru katedre za pedagoško psihologijo izvajal in se še izvaja tudi predmet, ki je namenjen vsem študentom pedagoških smeri na Filozofski fakulteti. Najprej je ta predmet kot »Uvod v psihologijo« predaval Ivan Toličič. Kasneje, leta 1971, pa je predavanja prevzela Barica Marentič Požarnik, ki je program predmeta dopolnila in ga bolj prilagodila bodočim učiteljem. Skladno s temi vsebinskimi spremembami programa se je spremenil tudi naziv predmeta, in sicer najprej v »Psihologija pouka in učenja«, kasneje pa v »Psihologija za učitelje«.

Ko je Barica Marentič Požarnik odšla na Oddelek za pedagogiko in tam začela predavati tudi pedagoško psihologijo za študente pedagogike, sama zaradi preobremenjenosti ni zmogla več izvajati programa predmeta Psihologija za učitelje. Leta 1980 je zato Drago Žagar, poleg Pedagoške psihologije II za študente psihologije, prevzel tudi predavanja iz predmeta Psihologija za učitelje za študente filoloških smeri študija na Filozofski fakulteti, medtem ko je Barica Marentič Požarnik nadaljevala s predavanji tega predmeta za študente nefiloloških smeri vse do upokojitve. Vendar pa tudi ta kadrovska dopolnitev, delno s še enim učiteljem na predmetu, ni

zadostovala. Zato je bilo potrebno kadrovsko vrzel zapolniti še z dvema asistentoma. Tako je bila leta 1988 kot asistentka nastavljena Cirila Peklaj in leta 1994 Melita Puklek Levpušček.

Z upokojitvijo prof. dr. Draga Žagarja trenutno delajo na katedri za pedagoško psihologijo pri predmetih s področja pedagoške psihologije (Uvod v pedagoško psihologijo, Psihologija učenja, Psihologija pouka, Psihosocialni odnosi v šoli, Didaktika psihologije in Psihologija za učitelje) tri visokošolske učiteljice: prof. dr. Sonja Pečjak, prof. dr. Cirila Peklaj in doc. dr. Melita Puklek Levpušček ter dve asistentki: dr. Katja Depolli Steiner in Tina Pirc.

Pedagoški psihologi so kot visokošolski učitelji in asistenti zaposleni tudi drugje: na Oddelku za psihologijo na Filozofski fakulteti v Mariboru, na Oddelku za pedagogiko na Filozofski fakulteti v Ljubljani in na vseh treh pedagoških fakultetah: v Ljubljani, Mariboru in Kopru. Na Oddelku za psihologijo Filozofske fakultete v Mariboru predava pedagoško psihologijo prof. dr. Norbert Jaušovec, na Oddelku za pedagogiko Filozofske fakultete v Ljubljani pa doc. dr. Barbara Šteh. Na Pedagoški fakulteti v Ljubljani so izvajalci predmetov Pedagoška psihologija in Psihologija za učitelje prof. dr. Cveta Razdevšek Pučko, doc. dr. Alenka Polak in doc. dr. Mojca Juriševič. Na Pedagoški fakulteti v Mariboru predavata te predmete doc. dr. Katja Košir in doc. dr. Katarina Habe. Na Pedagoški fakulteti v Kopru je dolga leta predavala prof. dr. Cveta Razdevšek Pučko, tudi doc. dr. Mojca Juriševič, sedaj pa izvajata predmete s področja pedagoške psihologije viš. pred. Sonja Čotar in asist. mag. Petra Dolenc. Vrsto let je na Pedagoški fakulteti v Ljubljani in Kopru predavala pedagoško psihologijo za študente predšolske vzgoje tudi prof. dr. Breda Kroflič, na Pedagoški fakulteti v Mariboru pa prof. dr. Ivan Ferbežar. Že pred ustanovitvijo obeh fakultet je na takratni Pedagoški akademiji v Ljubljani predaval pedagoško psihologijo Albin Podjavoršek, na Pedagoški akademiji v Mariboru pa Janko Plemenitaš.

Raziskovalna in publicistična dejavnost slovenskih pedagoških psihologov

Pedagoški psihologi v Sloveniji so bili vseskozi aktivni tudi na znanstvenoraziskovalnem področju. Raziskave v šestdesetih in sedemdesetih letih prejšnjega stoletja so bile usmerjene predvsem v preučevanje dejavnikov osebnostnega razvoja in učne uspešnosti učencev ter šolsko dokimologijo; najpomembnejše med njimi so zbrane v tabeli 1.

V osemdesetih letih prejšnjega stoletja se je težišče raziskovanja premaknilo k raziskovanju vplivov socialno-ekonomskih in demografskih dejavnikov na osebnostni razvoj in učno uspešnost učencev. Med temi raziskavami je treba omeniti obsežno mednarodno raziskavo *Coping Styles and Achievement: A Cross – National Study of School Children*. Glavni pobudnik in avtor raziskave je bil Robert F. Peck s teksaške univerze v Austinu, pri nas pa sta jo vodila Ivan Toličič in Leon Zorman (Diaz-Guerrero, 1973). Raziskava je zajela otroke iz osmih držav: Anglije, Brazilije,

Italije, Japonske, Mehike, ZDA, bivše ZRN in Slovenije. Rezultati so v vseh državah pokazali, da SES pomembno vpliva na razvoj otrokovih sposobnosti. Ta raziskava je bila v tistem obdobju edinstven primer tako obsežne raziskave na področju psihologije pri nas.

Druga pomembna raziskava, ki obravnava omenjeno problematiko, pa je bila raziskava *Vpliv socialno ekonomskih in demografskih dejavnikov na šolski uspeh in osebnostne lastnosti otrok* avtorjev Ivana Toličiča in Leona Zormana (Toličič in Zorman, 1977). To je bila vseslovenska raziskava, v kateri so bile preučevane razlike med učenci iz šol v različno urbaniziranih okoljih in med učenci iz različnega SES. Rezultati so pokazali, da socialna in kulturna razvitost okolja močno vpliva na šolsko uspešnost in nekatere osebnostne lastnosti otrok. Ta vprašanja so zaradi velikega socialnega razslojevanja slovenske družbe aktualna tudi danes, zato bi jih bilo potrebno na novo preučiti z namenom objektivnega spoznavanja socialno pogojenih razlik med otroci in opozarjanja družbe na te razlike.

V osemdesetih in devetdesetih letih prejšnjega stoletja so prevladovale raziskave na področju ustvarjalnosti; pomembnejše raziskave na tem področju je opravil Drago Žagar, kasneje pa tudi njegov »učenec« Norbert Jaušovec in Breda Kroflič (tabela 2).

Tabela 1. *Prve slovenske raziskave na področju pedagoške psihologije*

Raziskava	Avtor/avtorji
Zrelost otrok za vstop v šolo[a]	Ivan Toličič (Toličič, 1965)
Vpliv halo učinka na ocenjevanje učencev	Ivan Toličič (Toličič, 1970b)[b]
Doba poučevanja in veljavnost šolskih ocen	Leon Zorman (Zorman, 1964, 1970a)[a]
	Leon Zorman (Zorman, 1970b)[b]
Vpliv dolžine teksta v šolskih nalogah na ocenjevanje	Leon Zorman (Zorman, 1970b)[b]
Vpliv urjenja ocenjevalcev na veljavnost šolskih ocen	Ivan Toličič, Leon Zorman in (Toličič in Zorman, 1970)[b]

Opombe:
a V okviru te raziskave je bil konstruiran tudi znan Toličičev Test za šolske novince.
b Raziskave, ki so objavljene v monografiji "Uspešnost učencev v šoli" (ur. Toličič, 1970a), vendar sta jih avtorja že v 60-ih predstavila na različnih domačih in mednarodnih konferencah.

V zadnjem desetletju prejšnjega stoletja je potekala prenova osnovne šole, zato so bile raziskave usmerjene v preučevanje pedagoškopsiholoških vidikov prenove ter v njeno evalvacijo. Pedagoški psihologi so bili nosilci štirih takih raziskav (tabela 3). Prav tako so bili pedagoški psihologi aktivni pri pripravi Bele knjige na področju vzgoje in izobraževanja, ki je izšla v letošnjem letu (Krek in Metljak, 2011), in sicer so aktivno sodelovali pri pripravi konceptualnih smernic na področju vzgoje

in izobraževanja nadarjenih (M. Juriševič) ter izobraževanja strokovnih delavcev na področju vzgoje in izobraževanja (C. Peklaj).

Tabela 2. *Raziskave na področju ustvarjalnosti*

Raziskava	Avtor/avtorji
Vpliv socialno-ekonomskega statusa družine na konvergentne in divergentne sposobnosti otrok	Drago Žagar (Žagar, 1981)
Vpliv učiteljevih stališč na učenčeve ustvarjalne sposobnosti	Drago Žagar (Žagar, 1984a)
Različni načini mišljenja in učni uspeh učencev	Drago Žagar (Žagar, 1984b)
Vpliv ustvarjalnih sposobnosti na učni uspeh učencev	Drago Žagar (Žagar, 1984c)
Vpliv družinskega okolja na kreativnost	Norbert Jaušovec (Jaušovec, 1980)
Razvoj ustvarjalnosti v šoli	Norbert Jaušovec (Jaušovec, 1987a)
Razvijanje ustvarjalnosti predšolskih otrok skozi gibalno dejavnost	Breda Kroflič (Kroflič, 1989)

Poleg navedenih štirih sklopov problemov so se pedagoški psihologi ukvarjali tudi z drugimi pomembnimi vprašanji vzgoje in izobraževanja, kot denimo z nevropsihološkimi vidiki reševanja problemov in ustvarjalnosti (N. Jaušovec), odnosom med glasbo in kognitivnim funkcioniranjem (K. Habe), nadarjenimi učenci (I. Ferbežar; D. Žagar), psihološkimi vidiki branja (S. Pečjak), sodelovalnim učenjem (C. Peklaj), učnimi navadami in strategijami ter samoregulacijskim učenjem (B. Marentič Požarnik, S. Pečjak; C. Peklaj), samopodobo in učenjem (M. Juriševič), učno motivacijo (M. Juriševič), uporabo portfolia pri učenju in ocenjevanju (M. Juriševič; C. Razdevšek Pučko), opisnim ocenjevanjem (C. Razdevšek Pučko), socialnimi odnosi med učenci (K. Košir), razredno interakcijo (C. Razdevšek Pučko), šolsko in razredno klimo (V. Zabukovec), psihološkimi vidiki obremenjenosti učencev (D. Žagar), pedagoškimi stališči učiteljev (C. Razdevšek Pučko), kakovostjo učenja in poučevanja (B. Šteh), izobraževanjem učiteljev (B. Marentič Požarnik; C. Razdevšek Pučko), timskim delom v šoli (A. Polak) in izgorelostjo učiteljev (K. Depolli Steiner).

Svoja dela so pedagoški psihologi tudi objavljali. Analiza njihove publicistične dejavnosti za zadnjih deset let, prikazana v sliki 1 kaže, da imajo največ objav v slovenskih znanstvenih in strokovnih revijah (*Psihološka obzorja, Anthropos, Sodobna pedagogika, Pedagoška obzorja, Vzgoja in izobraževanje, Didakta, Educa*). V obdobju zadnjih petih let je opazen tudi porast objav v tujih revijah (*Studia Psychologica, Psihologijske teme, Acta Psychologica, Educational Studies, Review of Psychology, International Journal od Psychophysiology*) in v monografskih publikacijah. Najmanj publicistične aktivnosti je zaznati v poljudnem tisku, kar bi bilo treba v prihodnje izboljšati, saj to vodi k popularizaciji pedagoškopsiholoških spoznanj tudi v

širši javnosti, ne le strokovni. Na tem mestu je smiselno izpostaviti pomislek, da je stanje na področju publicistične dejavnosti v zadnjem času najverjetneje odraz močnega vpliva habilitacijskih meril v univerzitetnem prostoru, kar po eni strani raziskovalce žene v enostranskost izbire želenih mest objave (v skladu s t.i. točkami, ki so potrebne za napredovanje), po drugi strani pa zapostavlja objavljanje v strokovnih publikacijah, ki omogočajo »dialog« z vzgojno-izobraževalno prakso. Najpomembnejše monografske publikacije, ki so nastale v petdesetih letih razvoja pedagoške psihologije v Sloveniji, so predstavljene v tabeli 4.

Tabela 3. *Raziskave v obdobju prenove osnovne šole, ki so jih vodili pedagoški psihologi*

Raziskava	Avtor/avtorji
Komunikacijski model opismenjevanja z didaktično igro	Sonja Pečjak (Pečjak, Križaj Ortar, Magajna in Kozinc, 1999)
Strokovna avtonomija in odgovornost pedagoških delavcev	Barica Marentič Požarnik (Marentič Požarnik, Kalin, Šteh in Valenčič Zuljan, 2003)
Organizacija nivojskega pouka, stališča učencev, učiteljev in staršev do te oblike diferenciacije ter njeni učinki na učence	Drago Žagar (Žagar, Peklaj in Pečjak, 2003)
Evalvacija prenove prvega triletja osnovne šole	Cveta Razdevšek Pučko, Alenka Polak (Razdevšek Pučko idr., 2007)

Sklep in pogled naprej

Na osnovi povedanega lahko predstavitev strneva v sklep, da je šestdesetletni razvoj pedagoške psihologije v Sloveniji uspešno in sproti sledil trendom razvoja te psihološke discipline drugod v svetu (Evropi in Ameriki) in da je danes v glavnem primerljiv s temi trendi oziroma za njimi po različnih indeksih ne zaostaja. K temu napredku je veliko prispevala empirična usmerjenost, zasnovana na solidni metodologiji.

Kljub nespornemu napredku pedagoške psihologije v Sloveniji pa se je nekaterim problematikam v preteklosti posvečalo premalo pozornosti. Po najinem mnenju so se pedagoški psihologi premalo ukvarjali s sekundarnim in terciarnim izobraževanjem, vsekakor pa manj kot z osnovnim izobraževanjem in predšolsko vzgojo. V prihodnosti bi se morali zato bolj usmeriti tudi v preučevanje višje ravni izobraževanja. Več pozornosti je treba nameniti tudi preučevanju procesov učenja v okviru posameznih učnih predmetov ter razvoju učinkovitih metod poučevanja. Skoraj nedotaknjena je do danes še psihološka problematika izobraževanja odraslih. Poleg tega je preveč zapostavljeno preučevanje karierne orientacije; spremljanje uspešnosti učencev v nadaljnjem izobraževanju in v kasnejšem poklicu ter validacija

teh postopkov. Potrebne so tudi kompleksnejše in dolgoročnejše raziskave, ki bi prispevale k bolj celoviti psihološki osvetlitvi problemov na področju vzgoje in izobraževanja. Več pozornosti je treba posvetiti tudi implementaciji raziskovalnih rezultatov v pedagoško prakso, kajti izkušnje kažejo, da mnoge raziskave ne najdejo poti do uporabnikov (prim. slika 1). Rezultate posameznih raziskav je treba preverjati še z drugimi vzporednimi raziskavami, da bi se na ta način preverila njihova veljavnost. Nenazadnje bi se pedagoški psihologi morali še bolj vključevati tudi v razne mednarodne raziskovalne projekte.

Razvoj pedagoške psihologije je vplival tudi na nastanek in razvoj šolske psihološke službe. V Sloveniji so se začeli prvi šolski psihologi na šolah zaposlovati ob koncu šestdesetih let. Z leti je postajala ta služba vedno bolj organizirana, vendar je bila formalno uzakonjena šele z Zakonom o osnovni šoli leta 1980. Do danes je dosegla velik napredek, tako po številu zaposlenih psihologov na šolah (zlasti osnovnih šolah)[5] kot tudi v strokovnem pogledu. Primerjava s šolskimi psihološkimi službami v drugih šolskih sistemih (Evropi in Ameriki) bi verjetno pokazala, da naša ne zaostaja, ampak je celo bolj razvita. Med razvojem pa so se v strokovnem delovanju šolske psihološke službe pri nas pokazale tudi določene pomanjkljivosti. Po najini oceni se šolski psihologi zlasti v zadnjih dvajsetih letih veliko ukvarjajo s socialnopedagoškimi vidiki vzgojno-izobraževalne problematike, manj pozornosti pa posvečajo izrazito psihološkim vidikom: ugotavljanju in spremljanju spoznavnega, čustvenega in socialnega razvoja učencev, ugotavljanju individualnih razlik med učenci, spremljanju učnega napredka učencev in analizi vzrokov učne neuspešnosti... ter svetovanju učencem, učiteljem in staršem na teh psiholoških osnovah. S takšno usmeritvijo šolska psihološka služba izgublja svojo identiteto in ne prispeva optimalno svoje dodane vrednosti k prispevkom drugih strok: šolske, socialne in specialno rehabilitacijske pedagogike ter socialnega dela. Seveda pa tudi drugi profili šolskih svetovalnih delavcev pogosto ne dovolj kompetentno posegajo v reševanje psihološke problematike. Analiza del in nalog različnih profilov svetovalnih delavcev kaže, da se vsi bolj ali manj ukvarjajo z enakimi problemi in na enak način, najpogosteje z disciplino in vedenjskimi težavami otrok, integracijo otrok s posebnimi potrebami in učno neuspešnostjo posameznih učencev (Vidmar, 2004). Verjetno je edino specifično področje, ki ostaja v domeni šolskih psihologov psihološko testiranje. Podobno razmišljanje, s katerim se v celoti strinjava, deli Mayer (2001), ko razlaga, da je »v današnjih časih težko biti pedagoški psiholog« (str. 83). Ta problem razume kot izziv za v prihodnje, ko naj bi se delo različnih strokovnjakov na področju vzgoje in izobraževanja sinergično dopolnjevalo; pedagogi naj bi se bolj posvetili poučevanju učnih strategij na posameznih predmetnih področjih, psihologi pa nadaljnjemu raziskovanju psiholoških vprašanj na področju aktualne problematike vzgojno-izobraževalnega dela.

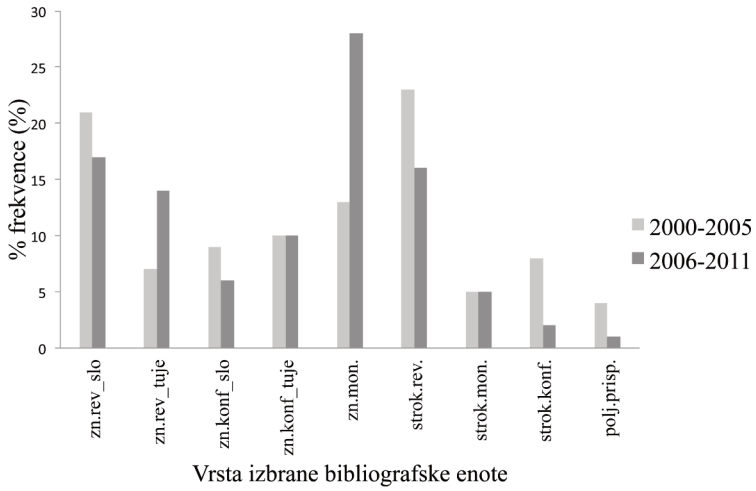
[3] Po podatkih Statističnega urada RS je bilo v letu 2009 aktivnih 290 psihologov na področju vzgoje in izobraževanja (osebna komunikacija z B. Stritih, 20. 10. 2011).

Tabela 4. *Raziskave v obdobju prenove osnovne šole, ki so jih vodili pedagoški psihologi*

Naslov monografije	Avtor/avtorica
Testi znanja in njihova uporaba v praksi	Toličič in Zorman (1963)
Preverjanje in ocenjevanje znanja ter opazovanje učencev v šoli	Zorman (1968)
Uspešnost učencev v šoli	Toličič (ur.) (1970a)
Sestava testov znanja in njihova uporaba v šoli	Zorman (1974)
Dejavniki uspešnega učenja	Marentič Požarnik (1976)
Okolje in uspešnost učencev: vpliv socialnoekonomskih in demogeografskih dejavnikov na šolski uspeh in osebnostne lastnosti otrok	Toličič in Zorman (1977)
Spodbujanje otrokove ustvarjalnosti: Priročnik za učitelje, študente in starše.	Jaušovec (1987b)
Nova pota v izobraževanju učiteljev	Marentič Požarnik (1987)
Nadarjeni otroci v vrtcu	Glogovec in Žagar (1990)
Kako uspešno reševati probleme?	Jaušovec (1991)
Ustvarjalnost: projektno vzgojno delo	Glogovec in Žagar (1992)
Ustvarjanje skozi gib	Kroflič (1992)
Flexible thinking: An explanation for individual differences in ability, (Perspectives on creativity research)	Jaušovec (1993)
Naučiti se misliti	Jaušovec (1994)
Izzivi raznolikosti	Marentič Požarnik, Magajna in Peklaj (1995)
Opisno ocenjevanje: Teoretična izhodišča in praktični napotki za opisovanje dosežkov pri posameznih predmetih	
Merjenje razredne klime: priročnik za učitelje	Zabukovec (1998)
Samopodoba šolskega otroka	Juriševič (1999)
Ustvarjalni gib - tretja razsežnost pouka : učinki ustvarjalnega giba na nekatere vidike intelektualnega, emocionalnega in socialnega razvoja otroka	Kroflič (1999)
Osnove psihologije branja: Spiralni model kot oblika razvijanja bralnih sposobnosti učencev	Pečjak (1999)
Opisno ocenjevanje	Razdevšek Pučko in Baraga (1999)
Psihologija pouka in učenja	Marentič Požarnik (2000)
Sodelovalno učenje ali Kdaj več glav več ve	Peklaj (2001)
Celovitost nadarjenosti	Ferbežar (2002)
Preverjanje in ocenjevanje za uspešnejši študij	Marentič Požarnik in Peklaj (2002)
Bralne učne strategije	Pečjak in Gradišar (2002)
Poglavja iz pedagoške psihologije: Izbrane teme	Pečjak in Košir (2002)
Šolsko psihološko svetovanje	Pečjak, Košir in Zabukovec (ur.) (2005)
Učna motivacija in razlike med učenci	Juriševič (2006)
Bralna motivacija v šoli: Merjenje in razvijanje	Pečjak, Bucik, Gradišar in Peklaj (2006)
Timsko delo v vzgoji in izobraževanju	Polak (2007)
Psihologija za učitelje	Žagar (2009)
Osebnostni, motivacijski in socialni dejavniki učne uspešnosti	Puklek Levpušček in Zupančič (2009)
Psihološki vidiki bralne pismenosti: od teorije k praksi	Pečjak (2010)
Model supervizirane prakse psihologov	Zabukovec in Podlesek (2010)
Didaktika psihologije v srednjem izobraževanju	Žagar (2011)

Opombe: V tem pregledu seveda niso zajeta vsa dela, ki so jih objavili pedagoški psihologi. Izpuščene so predvsem interdisciplinarne monografije, ki so nastale v soavtorstvu s strokovnjaki iz drugih področij.

Nenazadnje je v sklepu tega razmišljanja pomembno poudariti še razširjanje oziroma diseminacijo pedagoškopsiholoških spoznanj v vzgojno-izobraževalno prakso. Anderman (2011) nujnost te diseminacije vidi na dveh ravneh, in sicer bolj neposredno, na ravni učinkovitejšega sodelovanja z učitelji oziroma šolo kot mikrosistemom ter posredno, na ravni intenzivnejšega sodelovanja pedagoških psihologov z oblikovalci vzgojno-izobraževalne politike na nacionalni ravni. Zdi se, kakor da je glavni problem razumevanje transferja, na kar je opozarjal že William James; prenos iz psihologije na področje vzgoje in izobraževanja po njegovem mnenju ni ne spontan, ne neposreden in enostaven (prim. Mayer, 1992), kakor bi se morda utegnilo zazdeti. Vzgojno-izobraževalni kontekst je namreč živ organizem, zato je treba najprej razumeti njegovo dinamiko, nato pa premišljeno uporabiti psihološko znanje za učinkovito reševanje problemov učenja in poučevanja in izboljševanje vzgojno-izobraževalne prakse. Pregled delovanja slovenskih pedagoških psihologov, predstavljen v tem prispevku, kaže na aktivnost tako znotraj discipline kot na omenjenih »zunanjih« ravneh. Za nadaljnji razvoj pedagoške psihologije v Sloveniji in njene implementacije na interdisciplinarnem področju vzgoje in izobraževanja, pa bo potrebno v prihodnje to delovanje še poglobiti in dopolniti, tako z znanstveno-raziskovalnim kot tudi s strokovnim delom.



Slika 1. Primerjava izbranih objav habilitiranih visokošolskih učiteljev za področje pedagoške psihologije v letih 2000 – 2005 in 2006 – 2011 (SICRIS). Habilitirani visokošolski učitelji za področje pedagoške psihologije v obdobju 2000 – 2011: Habe, K., Jaušovec, N., Juriševič, M., Košir, K., Kroflič, B., Pečjak, S., Peklaj, C., Marentič Požarnik, B., Puklek Levpušček, M., Polak, A., Razdevšek Pučko, C., Šteh, B., Zabukovec, V., Žagar, D.. V primerih soavtorstva se je objava štela le enkrat. V primerih ponatisa monografij se je štela le 1. izdaja monografije, ne ponatisi. zn.rev_slo = izvirni ali pregledni znanstveni članki v domačih revijah; zn.rev_tuje = izvirni ali pregledni znanstveni članki v tujih revijah; zn.konf_slo = objavljeni znanstveni prispevki na domačih konferencah; zn.konf.tuje = objavljeni znanstveni prispevki na konferencah v tujini; zn.mon. = samostojni znanstveni sestavki/poglavja ali znanstvene monografije; strok.rev. = strokovni članki; strok.mon. = samostojni strokovni sestavki/poglavja ali strokovne monografije; strok.kon. = objavljeni strokovni prispevki na konferencah; polj.prisp. = poljudni članki.

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Znanstveni raziskovalnoempirični prispevek

Emotions, motivation and self-regulation in boys' and girls' learning mathematics

Cirila Peklaj & Sonja Pečjak
University of Ljubljana, Faculty of Arts, Department of Psychology

Abstract: The purpose of our study was to investigate the relationship of affective and motivational processes and self-regulation in mathematics in secondary school students. We were interested in finding out if these relationships differ between boys and girls. Second, we predicted the use of cognitive and metacognitive strategies from emotional and motivational variables. A total of 397 students (145 boys and 252 girls) attending the first year of grammar schools in Slovenia participated in the study. Emotions were measured with the three scales assessing students' positive and negative emotions during math classes, during learning math at home and during math tests. Students' goal orientations were measured by Achievement Goal Questionnaire Revised (AGQ-revised; Elliot & Murayama, 2008), self-efficacy by Patterns of Adaptive Learning Scales (PALS; Midgley et al., 2000) and cognitive and metacognititve strategies by Motivated Strategies for Learning Questionnaire (MSLQ; Pintrich et al., 1991). More significant correlations between emotional and motivational dimensions were found for girls than for boys. The opposite was true for the relationship between emotional dimensions and strategies. Further hierarchical regression analyses showed that emotions explained a greater amount of variance in using cognitive and metacognitive strategies in boys than in girls. In both genders, positive emotions during learning math at home and math test are the best predictors of (meta)cognitive strategy use. Among motivational variables, only performance goal orientation explained significant amount of variance in all strategies in girls over and above emotional variables. Implications of emotional and motivational dimensions for the use of cognitive and metacognitive strategies in learning math are discussed, as well as implications for further research.

Keywords: emotions, motivation, self-regulation, mathematics, academic achievement

* Naslov / Address: Cirila Peklaj: red. prof. dr. Cirila Peklaj, Univerza v Ljubljani, Filozofska fakulteta, Oddelek za psihologijo, Aškerčeva 2, 1000 Ljubljana, e-mail: cirila.peklaj@ff.uni-lj.si

Čustva, motivacija in samoregulacija fantov in deklet pri učenju matematike

Cirila Peklaj in Sonja Pečjak
Univerza v Ljubljani, Filozofska fakulteta, Oddelek za psihologijo, Ljubljana

Povzetek: Namen študije je bil raziskati odnos afektivnih in motivacijskih procesov s samoregulacijo pri matematiki pri srednješolcih. Zanimalo nas je ali se te povezave razlikujejo glede na spol ter koliko čustvene in motivacijske spremenljivke napovedujejo uporabo kognitivnih in metakognitivnih strategij dijakov. V raziskavi je sodelovalo 397 slovenskih dijakov prvega letnika gimnazije (145 fantov in 252 deklet). Dijaki so s pomočjo treh lestvic ocenili pozitivna in negativna čustva pri matematiki v treh kontekstih: med poukom, med učenjem doma in med preizkusom. Ciljno motivacijske orientacije dijakov smo merili z revidiranim AGQ vprašalnikom (Achievement Goal Questionnaire Revised AGO-Revised; Elliot in Murayama, 2008), lastno učinkovitost dijakov s PALS-om (Patterns of Adaptive Learning Scales PALS; Midgley et al., 2000), kognitivne in metakognitivne strategije pa z MSLQ (Motivated Strategies for Learning Questionnaire MSLQ; Pintrich et al., 1991). Pri dekletih smo med čustvenimi in motivacijskimi dimenzijami našli več pomembnih korelacij kot pri fantih, pri fantih pa več pomembnih povezanosti med čustvi in strategijami. Hierarhična regresijska analiza je pokazala, da čustva pri fantih pojasnijo več variance pri uporabi kognitivnih in metakognitivnih strategij kot pri dekletih. Pri obeh spolih pa so najbolje napovedovala uporabo (meta)kognitivnih strategij pozitivna čustva med učenjem matematike doma in pri preizkusu iz matematike. Med motivacijskimi spremenljivkami pa je pomemben del variance v uporabi vseh strategij pri dekletih pojasnila le ciljna usmerjenost v dosežek. Ob koncu izpostavljamo implikacije emocionalnih in motivacijskih spremenljivk za uporabo kognitivnih in metakognitivnih strategij pri učenju matematike in za nadaljnje raziskovanje.

Ključne besede: čustva, motivacija, samoregulacija, matematika, učni uspeh

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The purpose of the article is to show the connection between academic emotions on the one hand and motivational goals orientations and the choice of learning strategies in SRL on the other hand in the context of mathematics learning. First, self-regulation and its connection will achievement will be discussed, followed with the description of academic emotions in more detail, followed by explanation of motivational variables and the results of empirical studies of connections between academic emotions, motivational goal orientation and learning strategies.

Self-regulated learning and its elements

Self-regulated learning (SRL) is a form of learning that enables the learner to adapt to growing demand of information society and to find his way around in the multitude of new information. Student's activity in planning, monitoring and

evaluating his/hers own learning processes is the centre of SRL. Zimmerman & Schunk (2001) emphasize that SRL is about regulation of cognition (control of cognitive learning strategies), motivation and emotion (control of motivational beliefs and affects) and behaviour.

A number of models explaining the self-regulatory process and the role of different factors in the effectiveness of SRL, especially the role of cognitive and motivational factors, for example the model of Boekarts (1997), cyclical model of Zimmerman (1998) and the model of Garcia and Pintrich (1994). In all these models authors stress cognitive and motivational processes and their relation to learning achievement. The researcher in SRL usually does not include affective (emotional) processes, as they are not explicitly mentioned in any of the models presented earlier. And we can agree with the statement, posited by Pekrun, Goetz, Titz, & Perry (2002) that in the 90s of the past century research interest in emotion, rising otherwise, almost completely avoided the area of educational psychology, especially the domain of SRL. But nevertheless, the results of laboratory experiments (Bless et al., 1996; Meinhardt & Pekrun, 2003; Pekrun, 1992) revealed that emotions have an impact on the way of perception, on processing and long-term retention.

Studying academic emotions is important for many reasons: first, learners' emotional experiences are directly linked to his/hers subjective wellbeing; second, emotions have an impact on the quality of learning process and thus on learning achievement; and third, emotions have an influence on the quality of student – teacher interaction in the classroom, which consequently has an impact on teaching effectiveness (Goetz, Pekrun, Hall, & Haag, 2006).

Empirical evidence concerning the issue shows that positive emotions have positive influence on learning, especially on SRL. In SRL it is presupposed that a student plans, monitors and reflects his or her own learning process. This way of learning anticipates mental flexibility/adaptability and it is assumed that the latter is stimulated by positive emotions. Negative emotions, on the other hand, are supposed to direct the students towards learning based on external control (for example from a teacher), which results in worse self-regulation of one's learning.

Academic emotions

Reinhardt Pekrun, the leading author in the field of academic emotions research, defined academic emotions as emotions which are directly linked to learning situation in general – teaching, learning, tests and students' achievement (Pekrun et al., 2002). Pekrun et al. (2002) most often connected academic emotions with the learning process according to following dimensions: (1) task-related and self-related emotions and social related emotions, (2) according to valence as positive and negative emotions, and (3) according to their direction to process, prospective and retrospective emotions. The classification in summarized in the Table 1.

Table 1. *The domain of academic emotions*

	Positive	Negative
Task related and self-related		
Process	enjoyment	boredom
	anticipatory joy	hopelessness
	hope	anxiety
Retrospective	joy about success	sadness
	satisfaction	disappointment
	pride	shame and guilt
	relief	
Social related	gratitude	gratitude
	empathy	jealousy and envy
	admiration	contempt
	sympathy and love	antipathy and hate

Note: Adapted from "Academic emotions in students' self-regulated learning and achievement: A program of quantitative and qualitative research", Pekrun, R., Goetz, T., Titz, W., in Perry, R. P., 2002, Educational Psychologist, 37(2), str. 92. Avtorske pravice Taylor&Francis, 2002.

Task and self-related emotions are connected with an individual. This means that the feelings and thoughts, caused by an emotion, are directed backward to an individual (for example anxiety). Some emotions and associated thoughts however are directed toward other people (for example anger or jealousy). Prospective emotions are associated with an expected outcome of a learning situation (for example hope), retrospective emotions on the other hand are the emotional reactions to an actual outcome of a learning situation (for example pride in accomplished goal or shame if the goal is not accomplished).

This classification of academic emotions is important for understanding and differentiating the effects of individual types of emotions on motivational and cognitive factors in learning. In this regard Pekrun, Frenzel, Goetz, & Perry (2007) further classified emotions according to the level of activation as (i) activating or deactivating. Activating emotions are those that energize the student to action or push the student to approach or engage in a task (for example enjoyment of learning, hope for success). Deactivating emotions are those that facilitate rest, disengagement or avoidance of action (for example boredom and hopelessness).

Motivation – achievement goal orientations and self-efficacy

As already stated before, academic motivation plays an important role in students' SR behaviour, because it determines the quantity and the quality of time and

effort a student dedicates to learning, the strategies he uses in learning and therefore the learning outcome. Two motivational constructs will be used in our study to measure students' motivation, namely achievement goal orientations and self-efficacy.

Achievement goal theory proved to be a useful starting point for studying and understanding students' motivation for learning in school. Researchers (Ames, 1992; Dweck & Legget, 1988; Elliot, 1999; Harackiewicz & Sansone, 1991; Nicholls, 1984; Urdan & Maeher, 1995) generally focus on the two facets of the goal directed achievement strivings, namely mastery (that is task orientation, learning, mastery) and performance (that is ego orientation, self-enhancement, relative ability).

Mastery goals are goals directed to learning and mastery of learning content. Student who adopt this goal orientation are actively striving to develop and improve their competence, they find challenge in learning mentally demanding tasks and to gain the understanding of the subject matter. On the other hand performance goals are goals directed to present ones' own abilities. Students with this goal orientation in learning situations compare their performance with the performance of the other students, they want to show their knowledge in the best possible way, good grades are more important to them as mastery of content and the attention is directed to the self (Ames and Archer, 1998; Dweck & Legget 1988; Nicholls et al., 1990). In the mid-nineties some researcher had pointed out that performance goals can have approach or avoidance dimension. Students in achievement situations can learn to show their capabilities, to outperform other or they can learn to avoid showing their incompetence to other students or to teacher (Elliot & Harackiewicz, 1996). The subdivision of performance goals to performance approach and to performance avoidance goals was proposed. In both performance goal orientations students focus on their abilities, on the self, but in the first case the search for success prevails, while in the second, avoidance of failure prevails.

A step further in the achievement goal theory was made by Elliot and his co-workers (Elliot & McGregor, 2001; Elliot & Murayama; 2008, Elliot & Thrash, 2001) who proposed 2 x 2 achievement goal framework in which they also divided mastery goals into mastery-approach and mastery-avoidance goals. This model includes mastery-approach, mastery-avoidance, performance-approach and performance-avoidance goals. Mastery-approach goals are directed toward fulfilling once potential and to learn and understand as much as possible (Elliot & McGregor, 2001; Elliot & Murayama, 2008). Mastery-avoidance goals are directed toward trying to avoid learning and understanding less than possible in a certain situation (Elliot & Murayama, 2008). Performance-approach goals include normative component and are directed toward comparison with others. Students' goals are to be better than others in the class. Performance-avoidance goals, on the other hand, are directed toward avoiding doing worse than the others (Elliot & Murayama, 2008; Hulleman et al., 2010). Elliot & McGregor (2001) also developed the questionnaire to measure all four goal orientations, which was latter revisited (Elliot & Murayama, 2008). In our study we used the revised version of Achievement Goal Questionnaire – Revised (AGQ; Elliot & Murayama, 2008).

Another motivational dimension which can explain students' self-regulation in learning was also included in our research, namely self-efficacy. Self-efficacy belief is a judgment that an individual make about his or her ability to perform a specific task (Bandura, 1986). Self-efficacy was constantly found to be related with students' engagement in academic situations and their academic achievement is self-efficacy (Patrick, Ryan, & Kaplan, 2007; Puklek Levpušček & Zupančič, 2009; Smith, Sinclair, & Chapman, 2002).

Academic emotions, motivation and strategy use

Some authors include emotions as important factor in explaining academic motivation and achievement. Two of the most significant models on the effects of emotions are cognitive-motivational model from Pekrun (1992) and asymmetric two-dimensional model from Linnenbrink and Pintrich (2002).

The basic assumption of cognitive-motivational model (Pekrun, 1992) proposes that emotion effects achievement indirectly through different cognitive and metacognitive mediators. The most important mediators are academic motivation, learning strategies, cognitive resources and self-regulation (Pekrun et al., 2002). Single emotions have different effects on these mediators. Research reveals that positive-activating emotions are associated with increases in the efficacy of learning, negative-deactivating emotions with decreases in learning, while different studies have found different effects on learning for negative-activating emotions (c. f. Pekrun et al., 2002). Author argues that negative emotions require more cognitive resources (like attention, problem solving) than positive emotions, leaving fewer resources available for task-directed activities, and therefore leading to less efficient cognitive processing. This is proved also by empirical research of Pekrun and his colleagues (2007). The results show that positive activating emotions (enjoyment, hope and pride) significantly correlate with metacognitive, organizational and elaboration strategies, but negative activating emotions (anger, anxiety and shame) sometimes correlate with rehearsal strategies. Based on these results, authors draw a conclusion that there is a reciprocal connection between positive emotions and better learning self-regulation: positive emotions reinforce self-regulation, this leads to better achievement, which (further on) strengthens positive academic emotions.

The results of other research also confirmed connections of academic emotions with the use of specific learning strategies. For example Zeidner (2007) proved, that anxiety disrupts students' efficient processing directed at successfully completing the task. Forgas (2001) wrote that positive mood has been associated with the use of holistic and adaptive approach to learning (strategies) and negative emotions have been associated with analytical and detail-focused form (strategies) of cognitive engagement.

The other model of Linnenbrink and Pintrich (2002) explains the relationship between affective and motivational factors and presumes asymmetric and two-

dimensional relationship between affective processes (mood, emotions) and achievement goals. The influence of mood as a long lasting affective state on achievement goals is higher than the influence of short lasting emotions. Positive emotions are related with student's mastery goals, but negative mood is probably not connected with achievement goals. Goals have further effects on experiencing specific learning emotions. Orientation toward mastery goals raises positive academic emotion and lower negative academic emotions. Orientation toward performance goals is usually not connected with positive emotions, but with higher degree of negative academic emotions. Authors also presume that through academic emotions goals are indirectly also connected with achievement. The goals-emotion-achievement linkage was confirmed also by other authors (e.g., Elliot & Pekrun, 2007).

Positive relations of mastery-approach goal orientation and positive affect toward subject (Puklek & Peklaj, in print) and interest (Hulleman et al., 2010) was found. Some relations between performance-approach goals and positive emotions such as pride and enjoyment, and negative relations with boredom were also found (Daniels, Stupnisky, Pekrun, Haynes, Perry et al., 2009). The relations between performance-approach goals and anxiety are not so consistent. They range from no (Wolters et al., 1998) to relatively low (Daniels et al., 2009; Middleton & Midgley, 1997; Skaalvik, 1997). Elliot and Muruyama (2008) found positive correlation with fear of failure. Wolters (2004) and Bong (2005) also found positive correlations between performance-approach goals and self-efficacy, but Linnenbrick (2005) found no correlation with self-efficacy.

Mastery-avoidance goal orientation was found to be related to worry, anxiety, higher levels of emotionality (Elliot & McGregor, 2001), fear of failure (Elliot & Murayama, 2008). Students with performance-avoidance goal orientation show less enjoyment and more anxiety (Rowsthorne & Elliot, 1999; Skaalvik, 1997; Wolters et. al., 1996), fear of failure (Elliot & McGregor, 2001), anticipatory test anxiety and worry (Elliot & Murayama, 2008). It was also found that students with this goal orientation had lower self-efficacy (Midleton & Midgley, 1997) and academic self-concept (Murayama & Elliot, 2009).

The same pattern can be seen between achievement goals and learning strategies. A more positive pattern of relations between approach goals (mastery and performance) and learning strategies was found than between avoidance goals and learning strategies. Higher mastery-approach goals were also found to be related to deep processing in learning (Elliot & McGregor, 2001) and performance outcomes (Hulleman et al., 2010). Research of performance-approach goals and learning strategies is also inconsistent. Wolters et al. (1996) showed that performance-approach goals can be connected with task engagement, deeper cognitive strategies and regulatory use, Linnenbrink (2005) found positive connections with quality of self-regulation, Kaplan and Midgley (1997) did not find any connection with strategy use, but Elliot and McGregor (2001) found positive connections with surface processing. On the other hand results of avoidance

goals are quite clear. Mastery-avoidance goals are connected with disorganization in learning (Elliot & McGregor, 2001), and lower performance outcomes (Hulleman et al., 2010, Puklek Levpušček & Peklaj, 2011). A negative pattern can be also seen in using cognitive and metacognitive strategies. Performance-avoidance is also related to reduced use of deep learning strategies (Elliot & Murayama, 2008) and less monitoring and evaluation of learning (Wolters, 2004), less engagement in learning (Church, Elliot, & Gable; 2001), less help seeking (Bong, 2008) and more surface processing (Elliot & Murayama, 2008).

Aims of the study and hypotheses

The purpose of our study was to investigate the relationships of affective and motivational processes and self-regulation in mathematics in secondary school students. First, we were interested in establishing if these relationships differ between boys and girls. Research of gender differences in emotional, motivational processes and strategy use showed some differences between boys and girls. More positive affect toward school was found in girls (Kaplan & Maehr, 1999), but also test anxiety was one of the emotions that have been usually found to be higher in girls than in boys (Smith & Sinclair, 2005; Wolters & Pintrich, 1998). Gender differences were also fund in goal orientations and self-efficacy. Girls were found to have higher mastery-approach goal orientation (Elliot & McGregor, 2001) and higher performance-avoidance goals in math (Midgley & Urdan, 2001), but higher performance-approach goals (Wolters, 2004) and also math self-efficacy was found in boys (Fast et al., 2010; Williams and Williams, 2010; Wolters, 2004). Gender differences in the use of cognitive and metacognitive strategies in math were also found with girls showing higher levels of self-regulated strategies (Patrick, Ryan, & Kaplan, 2007).

Second, we tried to find out if the pattern of relationships between emotional, motivational variables and self-regulatory strategies was the same in boys and girls. Third, we tried to find out how emotional and motivational variables can predict the use of cognitive and metacognitive strategies in boy and girls. Research links motivation-emotion-self regulation can be particularly relevant to first-year gymnasium students who find themselves in a new achievement setting that differs considerably from elementary school. This learning environment is much more competitive, pressure for achieving is higher and at the same time, higher levels of autonomy and independence in learning are expected. Under these conditions students' strategies may be particularly susceptible to the influence of affective variables (emotional and motivational).

According to the research aims three hypotheses were developed:

Hypothesis 1: Students will differ in emotional, motivational and (meta)cognitive strategies according to their gender.

Hypothesis 2: The pattern of relationships between emotional, motivational variables and self-regulatory strategies will be different in boys and girls.

Hypothesis 3: Emotional and motivational variables will be important predictors of the use of cognitive and metacognitive strategies in boys as well as in girls.

Method

Participants

There were 397 upper-secondary students (145 boys and 252 girls) in their first grade of "*gymnasium*" program participating in the study. Students were recruited from schools in different regions in Slovenia (6 schools, 13 classrooms). The average age of students was 15.67 years.

Measures

Emotions in learning. Students' emotions were measured with Emotions in Learning Scale (ELS). The instrument developed for the purposes of the study. It consists of eight emotions, four positive (joy, hope, pride, relief) and four negative emotions (anger, anxiety, shame, hopelessness). Students answered the question of how often they felt a certain emotion during three different learning situations in math: during classes, during learning at home and during taking tests on a five-point scale (1–*never*, 2–*rarely*, 3–*sometimes*, 4–*often*, 5–*always*). Cronbach α coefficients for positive emotions in math classes were .68, for home learning were .67 and for tests taking were .67. Cronbach α coefficients for negative emotions were .69, .70 and .68, respectively.

*Motivation in learning***.** Achievement Goal Questionnaire Revised (AGQ-revised; Elliot & Murayama, 2008) was used to measure students goal orientations. Questionnaire is based on 2x2 framework of achievement goal orientations measuring four achievement goals: mastery approach goals, mastery avoidance goals, performance approach goals and performance avoidance. Questionnaire consists of four scales (each consist of 3 items) measuring students' goal orientations. Students were asked to answer how much they agreed that each item is valid for them in their math learning on a five-point scale (1–*strongly disagree* to 5–*strongly agree*). The example of item measuring students' mastery approach goal orientation is: "My aim is to completely master the material presented in math class." Cronbach α coefficients for the four scales that were obtained in the sample of North American students were .84 for mastery-approach goals, .88 for mastery-avoidance goals, .92 for performance-approach goals and .94 for performance avoidance goals. In our sample Cronbach α coefficients were .63, .70, .81 and .85, respectively.

Self-efficacy was measured with the scale from Patterns of Adaptive Learning Scales (PALS; Midgley et al., 2000). Academic Self-Efficacy Scale consists of five items measuring students' perceptions of their competence to do their math work.

The students responded to items on a five-point scale (1– *not at all true*, 2 – *usually not true*, 3 – *somewhat true*, 4 – *quite true* and 5 – *very true*). The example of item: "I can do even the hardest work in math if I try". In the research conducted by Midgley et al. (2000) Cronbach α coefficient was .78, in our study was .84.

Cognitive and metacognitive strategies. Four subscales (repetition, elaboration, organization and metacognitive strategies) of Motivated strategies for learning questionnaire (MSLQ; Pintrich, Smith, Garcia, & McKeachie, 1991) were used to measure cognitive and metacognitive strategies in math. Subscale repetition strategies consists of four items, subscale elaboration strategies of six items, organizational strategies of four items and metacognitive strategies of twelve items. Students answer on seven point scale (1– *not true for me at all* to 7 – *completely true for me*). An example of item from metacognitive strategies scale: "I ask myself questions to make sure I understand the material I have been studying in this class." Authors report following Cronbach α reliability coefficients: .69 for repetition strategies, .76 for elaboration strategies, .64 for organizational strategies and .79 for metacognitive strategies. In our study Cronbach α reliability coefficients were: .60, .70, .63 and .73, respectively.

Procedure

We obtained the parents' consent that their children may participate in the research. The present study uses a part of data gathered in a broader study about factors that can influence students' achievement in high school which was conducted by the authors. Testing in schools was carried out in the period from March to June 2010 during regular school hours. It took one school hour to compete the questionnaires relating to math. Scales were applied in regular school hours at the times most suitable for the school. The students first answered the questions related to the basic demographic data (gender, date of birth) followed by the scales that measured different variables related to math.

Results

First One-way ANOVA was performed to find out possible gender differences in measured variables. The results are presented in Table 1. Cohen *d* values were also calculated.

Table 2. *Results of ANOVA according to gender in affective, motivational and cognitive variables included in research*

Variables	Male			Female					
	N	*M*	*SD*	*N*	*M*	*SD*	*F*	*p*	Cohen *d*
Emotions									
Positive - class	140	12.90	3.34	249	12.51	2.83	0.99 (1,387)	.320	
Negative - class	142	7.73	2.61	245	9.00	3.13	16.68 (1,385)	.000	.42
Positive - home	140	11.36	3.08	247	12.29	3.15	7.88 (1,385)	.005	.30
Negative - home	140	7.66	2.59	244	9.11	3.30	19.92 (1, 382)	.000	.46
Positive - test	141	12.08	3.56	247	12.19	3.27	0.09 (1,386)	.770	
Negative - test	143	8.59	3.02	244	10.29	3.34	24.91 (1,385)	.000	.51
Motivation									
Mastery approach	145	11.95	2.14	249	12.48	2.06	5.83 (1,392)	.016	.25
Mastery avoidance	138	11.06	2.95	242	11.50	2.73	2.14 (1,378)	.140	
Performance approach	143	9.47	2.89	248	9.84	2.95	1.45 (1,389)	.230	
Performance avoidance	145	9.89	3.41	245	10.24	3.15	1.09 (1,388)	.300	
Self-efficacy	144	20.39	3.53	251	19.85	4.08	1.76 (1, 393)	.190	
Strategies									
Repetition	140	16.92	4.61	244	18.80	4.89	13.68 (1,382)	.000	.37
Elaboration	140	24.40	7.17	240	26.92	6.99	11.24 (1,378)	.001	.35
Organisation	142	13.89	4.81	247	16.75	5.14	29.24 (1,387)	.000	.55
Metacognitive	138	48.69	10.57	232	53.50	10.36	7.66	.000	.45

Four differences were found between boys and girls in academic emotions: in negative emotions in class, in positive and negative emotions in home learning and in negative emotions during test taking in math. Girls reported significantly higher negative academic emotions in all three learning environments and higher positive emotions during home learning. In motivational variables only one significant difference was found in mastery approach goals. Girls reported higher mastery goal orientation in math than boys. Similarly, significant differences were found in all four self-regulated strategies. Girls reported higher use of repetition, elaboration, organization and metacognitive strategies. Effect sizes of differences are small except in organizational strategies and negative emotions during test taking where they are moderate. Because of these differences all further analyses were performed separately for boys and girls.

Pearsons' correlation coefficients were calculated separately for boys and girls. They are presented in Table 3. Results showed similar patterns of significant intercorrelations among the variables measuring academic emotions, among student motivational variables and among cognitive and metacognitive strategies. Only two differences between boys and girls were found. Correlations between negative academic emotions in different settings were higher in girls than in boys. In girls, a significant positive correlation was also found between mastery-avoidance and performance-avoidance goal orientation that was not found in boys.

Positive emotions in math class, in learning at home and during math tests taking were low-positively related with all motivational variables in girls, except mastery-avoidance goal orientation. Negative emotions in class and during test taking were also low-positively related with performance-avoidance goal orientation in girls. Negative emotions in all three situations were also low and negatively related with math self-efficacy. In boys, the pattern of correlations was similar for positive emotions during math classes and home learning and all motivational variables as in girls. All correlations were low and positive. Positive emotions during math test taking were low and positively related only with math mastery goal orientation and self-efficacy. But negative emotions in all three situations were only low negatively related with self-efficacy. In sum, less significant correlations were found between academic emotions and motivational variables in boys.

Positive emotions were also low-positively related with all (meta)cognitive strategies in girls and in boys, with the exception of correlation between positive emotions during test taking and elaboration in boys. In girls, two low-positive correlations were also found between negative emotions during math classes and organizational strategies and negative emotions during test taking and metacognition. In girls, low and positive correlations were also found between all motivational variables and (meta)cognitive strategies, except between mastery avoidance goal orientation and organizational strategies. In boys, low-positive correlations were also found between all motivational variables and (meta)strategies, but between performance-avoidance goal orientation, repetition and organizational strategies and between self-efficacy and organizational strategies. In sum, comparison between boys and girls also showed less statistically significant correlations between emotional, motivational variables and strategies in boys than in girls.

A series of hierarchical regression analyses were computed to predict the use of cognitive (repetition, elaboration and organization strategies) and metacognitive strategies for boys and girls. In all analyses, academic emotions were entered as the first step in regression analysis and motivational variables were entered as the second step.

As shown in Table 4 both sets of variables predicted significant amount of variance in using repetition strategies in boys. Emotional variables were found to predict repetition better than motivational variables. Among academic emotions positive emotions were a significant predictor. Positive emotions during math class

Table 3. *Pearsons' correlation coefficients among affective, motivational and cognitive variables included in research for boys and girls*

Variab les	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	
Emotions															
1. Positive - class	-	.03	.51***	.02	.50***	.04	.34***	.13*	.30***	.27***	.29***	.27***	.20**	.18*	.21***
2. Negative - class	.16	-	.10	.75***	-.06	.70***	.07	.11	.12	.17**	-.19**	-.02	.00	.04	.07
3. Positive - home	.56***	.13	-	.02	.47***	.05	.34***	.16*	.28***	.21***	.37***	.35***	.36***	.32***	.33***
4. Negative - home	.19*	.58***	.11	-	-.06	.75***	-.01	.06	.02	.06	-.17**	-.06	-.05	.05	.06
5. Positive - test	.41***	-.04	.36***	.01	-	-.10	.18**	.09	.18**	.16*	.31***	.16*	.10	.10	.18**
6. Negative - test	.08	.61***	.16	.46***	-.02	-	.02	.08	.10	.13*	-.22***	.02	-.01	.10	.11
Motivation															
7. Mastery approach	.28***	-.11	.25**	-.08	.26**	-.13	-	.44***	.52***	.21***	.36***	.24***	.34***	.23***	.25***
8. Mastery avoidance	.17*	-.03	.27**	.02	.02	-.03	.36***	-	.34***	.33***	.23***	.18**	.14*	.10	.14*
9. Performance approach	.25**	-.10	.31***	-.02	-.02	-.09	.25**	.21*	-	.67***	.29***	.30***	.35***	.29***	.31***
10. Performance avoidance	.13	.02	.18*	.05	.04	.04	.36***	.31***	.70***		.19**	.18**	.27***	.12*	.21**
11. Self-efficacy	.33***	-.23**	.33***	-.17*	.34***	-.23**	.37***	.22**	.43***	.22**	-	.15*	.23***	.18**	.13*
Strategies															
12. Repetition	.17*	.11	.39***	.10	.31***	.10	.29***	.23**	.29***	.10	.21*	-	.66***	.66***	.64***
13. Elaboration	.19*	.09	.31***	-.02	.39***	.04	.27***	.16	.29***	.16*	.26**	.69***	-	.66***	.67
14. Organisation	.24**	.19*	.36***	.12	.24**	-14	.20*	.23**	.23**	.15	.13	.67***	.66***	-	.58***
15. Meta-cognitive	.19*	.16	.32***	.02	.37***	.18*	.21*	.25**	.17*	.18*	.66***	.18*	.66***	.69***	.59***

*Note: Above the diagonal are results for girls, below the diagonal are results for boys. N for individual correlations for girls range from 225 to 247 and N for boys range from 123 to 144. *p < .05. **p < .01. ***p < .001.*

were a negative predictor of repetition, but positive emotions during learning at home and during test taking were positive predictors of repetition in boys. Among motivational variables, performance approach was a positive predictor of repetition and performance-avoidance approach was a negative predictor. In total 32% of variance in use of repetition strategies was explained by academic emotions and motivation for boys.

In comparison with boys, only academic emotions significantly predicted their use of repetition in girls. Two positive academic emotions, namely positive emotions in class and in home learning positively predicted self-reported use of repetition in math. Although motivational variables together did not additionally predicted significant amount of variance, performance approach was the individual significant predictor in girls, too. In girls, only 17% of variance in repetition can be explained by academic emotions and motivation.

Table 4. *Results of hierarchical regression analysis for variables predicting repetition strategies for boys and girls*

	Source for use of repetition strategies							
	Repetition – boys				Repetition – girls			
Predictors	ΔR^2	β	ΔR^2	β	ΔR^2	β	ΔR^2	β
Step 1: Emotions								
Positive - class		-.19		-.25*		.18*		.15
Negative - class	.23***	.07		.12		-.03		-.08
Positive - home		.43***		.33**	.13***	.24**		.23**
Negative - home		.01		.03		-.13		-.08
Positive - test		.24**		.15**		-.05		-.05
Negative - test		-.01		.04		.09		.05
Step 2: Motivation								
Mastery approach				.15				-.08
Mastery avoidance			.09*	.11			.04	.00
Performance approach				.32**				.20*
Performance avoidance				-.25*				-.02
Self-efficacy				.05				.15
Total R^2	.23		.32		.13		.17	
N	123				216			

*$p < .05$. **$p < .01$. ***$p < .001$.

Table 5. *Results of hierarchical regression analysis for variables predicting elaboration strategies for boys and girls*

	Source for use of elaboration strategies							
	Elaboration – boys				Elaboration – girls			
Predictors	ΔR^2	β	ΔR^2	β	ΔR^2	β	ΔR^2	β
Step 1: Emotions								
Positive - class		-.12		-.20		.01		.02
Negative - class	.21***	.21		.26*		.04		-.05
Positive - home		.24*		.16	.12***	.31**		.24**
Negative - home		-.09		-.08		-.10		-.01
Positive - test		.36***		.29**		-.09		-.09
Negative - test		-.08		-.03		-.11		.06
Step 2: Motivation								
Mastery approach				.17				.27***
Mastery avoidance			.07	-.01			.12***	-.13
Performance approach				.19				.17**
Performance avoidance				-.09				.13
Self-efficacy				.12				-.06
Total R^2	.21		.28		.12		.24	
N	126				216			

*$p < .05$. **$p < .01$. ***$p < .001$.

Results presented in Table 5 are related to the use of elaboration strategies. In boys, only academic emotions significantly predicted the use of elaboration strategies in math. Motivational variables did not prove to be an additional significant predictor. Positive emotions during home learning and test taking, but also negative emotions during class were positive predictors of elaboration strategies use in boys. Both sets of variables explained 28% of variance. Contrary to boys, both sets of variables proved to be significant predictors of elaboration strategies in girls. Among emotional variables, positive emotions during math home learning were a positive predictor of elaboration strategies and among motivational variables girls' mastery approach and performance approach were also positive predictors of their elaboration strategies. Both sets of variables explained 24% of variance.

Table 6. *Results of hierarchical regression analysis for variables predicting organisation strategies for boys and girls*

	Source for use of organisation strategies							
	Elaboration – boys				Elaboration – girls			
Predictors	ΔR^2	β	ΔR^2	β	ΔR^2	β	ΔR^2	β
Step 1: Emotions								
Positive - class		.01		-.03		.01		-.03
Negative - class	.17***	.15		.18		-.07		-.10
Positive - home		.30**		.23**	.10***	.27***		.23**
Negative - home		.03		.03		.01		.04
Positive - test		.13		.07		.07		.07
Negative - test		-.03		.01		.13		.10
Step 2: Motivation								
Mastery approach				.09				.11
Mastery avoidance			.04	.12			.05*	-.05
Performance approach				.15				.26**
Performance avoidance				-.08				-.09
Self-efficacy				.03				-.05
Total R^2	.17		.21		.10		.15	
N	126				216			

*$p < .05$, **$p < .01$, ***$p < .001$.

Results relating to organization strategies (Table 6) showed that in boys, only academic emotions significantly predicted their use. Positive emotions during home learning were the only significant predictor. In girls, both sets of variables were significant predictors. Positive emotions during home learning and performance-approach goal orientation were positive predictors for organization strategy use. In boys, 21% of variance in organization strategies was explained by emotional and motivational variables, in comparison with girls, where 15% of variance was explained.

Table 7. *Results of hierarchical regression analysis for variables predicting metacognitive strategies for boys and girls*

	Source for use of metacognitive strategies							
	Elaboration – boys				Elaboration – girls			
Predictors	ΔR^2	β	ΔR^2	β	ΔR^2	β	ΔR^2	β
Step 1: Emotions								
Positive - class		-.11		-.15		.11		.07
Negative - class	.15***	.19		.22*		-.03		-.10
Positive - home		.24*		.18	.11***	.26**		.22**
Negative - home		-.16		-.15		-.03		.02
Positive - test		.34***		.28**		-.03		-.03
Negative - test		.14		.18		.11		.08
Step 2: Motivation								
Mastery approach				.11				.10
Mastery avoidance			.03	.17			.05*	-.01
Performance approach				.17				.20*
Performance avoidance				-.10				-.02
Self-efficacy				.03				-.10
Total R^2	.25		.28		.11		.16	
N	120				207			

*$p < .05$. **$p < .01$. ***$p < .001$.

Finally, metacognitive strategy use was also predicted. Results (Table 7) showed differences between boys and girls again. Only academic emotions were significant predictor of metacognitive strategy use in boys. First positive emotions during home learning and test taking were positive predictors of metacognitive strategy use, but when motivational variables were entered into regression analysis, negative emotions during math class and positive emotions during test taking become positive predictors of metacognitive strategy use. For girls, both sets of variables significantly predicted metacognitive strategies. Individual significant predictors were positive emotions during home learning and performance-approach goal orientation. Greater amount of variance was explained by predictors for boys (28%) than for girls (16%).

To sum up, the results of regression analyses showed that both emotional and motivational variables proved to predict strategy use differently in boys and in girls. Emotional variables in both predicted greater amount of variance in strategy use than motivational variables. Another important finding is that among academic emotions, most important are positive academic emotions during home learning and test taking which are the most frequent positive predictors of different strategy use. Only in boys

negative emotions during math learning in class can also predict elaboration and metacognitive strategy use. Some other differences between boys and girls were also found. In girls, positive emotions during home learning are the only predictors of all strategies, but in boys, other emotions are also important, such as positive emotions during test taking (for repetition, elaboration and metacognitive strategies), positive strategies in class (for repetition) and negative strategies during class learning (for elaboration and metacognitive strategies). The difference between boys and girls is also in the importance of goal orientations in strategy use. For boys, only performance-approach and performance-avoidance goals were predictors of repetition. For girls, performance-approach goal orientation was an important predictor of all strategies and mastery-approach goal orientation was also an important predictor of elaboration strategies. Thus, for girls goal orientations are more important predictors for majority strategies than for boys, the only exception being repetition. Another important difference is in the amount of explained variance. More variance can be explained with academic emotions and motivation in boys than in girls.

Discussion

The purpose of our study was to investigate the relationships of emotional, motivational variables and use of self-regulatory strategies in secondary school students learning mathematics. The results confirmed different patterns of relationships for girls and for boys and therefore acknowledge the importance of analyzing this relationships separately according to students' gender. Results also revealed that emotions can have a different effect on (meta)cognitive strategy use in different learning environments, during classes, during home learning and during test taking.

Differences in emotional, motivational variables and (meta)cognitive strategies

The results related to gender differences in emotional, motivational and cognitive variables relating to math learning are in accordance with prior research which showed the existence of differences in all three domains of SRL (Elliot & McGregor, 2001; Fast et al., 2010; Kaplan & Maehr, 1999; Patrick et al., 2007; Smith & Sinclair, 2005; Wolters, 2004). Therefore we can accept the first hypothesis about the differences in emotional, motivational and (meta)cognitive strategies. Regardless of this fact, some inconstancies with earlier research were also found which are discussed.

More positive emotions were found in girls during math home learning, but no differences were found between boys and girls during class learning and test taking. On the other hand girls report higher levels of negative emotions in all there learning situations. Our results therefore confirmed the exiting results that showed higher levels of test anxiety in girls in comparison with boys (Smith & Sinclair, 2005;

Wolters & Pintrich, 1998) and also further extend this pattern of higher emotionality to anger, shame and hopelessness which also compose negative emotionality scale. Experiencing higher levels of negative emotions is not related only to test anxiety, but can be also seen during learning math in class and at home. We can conclude that in general, girls experience more negative emotions during learning math in different context than boys.

In motivational variables only one significant difference was found in master-approach goals orientation. The results are the same as those found by Elliot and McGregor (2001) who also found higher mastery-approach goal orientation in girls in tertiary education. In mathematics, girls are directed toward fulfilling their potential and learning as much as possible more than boys. Contrary to research that also found higher performance-avoidance goals in math in girls (Midgley & Urdan, 2001) and higher performance-approach goals in math in boys (Wolters, 2004) no difference between boys and girls was found in our research. In general, we can conclude that girls show more positive achievement motivation than boys. Contrary to expectations no differences were found in self-efficacy which is motivational variable most often found to be higher in boys than in girls even when researchers take the actual achievement (grades) into account (Williams & Williams, 2010).

Higher results for girls were also found in their reported use of (meta)cognitive strategies during math learning as it was found in prior research (Patrick et al., 2007). Girls repeat content in math more often than boys, probably they solve more math problems for homework, use more elaboration and organization strategies during learning and also more regulatory strategies as planning, monitoring, reviewing, evaluating and correcting mistakes. This higher level of strategic learning can be one of the reasons for higher math grades in Slovene girls in grammar schools in comparison with boys (Japelj Pavešić & Cankar, 2010).

These results in more adaptive motivation in girls than in boys and in absence of differences in self-efficacy, which may be explained with our school system that does not allow students to choose the amount of math in primary or secondary school. The same amount of math is required for all students. Thus, girls could not choose less math lessons than boys, as in other countries, with less strict system and more flexibility in curriculum. This fact, together with their directedness to deep understanding, more frequent use of (meta)cognitive strategies could be reflected not only in their grades, but also in their math self-efficacy which then resembles their actual achievement more closely.

Patterns of relationships between variables for boys and girls

Our second hypothesis was related to different patterns of relationships between emotional, motivational and (meta)cognitive strategy variables in boys and girls. Results contrary to expectations show only a few differences in correlational patterns

between boys and girls. Therefore, our second hypothesis can be only partially confirmed. Results relating to inter-correlations among emotional, motivational and (meta) cognitive variables showed only two differences in girls' positive correlation existed between mastery-avoidance and performance-avoidance goals which are not present in boys. Results also showed that inter-correlations between negative emotions in different settings are higher in girls than in boys, indicating that boys may differentiate these negative experiences during math learning more than girls do.

Regarding the results about correlations between emotional and motivational variables, the only difference was in number of significant correlations. Two more significant correlations were found in girls than in boys: between positive emotions in class and performance-avoidance goals and between negative emotions in class and performance-avoidance goals. Higher levels of either positive or negative emotions have higher impact on avoidant motivation for girls in math. It is more important for them not to do worse than others in class in comparison with boys.I

Comparison of results including relations between emotions and (meta)cognitive strategies shows two differences. Correlations between positive emotions during test taking and organizational strategies are higher for girls than for boys, once again indicating that positive experiences during math test are more important for girls. On the other hand, negative emotions during class in boys are connected with higher use of organizational strategies, and negative during test are connected with higher use of metacognitive strategies. In girls, more connections between self-efficacy and (meta)cognitive strategies were found than in boys.

Predictive power of emotions and motivation in strategy use for boys and girls

In the third hypothesis we predicted that emotional and motivational variables will be important predictors of cognitive and metacognitive strategy use in boys and in girls. Our results again only partially confirmed the third hypothesis. Both sets of variables proved to be significant predictors of repetition in boys and in elaboration, organization and metacognitive strategies in girls. Thus, in our research a different pattern in predicting (meta)cognitive strategy use in math learning according to gender was found.

In boys the most important predictor of repetition is negative emotions in school and positive emotions during home and during test taking. For organizational strategies only positive emotions during home learning are an important predictor, but for elaboration and metacognitive strategies in boys, positive emotions during test taking and negative emotions during class learning are also significant predictors. In girls the only significant academic emotion for strategy use is positive emotions during home learning. It seems that, contrary to girls, some amount of negative emotions during math test taking can be as sign for them that they have to exercise more and that they have to monitor and regulate their math learning more carefully. Boys can

also understand positive emotions during class a sign that everything is alright with their math knowledge and they do not need any additional repetition in subject matter. On the other hand the only significant predictor for all strategies in girls was positive emotions during math home learning. Joy, hope, pride and relief when they are learning math alone at home help them approach math learning more strategically, which can later impact their math achievement.

Another difference related to gender in predicting (meta)cognitive strategies was found. In boys, the only motivational variables that predicted their repetition over and above academic emotions were performance-approach and performance-avoidance goals. Performance-approach goals were a positive predictor, but performance-avoidance goals were a negative predictor as was already confirmed in other research. For boys, an adaptive pattern for using repetition in math would be to experience positive emotions during home learning and during math test and to learn to do better than other students in the class. For girls performance-approach goals also proved to significantly predict all (meta)cognitive strategies over and above academic emotions. In elaboration, an additional significant predictor which explained even greater amount of variance was mastery-approach goals. To use elaboration strategies (to compare, summarize, explain or apply to different situations) in learning the subject matter, more effort is needed than to use repetition or organization. In these situations motivation to master subject matter in combination with performance-approach goals proved to be the best predictor of strategy use which was already confirmed in multiple goals approach in achievement goal orientation research (Linnenbrink, 2005; Smith & Sinclair, 2005).

Another difference according to gender is the amount of variance explained with emotional and motivational variables in strategy use in boys and in girls. Emotional and motivational variables explained greater amount of variance in boys than in girls. Emotional experiences in different situations during math learning are more important for boys than for girls. They can explain up to 23% of variance of repetition, 20% of variance in elaboration, 17% of organization and 21% of metacognitive strategies in boys. On the other hand, in girls, between 10% and 13% of variance for their (meta)cognitive strategy use could be explained with their academic emotions. Other individual variables not included in our research could be more important in explaining the girls' strategy use such as volition, interest, prior achievement, personality dimensions as well as variables in learning environment such as teacher and parent expectations regarding their math achievement (Bong, 2008; Friedel, Cortina, Turner, & Midgley, 2007; Puklek Levpušek & Zupančič, 2009).

Conclusion

Some final conclusions with implications for educational practice as well as for further research can be drawn from our research. The current study once again confirmed

the existence of gender differences in students' emotional, motivational and cognitive variables of their self-regulation in mathematics and therefore the importance to take these differences into account in educational practice. Differences were found in level of experiencing and reporting academic emotions, goal orientations and (meta)cognitive strategies and in relative importance of individual academic emotions and achievement goals in predicting strategy use. Teachers should be aware of these differences in designing optimal learning environment in which positive emotions during learning either in school or learning math in school could be experienced that is even more important for girls who experience higher levels of negative emotions in math. Carefully structured feed-back during math classes about strengths and weaknesses in ones' own learning combined with the instructions about (meta)cognitive strategies that can be used to improve them can help students to see realistic level of their knowledge. This could help students understand the need for more repetition and regulatory strategies use, that will be especially beneficial for boys and at the same time, it could direct students to mastery of declarative and procedural math knowledge, which could be beneficial for girls as well as for boys. Teachers should be attentive to promote positive emotions by enabling students, especially girls, to experience positive emotions during home learning by giving them homework, math problems, in which they can be successful. They also have to be careful in constructing math tests in such a way that they will not increase students' negative emotions, that is by avoiding too demanding test. This is especially important for boys. Although the research showed different patterns of math self-regulatory processes in boys and girls in the beginning of secondary school, some improvement that can further explain the nature of these differences more thoroughly can be used in future research. In our research, academic emotions were investigated only according to their positive or negative dimension. An important step further would be to look at individual positive and negative emotions and see their relative importance for strategy use in future research. Therefore the construction of short but reliable scales for individual emotions is also advised. Future research should also include some other dimensions that could have an effect on gender differences in students' academic emotions, motivation and strategy us. Parents' and teachers' expectations and their support in math classes could be among the most important ones.

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Znanstveni raziskovalnoempirični prispevek

Starostne razlike v samoregulaciji učenja

Karin Bakračevič Vukman[1*] *in Marta Licardo*[2]
[1]*Oddelek za psihologijo, Filozofska fakulteta Univerze v Mariboru*
[2]*Pedagoška fakulteta Univerze v Mariboru*

Povzetek: V pričujoči raziskavi smo želeli preučiti razvoj različnih področij samoregulacije v obdobju mladostništva in zgodnje odraslosti. Študija je vključevala učence v zaključnih razredih osnovne šole, stare 14–15 let, gimnazijce, stare 17–18 let, in študente, stare 22–23 let. Za pridobivanje informacij o kognitivni, metakognitivni in motivacijski samoregulaciji pri učenju smo uporabili Vprašalnik metakognitivnih, kognitivnih in motivacijskih strategij (Motivated Strategies for Learning Questionnaire MSLQ; Pintrich, 1991). Merili smo tudi metakognitivno točnost ob reševanju problemov. Le-ta naj bi nakazovala dejansko zmožnost metakognitivne samoregulacije. Rezultati so med starostnimi skupinami pokazali naslednje razlike: zaznana sposobnost samoregulacije je glede na skupino osnovnošolcev v obdobju srednjega šolanja upadla in nato zopet narasla v obdobju študija. Omenjena tendenca se ni pokazala v meritvi metakognitivne točnosti, pri kateri smo beležili izboljšanje skozi celotno raziskovano obdobje. Pokazale so se tudi zanimive razvojne razlike med spoloma: razlike v zaznani zmožnosti samoregulacije med fanti in dekleti so bile veliko večje v obdobju zgodnjega mladostništva (osnovnošolci), nato so se z naraščajočo starostjo zmanjšale (skupina srednješolcev) in v obdobju poznega mladostništva oziroma zgodnje odraslosti (skupina študentov) so razlike praktično izginile. Razlog za to lahko najverjetneje iščemo v različni hitrosti razvoja samoregulacije med fanti in dekleti.

Ključne besede: samoregulacija, metakognicija, starostne razlike, učenci

Age differences in self-regulation of learning

Karin Bakračevič Vukman[1*] *and Marta Licardo*[2]
[1]*University of Maribor, Faculty of Arts, Department of Psychology*
[2]*University of Maribor, Faculty of Education*

Abstract: The present research is focused on the development of different fields of self-regulation during adolescence and early adulthood. The study included participants from the following age groups: the pupils in the final classes of the primary school, aged 14–15 years, the youngsters in the secondary school (grammar school), aged 17–18 years, and the students, aged 22–23 years. To gain information on cognitive, metacognitive and motivational self-regulation of learning, we applied the Motivated Strategies for Learning Questionnaire (MSLQ; Pintrich, 1991). We also measured the metacognitive accuracy at problem solving, which should indicate the actual ability of metacognitive

[*] Naslov / Address: *Karin Bakračevič Vukman, Oddelek za psihologijo, Filozofska fakulteta UM, Koroška 160, 2000 Maribor, e-mail: karin.bakracevic@uni-mb.si*

self-regulation. The results showed the following differences between the age groups: the perceived ability of self-regulation decreased within the high school period compared to the primary school group, and increased again into study years. The described tendency was not obtained with respect to metacognitive accuracy. Results showed an increase in the metacognitive accuracy throughout the entire age-span studied. There are also interesting differences between the sexes. The differences in the perceived ability of self-regulation between boys and girls were distinctive within the early adolescence period, diminished during the growing age, and disappeared almost completely in the period of late adolescence/early adulthood. The reason for this could most probably be the different tempo of self-regulation development between boys and girls.

Keywords: self-regulation, metacognition, age differences, students

CC = 3500

Opredelitev samoregulacije

Samoregulacija vključuje sposobnost kontrole in uravnavanja lastnega vedenja, kognicije in emocij. Zelo široka opredelitev, ki so jo podali Rueda, Posner in Rothbart (2005) pravi, da se samoregulacija nanaša na več procesov in funkcij, s katerimi človeška psiha izvaja »nadzor« nad notranjimi stanji, procesi in funkcijami. Definirali so jo tudi kot sposobnost pričeti in izvesti aktivnosti v skladu z zahtevami okolja in z lastnimi cilji; ustrezno prilagajati intenzivnost, frekvenco in trajanje verbalnih, motoričnih in kognitivnih dejanj v socialnem ali izobraževalnem okolju (Bronson, 2000).

Samoregulacija pride predvsem do izraza oziroma je nujna v primerih, če pri ciljno usmerjeni dejavnosti naletimo na oviro in moramo razmisliti o alternativnih poteh za doseganje cilja, če na primer naloga zahteva osredotočanje pozornosti in blokiranje nebistvenih misli ali dražljajev...

Z vidika informacijsko-procesnih teorij kognitivnega razvoja so za razvoj samoregulacije najpomembnejši t. i. izvršilni procesi, ki igrajo odločilno vlogo pri kontroli akcije/vedenja in mišljenja. Pri reševanju problemov so izvršilne funkcije odgovorne za reprezentacijo problema, načrtovanje reševanja in evalvacijo (Zelazzo in Mueller, 2002).

Kako povezati in razmejiti samoregulacijo in metakognicijo kot dva sorodna, a vendar različna koncepta?

Večina avtorjev se strinja, da sta metakognicija in samoregulacija v psihologiji zelo uveljavljeni raziskovalni področji, vendar nista tako dobro definirani, kot bi pričakovali. Fox in Riconscente (2008) v delih treh klasičnih avtorjev Jamesa, Piageta in Vigotskega ugotavljata, da sta metakognicija in samoregulacija

vzporedna koncepta, ki se prepletata, a vendarle razlikujeta. Delo Piageta pravzaprav že dolgo povezujejo z raziskavami metakognicije in samoregulacije (Brown, 1987; Flavell, 1979; Pinard, 1986), predvsem z njunimi razvojnimi aspekti. Fox in Riconscente (2008) sta tako iz Piagetovih tekstov (Piaget, 1974) povzela njegovo argumentacijo, da se samoregulacija intelekta razvija vzporedno z metakognicijo. V delih Vigotskega je seveda močno poudarjena predvsem vloga notranjega govora pri samouravnavanju oziroma samoregulaciji otrokove aktivnosti. Po mnenju Vigotskega se razvoj odvija skozi ponotranjenje socialne interakcije, pri čemer predstavlja govor osnovo socialne interakcije. Tako ponotranjenje pripomore k naraščajoči abstrakciji in omogoči doseganje stopnje zavestne abstrakcije ali znanstvenih konceptov, k čemur pripomore tudi šolanje. Metakognicija in samoregulacija sledita podobni razvojni poti in se transformirata v smeri zrelega refleksivnega zavedanja in namerne kontrole. V delu Vigotskega (1986) se metakognicija pojavlja kot zavest, ki zahteva abstrakcijo in kontrolirano pozornost, ter se popolnoma prepleta s samoregulacijo. Vsebuje tudi zavedanje strukture lastnih miselnih procesov in zmožnost njihovega usmerjanja, pri čemer je sredstvo samousmerjanja sprva notranji govor (ponotranjenje direktivnega in indikativnega govora s strani drugih in v odnosu do drugih ljudi ali predmetov), nato pa »misel sama« (Vigotski, 1986). V glavnem postaneta refleksivna abstrakcija in formiranje konceptov mogoča v adolescenci in takrat omogočita tudi polnejši razvoj metakognicije. K razvoju metakognicije po mnenju Vigotskega bistveno pripomore tudi šolanje oziroma poučevanje in izvajanje šolskih nalog; le-to igra pomembno vlogo pri ozaveščanju in poznavanju lastnih miselnih procesov (Vigotski, 1986).

Samoregulacijo Vigotski (1986) opredeljuje kot namerno kontrolo lastne pozornosti, mišljenja in vedenja oziroma akcije. Razvoj le-te poteka v smeri od osnovne kontrole pozornosti preko kontrole vedenja h kontroli oziroma usmerjanju mišljenja, ki izraža progresivno ponotranjenje in abstrakcijo jezikovnih funkcij, katero prav tako dosežemo šele v adolescenci.

Na moderne raziskave metakognicije in samoregulacije sta nedvomno močno vplivala tudi Flavell (metakognicija) in Bandura (samoregulacija), lahko pa bi dodali še Zimmermana (2000), ki je nekako utrl pot modelu samoregulacijskega učenja. Flavell (1979) se je v svojem najpomembnejšem delu s področja metakognicije posvetil analizi in opisu razvojnih vidikov zmožnosti sledenja (ang. monitoring) lastnim kognitivnim procesom. Metakognicijo je konceptualno definiral kot »mišljenje o mišljenju« in jo operacionaliziral na štirih ključnih področjih: metakognitivno znanje, metakognitivna izkustva, cilji in aktivacija strategij. Tudi Dinsmore, Alexander in Loughlin (2008) ob analizi njegovih prispevkov ugotavljajo, da se metakognicija nanaša na refleksivno abstrakcijo novih ali obstoječih kognitivnih struktur. Med Flavellom in klasičnimi avtorji (predvsem Piagetom) zagotovo lahko potegnemo vsebinske vzporednice glede tega, kaj je metakognicija in kako se razvija, poudariti pa je potrebno, da

je Flavell področje metakognicije veliko podrobnejše razdelal in operacionaliziral. Podobno kot Flavell je metakognicijo razdelil Brown (1987), in sicer v znanje o kogniciji in samoregulatorne mehanizme, ki vključujejo preverjanje izida, načrtovanje, sledenje, popravljanje napak in evalvacijo strategij. Osredotočenje na strateške procese je pripeljalo tudi do razvoja koncepta metakognitivnih kontrolnih procesov (Nelson, 1996), ki so na nek način postali tudi podlaga konstruktu samoregulacije.

Če kot začetnika koncepta in najvplivnejšega avtorja na področju metakognicije vidimo Flavella, je po mnenju Dinsmora in sodelavk (2008) najvplivnejši avtor ali celo začetnik koncepta samoregulacije Albert Bandura. Če je bil koncept metakognicije popolnoma kognitivno orientiran, se je na področju samoregulacije sprva poudarjalo vedenjsko in emocionalno regulacijo (Bandura, 1989). V okviru Bandurovega koncepta samoučinkovitosti je bil dodan še motivacijski vidik. Samoregulacija, kot je opisana zgoraj, se v veliki meri oblikuje skozi interakcijo posameznika z okoljem. Ta poudarek jo deloma razlikuje od metakognicije, kjer so v ospredju razlag procesi znotraj posameznika.

Obe področji (predvsem samoregulacijo) so raziskovalci začeli preučevati tudi z nevropsihološkega vidika (npr. Posner in Rothbart, 1998). Tudi koncept izvršilne kontrole se v veliki meri prekriva z delom metakognitivnih procesov, saj pomeni usmerjanje akcije in je izredno pomemben pri odločanju, izbiri strategij in izvajanju drugih nerutinskih akcij.

Če na kratko povzamemo, so Dinsmore, Alexander in Loughlin (2008) z metaanalizo raziskav metakognicije in samoregulacije ugotovili, da študije metakognicije večinoma ostajajo znotraj kognitivnih okvirjev, medtem ko študije samoregulacije in samoregulacijskega učenja vključujejo kognitivno, motivacijsko in občasno tudi emocionalno področje.

Razvoj samoregulacije

Razvoj prizadevnega nadzora omogoča malčku določeno načrtovanje dejavnosti in fleksibilno odzivanje na spremembe v okolju (Posner in Rothbart, 2000) – torej določeno zmožnost samouravnavanja. Na vedenje torej že vpliva kognitivna predstava cilja. Sposobnost prizadevnega nadzora se povezuje tudi z razvojem vzdrževanja osredotočene pozornosti.

Prizadevni nadzor omogoča posamezniku regulacijo vedenja v odnosu do trenutnih in prihodnjih potreb (npr. odpoved takojšnji nagradi, da bi pridobil dragocenejšo nagrado v prihodnosti). Individualne razlike v prizadevnem nadzoru so povezane tudi z vidiki metakognicije, npr. s teorijo uma (Carlson in Moses, 2001). Tako so rezultati nalog, ki zahtevajo inhibitorno kontrolo, povezani z dosežki na nalogah teorije uma. Vse te ugotovitve kažejo na idejo, da prizadevni nadzor predstavlja podlago razvoja od bolj reaktivnega/odzivnega k bolj samoregula-

tivnemu vedenju – omogoča fleksibilnost pozornosti, ki je potrebna za ustrezno rokovanje z negativnimi čustvi in koordinira reakcije, ki so pod voljno kontrolo (Rueda, Posner in Rothbart, 2005). Na stopnji samokontrole, ki je predhodna samoregulaciji (2. leto starosti), je fleksibilnost za prilagajanje novim zahtevam še omejena in omejena je tudi zmožnost odlaganja zadovoljitve. Samoregulacija pa omogoča prilagajanje spremembam. Vključuje uporabo refleksije in strategij introspekcije, zavest in metakognicijo. Samoregulacija, kot smo jo že predhodno definirali, se torej prične pojavljati v starosti 3–4 let in se do obdobja adolescence razvije v dolgoročno ali strateško samoregulacijo.

V zvezi s tem naj omenimo, da nekateri avtorji pri razlagah razvoja samoregulacije poudarjajo razliko med t. i. organizmično ali biološko pogojeno regulacijo, ki je razmeroma »avtomatska«, in namerno oziroma voljno samoregulacijo, ki je intencionalna oziroma ciljno usmerjena. Že kmalu po rojstvu je v glavnem prisotna t. i. organizmična (samo)regulacija, v obdobju otroštva, še bolj pa mladostništva in odraslosti pa se močneje razvije namerna oziroma voljna samoregulacija (Gestsdottir in Lerner, 2008). Gestsdottir in Lerner (2008) k organizmični (samo)regulaciji prištevata fizične strukture in funkcije (npr. bioritem) ter vedenjske funkcije in procese (npr. temperament, kognitivni stili); namerna oziroma voljna samoregulacija pa naj bi vključevala ciljno orientirane procese, kot so npr. asimilacija/akomodacija, kontrolni procesi ter procesi selekcije, optimizacije in kompenzacije.

Razvoj samoregulacije je po eni strani povezan z zorenjem specifičnih regij frontalnega/prefrontalnega predela možganov in z razvojem pozornostnih mrež (izvršilna kontrola in inhibicija neustreznih impulzov) ter po drugi strani s socialno interakcijo in z vodenjem (uravnavanjem s strani drugega). To socialno podporo lahko sistematično zmanjšujemo, ko otroci postopno pridobivajo samoregulatorne spretnosti, sposobnosti.

Od adolescence naprej postanemo sposobni načrtovati kratkoročne in dolgoročne cilje ter podrediti svoje misli in vedenje doseganju teh ciljev. Od te starosti naprej na primer pričnejo mladostniki razmišljati o tem, kaj bi v življenju radi postali in sledijo dolgoročnemu načrtu, kot je določen postopek izobraževanja za uresničitev svojih ambicij. Podrejanje življenja mnogovrstnim dolgoročnim načrtom (kot npr. imeti družino, uspeti v poklicu …) je še kasnejši dosežek, ki se začne v zgodnji odrasli dobi. Brandstaedter (1999) pojasnjuje, da v adolescenci postanejo posameznikovi koncepti samega sebe in koncepti osebne prihodnosti dovolj razviti in definirani, da lahko usmerjajo namenska dejanja. Tudi zunanje zahteve z izvorom v družinskem in širšem družbenem okolju postajajo vedno bolj ponotranjene in integrirane s procesi samoregulacije, ki postaja dolgoročna in strateška. Samoevalvacije postajajo natančnejše; razvija se samorefleksija, ki je osnova tako razvoja identitete kot tudi samoregulacije (Lerner, Freund, De Stefanis in Habermans, 2001).

Samoregulacija se torej v adolescenci razvije do stopnje t. i. strateške samoregulacije, ki vključuje zastavljanje hierarhično postavljenih (kratkoročnih in dolgoročnih) ciljev, izbiro in uporabo ustreznih strategij za doseganje teh ciljev. Reševanje problemov postane načrtno in sistematično. Razvoj samoregulacije se nadaljuje tudi v obdobju odraslosti.

Rezultati študije španskih avtoric (Checa, Rodríguez-Bailón in Rueda, 2008) so pokazali, da je učinkovitost izvršilne pozornosti, ki predstavlja aspekt samoregulacije, povezana s šolskimi dosežki, predvsem v matematiki, kot tudi z aspekti socialne prilagojenosti. Spremenljivka prizadevni nadzor, se je pokazala kot pomemben napovedovalec vseh dimenzij šolske kompetence, ki so jih preverjali v omenjeni študiji. Podatki torej kažejo, da so individualne razlike v sistemih samoregulacije osrednjega pomena za razumevanje procesa učenja in socialnega prilagajanja v šoli.

Namen raziskave

V raziskavi smo želeli preučiti starostne razlike in razlike med spoloma na področju kognitivne/metakognitivne in motivacijske samoregulacije v učni situaciji. Pri tem smo se oprli na Pintrichev model samoregulacije učenja (Pintrich, 2000). Hkrati smo preučevali starostne razlike v metakognitivni točnosti kot dejavniku in/ali pokazatelju uspešnosti metakognitivne samoregulacije. Prav tako smo ugotavljali povezanost med t. i. samoocenjeno zmožnostjo metakognitivne samoregulacije in metakognitivno točnostjo ob reševanju problemov.

Zanimala nas je tudi povezanost zgoraj omenjenih spremenljivk z učnim uspehom. Glede na rezultate predhodnih raziskav smo predvidevali, da se bodo vsa področja samoregulacije izboljševala s starostjo (Demetriou in Kazi, 2001) in da bodo dekleta dosegala višje rezultate kot fantje (glej npr. Pečjak in Košir, 2003; Tomec, Pečjak in Peklaj, 2006). Prav tako smo predvidevali, da bodo vsa tri področja samoregulacije pozitivno povezana s šolskim učnim uspehom (Boekaerts, 1997; Puklek Levpušček, 2001).

Metoda

Udeleženci

Vzorec so sestavljali učenci dveh osnovnih šol z območja Maribora, stari od 14 do 15 let (N = 110; 56 deklet in 54 fantov), dijaki gimnazije, stari 17–18 let (N = 116; 72 deklet in 44 fantov) in študenti 3. letnikov nekaterih univerzitetnih študijskih programov, katerih povprečna starost je bila 22 let (N = 107; 81 deklet in 26 fantov).

Pripomočki

Na podlagi verzije Vprašalnika motivacijskih strategij za učenje (Motivated Strategies for Learning Questionnaire MSLQ; Pintrich, 1991) z 81 postavkami, smo sestavili vprašalnik kognitivne/metakognitivne in motivacijske samoregulacije v učni situaciji. Vključeval je tri podlestvice: podlestvica uporaba kognitivnih strategij vsebuje strategije ponavljanja naučenega, elaboracije naučenega in organizacijske strategije; podlestvica metakognitivne samoregulacije vključuje načrtovanje, sledenje in strategije uravnavanja kognitivne aktivnosti; motivacijska samoregulacija vključuje zaznavo lastne učinkovitosti in notranjo vrednost učenja. Postavke so preizkušanci ocenjevali na 5-stopenjski lestvici. Spodaj so navedeni primeri postavk na podlestvicah.

Uporaba kognitivnih strategij: »Med prebiranjem učnega gradiva poskušam nove učne vsebine povezati z že znanimi.«; »Zlahka si zapomnim ključne pojme v besedilu.«

Metakognitivna samoregulacija: »Med učenjem skušam ugotoviti, katerih pojmov ne razumem dovolj dobro.«; »Vem, kdaj znam za pozitivno oceno.«

Motivacijska samoregulacija: »Če naletim na težave, se zmeraj spomnim kakšne rešitve.«; »Ko se učim, si postavim cilje, ki usmerjajo mojo aktivnost.«

Zanesljivost podlestvic se je pokazala kot ustrezna: v naši študiji je Cronbach α koeficient znašal ,73 za podlestvico kognitivnih strategij; ,76 za podlestvico metakognitivne samoregulacije; za motivacijsko samoregulacijo pa ,83.

Hkrati smo preverjali metakognitivno točnost ob reševanju problemov. Leta se je nanašala na točnost evalvacije rešitve problema. V ta namen smo uporabili tri naloge verbalno-logičnega razmišljanja (Demetriou in Kazi, 2001), pri katerih so morali preizkušanci ob koncu reševanja oceniti ustreznost svoje rešitve na 7-stopenjski lestvici, pri čemer je 1 pomenilo rešitev je popolnoma napačna, 7 pa rešitev je popolnoma pravilna. Tako smo oblikovali novo spremenljivko – indeks metakognitivne točnosti, ki je bil izračunan na podlagi primerjave med dejanskim dosežkom in samoevalvacijo rešitve. Razlika med samooceno ustreznosti rešitve in dejanskim dosežkom nakazuje stopnjo metakognitivne točnosti (Schraw, 2008).

Postopek

Preizkušanci so izpolnjevali vprašalnik kognitivne, metakognitivne in motivacijske samoregulacije, nato pa še tri naloge verbalno-logičnega razmišljanja, pri katerih so morali ob koncu reševanja oceniti ustreznost svoje rešitve. Reševanje je potekalo skupinsko, in sicer v času šolskih ur. Sodelovanje v raziskavi je bilo anonimno. Predhodno so bila zbrana soglasja udeležencev oziroma njihovih staršev. Testator je najprej glasno prebral navodila in pojasnil postopek odgovarjanja, kasneje pa je bil na razpolago v primeru, če katera izmed postavk učencem ali dijakom ne bi bila

dovolj jasna. Preizkušanci so na odgovornem listu zabeležili tudi učni uspeh preteklega razreda oziroma letnika.

Ker nas je zanimala točnost samoevalvacije dosežka, smo v postopku obdelave podatkov oblikovali novo spremenljivko – indeks metakognitivne točnosti, ki je bil izračunan na podlagi primerjave med dejanskim dosežkom in samoevalvacijo rešitve.

Rezultati

Za ugotavljanje razlik med starostnimi skupinami in med spoloma smo uporabili ANOVO in t-test ter v primeru nehomogenih varianc Tamhanov post-hoc test.

Tabela 1. *Opisna statistika ter statistična pomembnost razlik v treh starostnih skupinah za različna področja samoregulacije in metakognitivno točnost*

	Starostne skupine				
Samoregulacija	Osnovnošolci	Srednješolci	Študentje		
	M (SD)	*M (SD)*	*M (SD)*	*T2*	
Kognitivna SR	3,77 (0,70)	3,58 (0,59)	3,68 (0,55)	–	
Metakognitivna SR	3,81 (0,72)	3,57 (0,60)	3,60 (0,53)	(S1, S2)**	(S1, S3)*
Motivacijska SR	3,25 (0,44)	3,03 (0,44)	3,17 (0,43)	(S1, S2)*	
Metakog. točnost	1,63 (0,38)	1,60 (0,27)	1,50 (0,25)	(S1, S3)**	(S2, S3)**

Opombe: T2 = Tamhanov post-hoc test za primerjavo srednjih vrednosti. Kratice v oklepajih v stolpcu T2 označujejo skupine, med katerimi so se pokazale statistično pomembne razlike v samoregulaciji. S1 = osnovnošolci, S2 = srednješolci, S3 = študentje. Pri metakognitivni točnosti pomeni nižja vrednost boljši rezultat.
**p < ,05. **p < ,01.*

Kot lahko razberemo iz tabele 1, so v povprečju najvišje svojo sposobnost samoregulacije na vseh področjih ocenili učenci osnovne šole. Pomembno nižje so ocene samoregulacije pri dijakih. Samoocene samoregulacijskih zmožnosti v skupini študentov pa so višje kot pri dijakih, čeprav ne dosegajo ocen osnovnošolcev. Kot statistično pomembne so se pokazale razlike v metakognitivni samoregulaciji, in sicer med osnovnošolci in srednješolci ter med osnovnošolci in študenti. V motivacijski samoregulaciji se je pokazala kot statistično pomembna le razlika med skupino osnovnošolcev in skupino srednješolcev. Metakognitivna točnost je bila najvišja v skupini študentov, nižja v skupini dijakov in najnižja v skupini osnovnošolcev. Razlike med skupino osnovnošolcev in študentov ter skupino srednješolcev in študentov so statistično pomembne.

T-test je pokazal statistično pomembne razlike med spoloma na področjih kognitivne in metakognitivne samoregulacije, kjer so se kot bolj samoregulirane ocenile pripadnice ženskega spola. Vendar so se tudi tukaj pokazale zanimive razvojne razlike.

Tabela 2. *Razlike med spoloma v kognitivni, metakognitivni in motivacijski samoregulaciji zarazlične starostne skupine (t-test)*

Samoregulacija	Starostne skupine						Pomembne razlike
	Osnovnošolci		Srednješolci		Študentje		
	m. sp.	ž. sp.	m. sp.	ž. sp.	m. sp.	ž. sp.	med spoloma
Kognitivna SR	3,55	3,98	3,54	3,61	3,70	3,67	(S1)**
Metakognitivna SR	3,64	3,98	3,45	3,64	3,51	3,64	(S1)**, (S2)*
Motivacijska SR	3,19	3,31	3,02	3,04	3,18	3,16	–

Opombe: Kratice v oklepajih v stolpcu »Pomembne razlike med spoloma v naslednjih skupinah« označujejo skupine, v katerih so se pokazale statistično pomembne razlike v samoregulaciji med spoloma. (S1 = osnovnošolci, S2 = srednješolci, S3 = študentje).

*$p < ,05$. **$p < ,01$.

Rezultati v tabeli 2 kažejo, da so bile razlike med spoloma veliko večje v obdobju zgodnjega mladostništva pri skupini osnovnošolcev (statistično pomembne razlike med spoloma so se v tem obdobju pokazale v kognitivni in metakognitivni samoregulaciji), nato so se z naraščajočo starostjo začele manjšati (v srednjem mladostništvu oziroma v skupini srednješolcev ostajajo statistično pomembne razlike v metakognitivni samoregulaciji) in v obdobju poznega mladostništva oziroma zgodnje odraslosti (skupina študentov) so razlike praktično izginile. Razlike med spoloma v metakognitivni točnosti v nobeni od skupin niso bile statistično pomembne.

Povezanost posameznih področij samoregulacije z učnim uspehom se je pokazala kot statistično pomembna v vseh starostnih skupinah; v skupini osnovnošolcev so bila z učnim uspehom pomembno povezana vsa tri preučevana področja samoregulacije; v ostalih dveh skupinah pa se je pokazala kot najmočnejša povezanost med učnim uspehom in metakognitivno samoregulacijo. Korelacijski koeficienti in njihova pomembnost so predstavljeni v tabeli 3.

Tabela 3. *Korelacije med kognitivno, metakognitivno in motivacijsko samoregulacijo ter učnim uspehom*

	Učni uspeh			
Samoregulacija	Osnovnošolci	Srednješolci	Študentje	Celoten vzorec
Kognitivna SR	,45***	,10	,24*	,31**
Metakognitivna SR	,54***	,41***	,31**	,46***
Motivacijska SR	,43***	,21*	,02	,28**

* $p < ,05$. ** $p < ,01$. *** $p < ,001$.

Razprava

Ugotovljene razlike med starostnimi skupinami v kognitivni, metakognitivni in motivacijski samoregulaciji so odkrile zanimivo tendenco, ki je bila v nasprotju z našimi pričakovanji. Čeprav smo predpostavljali, da se bodo vse oblike samoregulacije s starostjo izboljšale, je zmožnost samoregulacije od konca osnovne šole približno do zaključka srednje šole na vseh področjih upadla. Nato so se rezultati rahlo izboljšali do starosti okrog 22 let (starostna skupina 3 je vključevala študente 3. letnikov dodiplomskega študija). Glede na rezultate predhodnih raziskav razvoja samoregulacije naj bi se samoregulacija razvijala in izboljševala s starostjo in dosegla nivo načrtovanja ob pričetku mladostništva (Demetriou in Kazi, 2001). Nato naj bi postajala vedno učinkovitejša in strateška. Opozoriti moramo na rezultate metakognitivne točnosti, ki predstavlja pomemben korak v kognitivno-metakognitivnem samoregulativnem procesu in smo jo uporabili kot indikator »dejanske« zmožnosti metakognitivne samoregulacije. Pokazalo se je, da se je metakognitivna točnost skozi celotno raziskovano obdobje res izboljševala. Najverjetneje je razlog za pomembno nižje rezultate v samoocenjeni sposobnosti samoregulacije v obdobju srednjega mladostništva ravno v dejstvu, da vprašalniki merijo občuteno (zaznano) samoregulacijo. Torej dobljeni rezultati vprašalnika kognitivne/metakognitivne in motivacijske samoregulacije odražajo zaznano kompetenco na različnih področjih samoregulacije. Razlog za upad zaznane kompetence v času mladostništva je lahko večja (samo)kritičnost, stres in negotovost v tem obdobju (Steinberg, Bornstein, Lowe Vandell in Rook, 2011), kar ima lahko za posledico v splošnem nižje samoocene. Možno je tudi, da so bile mlajše skupine bolj optimistične v svojih samoocenah (Demetriou in Kazi, 2001). Prav tako je verjetno, da so starejši dijaki/študentje do določene mere avtomatizirali samoregulatorne procese in se morda zaradi tega vedno ne zavedajo, da jih izvajajo. Drugi razlog bi lahko bil učinek šolanja: upadanje samoregulacije po lastni oceni mla-

dostnikov proti koncu srednjega šolanja bi lahko bilo tudi posledica šolskega konteksta. Potrebno je omeniti, da so dijaki v starostni skupini srednješolcev obiskovali gimnazijo, ki spada med šole z relativno visoko zahtevnostjo. Morda se zaradi višje zahtevnosti in večje količine snovi (v primerjavi z osnovno šolo) niso počutili dovolj uspešni v svoji samoregulaciji ter so se temu primerno tudi ocenili. Seveda bi bila v pomoč primerjava učencev in dijakov, ki sledijo različnim izobraževalnim programom (Bouffard in Couture, 2003). Dober opis dinamičnih sprememb v samopodobi je tudi t. i. učinek »velike ribe v majhnem ribniku«, ki ga je opisal Marsh s soavtorji (2007), in poudarja vpliv referenčnega okvirja v izobraževalnih okoljih na akademsko samopodobo.

Glede razlik med spoloma na različnih področjih samoregulacije rezultati kažejo, da so dekleta poročala o višjih ravneh samoregulacije kot fantje. Pogostejšo rabo strategij samoregulacije pri dekletih so pokazale tudi druge raziskave (npr. Pečjak in Košir, 2003; Puklek Levpušček, 2001; Wolters in Pintrich, 1998), toda tukaj se zopet pokaže zanimiva tendenca, ki nakazuje, da se razlike v samoregulaciji med dekleti in fanti z leti zmanjšujejo. V osnovni šoli so se pokazale precejšnje razlike med spoloma na skoraj vseh področjih samoregulacije v smeri boljše samoregulacije deklet; v času študija, torej v zgodnji odraslosti, pa glede na naše rezultate teh razlik ni več. Je razvoj samoregulacije pri fantih v večji meri značilnost poznega mladostništva in zgodnje odraslosti, medtem ko dekleta prej razvijejo samoregulatorne mehanizme? Prav gotovo bi bilo potrebno na tem področju izpeljati več vzdolžnih študij.

Ob primerjavi metakognitivne samoregulacije, merjene s samoocenjevalnim vprašalnikom, in metakognitivne točnosti v reševanju problemov (gre za točnost evalvacije rešitve), smo ugotovili, da je korelacija med omenjenima spremenljivkama relativno nizka (r = ,13). Medtem ko je prva spremenljivka močno povezana s šolskim uspehom, druga ni. To bi lahko nakazovalo, da je zaznana zmožnost samoregulacije pomembnejša za šolski uspeh kot dejanska zmožnost uspešnega metakognitivnega »monitoringa«. Lahko bi trdili, da se ta dognanja ujemajo z mnenjem o primarni vlogi samozaznav kompetence za doseganje uspeha (Bandura, 1989). Pokazalo se je tudi, da različne metode za merjenje npr. metakognitivne samoregulacije ne merijo natančno istih fenomenov. V naši raziskavi je bila korelacija med rezultati, dobljenimi s samoocenjevalnim vprašalnikom, ki je meril metakognitivno samoregulacijo, in točnostjo vrednotenja rešitve pri reševanju problemov, ki pomeni korak v procesu metakognitivne samoregulacije, nižja, kot smo pričakovali. Da bi dobili jasnejšo sliko o razlogih za to ugotovitev, bi bila potrebna obsežnejša primerjava.

Prav tukaj je primerno omeniti nekaj omejitev pričujoče študije: rezultate težko povsem posplošimo, saj vzorec najverjetneje ni bil dovolj reprezentativen. Vključeval je namreč le učence, dijake in študente nekaterih šol iste regije. Prav tako v vzorcu študentov razmerje med spoloma ni najbolj ustrezno (več je deklet).

Veliko bolje bi bilo tudi, če bi lahko izvedli študijo sledenja oziroma vzdolžno študijo, ki bi nakazala dejanske spremembe v zaznani in dejanski zmožnosti samoregulacije, ne le razlik med starostnimi skupinami.

Zagotovo pa študija vnaša nekaj novih elementov s kombiniranjem različnih pristopov raziskovanja metakognitivne samoregulacije, saj omogoča primerjavo med samoocenjeno zmožnostjo samoregulacije in dejansko učinkovitostjo metakognitivnega sledenja in vrednotenja. Ugotovitve o razlikah v zaznani samoregulaciji med starostnimi skupinami pa so informativne tudi za izobraževalno prakso in nas morda usmerjajo na razmišljanje o možnostih, kako s pomočjo konteksta v obdobju (predvsem srednjega) mladostništva prispevati k boljši učni samoregulaciji.

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Znanstveni teoretsko pregledni prispevek

The feeling of doing across levels of analysis – The effects of perceived control on learning

Ljubica Chatman[*] and Betsy Sparrow
Columbia University, Psychology Department

Abstract: A person's sense of control was initially conceptualized in psychology as either a trait (Rotter, 1966), an attribution style (Weiner, 1979) or self-efficacy belief (Bandura, 1989a). More recent work in social cognition focuses on the process of inferring one's own causality and how the feeling of doing comes about. This investigation centers on a cue based process as leading to the experience of agency. These cues include vision, proprioception, social cues, and action relevant thought (Wegner & Sparrow, 2004). Since the advent of Functional Magnetic Resonance Imaging (fMRI), progress has been made in understanding the neural substrates implicated when one's infers own causality (for review see David, Newen, & Vogeley, 2008). An analysis of the different approaches to studying human agency, reveals their contributions with each level of analysis adding to and refining our understanding of perceived control and its effect on learning.

Keywords: agency, learning, perceived control

Ravni analize občutka »dejavnega sebe« – Vplivi zaznanega nadzora na učenje

Ljubica Chatman[*] in Betsy Sparrow
Univerza Columbia, Oddelek za psihologijo

Povzetek: Posameznikov občutek nadzora je bil v psihologiji prvotno konceptualiziran bodisi kot lastnost, atribucijski stil ali prepričanje o lastni samo-učinkovitosti. Novejše raziskave na področju socialne kognicije se osredinjajo na proces oblikovanja lastne vzročnosti in kako se iz te poraja občutek dejavnega sebe. Izhodišče te raziskave so procesi, ki vodijo k izkušnji dejavnega sebe, kot so denimo vizija, propriocepcija, socialni atributi in z dejavostjo povezane misli. Z iznajdbo funkcionalne magnetne resonance (fMRI) je bil dosežen napredek v razumevanju nevronskih substratov, ki implicirajo oblikovanje lastne vzročnosti. Analiza različnih pristopov in metodologije za preučevanje občutka dejavnega sebe kaže na razvoj v smislu širitve in natančnejšega razumevanja zaznanega nadzora in njegovega vpliva na učenje.

Ključne besede: občutek dejavnega sebe, učenje, zaznani nadzor

CC = 3040, 3243

[*] Naslov / Address: Ljubica Chatman, Columbia University, Psychology Department, 1190 Amsterdam Avenue 329 Schermerhorn Hall, 10027 New York, NY, USA, e-mail: lc2387@columbia.edu

Perceived control, and its effect on learning, has been studied using vastly different approaches, which converge on the conclusion that higher perceived control improves learning. With increasing specialization of training in psychology the study of phenomena of interest tends to become fragmented and often does not build on all relevant previous research (Roberts, 2006). To address this issue we propose a review of the literature to date across levels of analysis, bringing together related evidence on the same phenomenon. Specifically, we will review the study of perceived control and its effects on learning.

Perceived personal control has been studied using methods such as self-report questionnaires in large correlational studies, behavioral experiments manipulating perceived level of control, and fMRI and PET techniques that assess the neural correlates of self initiated action. These disparate lines of research of perceived control parallel the trends in the development of social and personality psychology. The observation of broadly defined phenomena, such as worldview, advances towards a more specific analysis of the process that underlies the emergent properties of whole human beings in their context (Mischel, 2004). What these diverse lines of study regarding personal control have in common is the investigation of the perception of *self-initiated*, *purposive*, *unobstructed* action.

The perception of agency is defined here as an inference about the degree to which one exerts a causal influence on an outcome. An ideal agent is perceived to have self-initiated, purposive, independent actions (Gray, Gray, & Wegner, 2007). Furthermore, the sense of authorship is a necessary precondition to the emergence of the self (Wegner, 2008).

An individual's perceived control can be conceptualized and operationalized in at least two ways: a conscious reflection about the self as an agent in one's general social context or as the author of physical actions in one's immediate environment. Philosophers have understood this complexity of the pervasive, but illusive concept of self, as "narrative" and "minimal" self (Gallagher, 2000). Conceptual understanding and reflection are defining features of the narrative self, whereas the minimal self refers to the agency of self in the moment, without the necessity to use any conceptual knowledge. The sense of agency is a complex phenomenon, which relies on many levels of neural processing based in different neural substrates whose interactions are not fully understood (David, Newen, & Vogeley, 2008; Synofzik, Vosgerau, & Newen, 2008).

Investigations aimed at understanding the neural underpinnings of agency show there are several distinguishable and possibly interrelated levels of agency perception. While this area of research is in its early stages, important distinctions and theoretical framework may help future studies in agency research in general. Synofzik and colleagues (2008) propose a theoretical framework to distinguish and study different levels of sense of agency. Action outcome couplings are the basis of making the agency judgment, but other cues,

like one's beliefs about agency, also impinge on this estimate when it is converted from feeling to judgment. Additionally, in order to attribute responsibility for a performed action, one must understand the intentions involved, and therefore such a judgment would also involve understanding mental states of self and others. At this level of perceiving agency, the actual motor action can be de-coupled from perceived agency.

The basis of perceived control at the first, feeling of agency, level which is a prerequisite for further, more complex inferences of agency, are the perceived couplings of actions and their effects. Their neural correlates are brain regions involved in monitoring visual and motor incongruence in posterior parietal cortex (PPC) (Chaminade & Decety, 2002; Farrer et al., 2003; Farrer et al., 2008; Farrer & Frith, 2002; Fink et al., 1999), cerebellum (Blakemore, Frith, & Wolpert, 2001) and extrastriate body area (EBA; Downing, Jiang, Shuman, & Kanwisher, 2001). When the feeling of agency is transformed into judgments of agency, the dorsolateral prefrontal cortex (DLPFC) is also activated. This area has been implicated in conflict monitoring and detection such as between one's own intended action and the sensory outcome (Fink et al., 1999; Schnell et al., 2007). In order to understand others' goal oriented actions and intentions the same brain areas are activated as when we perform that action ourselves. This network has been termed "mirror neurons" (Rizzolatti, Fadiga, Gallese, & Fogassi, 1996) and their key brain areas are the superior temporal sulcus (STS), parts of the PPC and the ventral premotor cortex (vPMc) (Keysers & Perrett, 2004) and they are thought to encode primarily motor aspects of actions.

In order to achieve a clearer understanding of how perceived control contributes to learning we will broadly categorize the diverse methodological and conceptual approaches outlined above into "narrative" and "minimal" self approaches to the study perceived control and their effects on learning. The purpose of using this distinction here is to organize the review of the disparate literatures. In addition, the practical implications for using the findings in educational settings differ according to the approach taken.

Agency of the Narrative and Minimal Self and Their Effects on Learning – Theoretical Background and Empirical findings

The study of perceived control can be parsed into consciously perceiving oneself as a causal agent within a given social context and one's online active engagement in controlling the task at hand. These lines of study correspond to the ideas of narrative self and minimal self, respectively (Gallagher, 2000). In both cases a person sees oneself as a causal agent, but whereas narrative self involves

semantically mediated representations of the self as a causal agent, minimal self involves controlling one's present actions and outcomes in the immediate moment.

Narrative Self Involvement

In order to study the sense of agency that a "narrative self" as a conceptually mediated sense of self may have, we can look to the chronic dispositions and characteristics of a conceptually mediated self, such as expectations and beliefs about the self and the world. Alternately, we can study factors in the social context that make some concepts relevant to the self more accessible and therefore alter their sense of agency. We will review lines of research that have taken these approaches and the contributions they make to understanding how the sense of agency contributes to learning.

Dispositional Approaches to the Study of Perceived Control

The study of the concepts of learned helplessness and resilience began as an experiment in rat survival skills, and revealed that the degree of control that the rats had learned they would have predicted how well they would cope and how hard they would try to survive until finally giving up (Richter, 1957; Seligman, 1972). This theory was then generalized to humans to predict that low expectations about the controllability of the environment would correlate with depression, while high perceived control over the environment correlates with normal functioning and even resilience. Hence, how actively people engage with an activity and how well they cope with a challenge, depends in part on their expectations about the controllability of the environment, which can lead to increased resilience or learned helplessness and depression. The idea of learned helplessness has spawned a whole movement of positive psychology, attempting to teach optimism and assuming that people can improve their lives by assuming an optimistic attributional style (Seligman, 1977).

The expectation about the controllability of the environment can be translated into the complementary estimate about one's own degree of possible causal influence, which has been studied on a broader level as locus of control (Rotter, 1966). Internal or external locus of control is conceptualized as a latent personality variable with each individual scoring along a continuum between believing that outcomes are contingent on their actions, to believing that all outcomes are dependent upon external forces, like fate, other people, God, etc. In the context of learning and education, correlational studies show that the global dispositional estimate about one's control residing within oneself (internal locus of control) is associated with increased achievement motivation and achievement behaviors. However, the correlations vary widely across studies and a plausible

mechanism has yet to be proposed, even the causal direction cannot be inferred (for a review see Stipek & Weisz, 1981).

Attribution theory (Weiner, 1972, 2000) encompasses the dimension of whether the cause is attributed to be internal or external and also includes two additional dimensions of controllability and stability of the perceived cause. Attributions about the cause of an outcome perceived as success or failure determine one's reaction and future behavior. These attributions affect further achievement related behaviors by changing expectations about future performance and the duration and malleability of those expectations and their impact on one's self esteem. This broad conceptual framework predicts that internal, stable and controllable attributions may be beneficial in the case of academic success (but not failure) in creating positive expectations and self-esteem increments.

In addition to the observational studies conducted by Weiner and colleagues (1972, 2000), a burgeoning recent literature has elaborated on the case of implicit assumptions about one's intelligence and the cognitions and goals that arise in the face of challenge or success as well as ensuing learning outcomes (Dweck, Chiu, & Hong, 1995). Dweck and colleagues have shown that there are two types of learners; people who attribute both success and failure to fixed ability (both "smart" and "dumb") are called entity theorists, contrasted with those who believe effort is key to learn and develop one's ability and skill, called incremental theorists. Entity attribution tends to result in performance goals (rather than learning goals) in a learning environment where evaluation is implied, more negative emotion and less persistence in the face of challenging problems and initial failures (Dweck et al., 1995). Specifically, entity theorists will forgo learning opportunities that could correct their errors (Chiu, Hong, & Dweck, 1997). Recordings of event related potentials associated with error correction suggest that entity theorists display a biased response toward negative feedback and yet subsequent brain activity suggests less conceptual processing and encoding which would be conducive to learning (Mangels, Butterfield, Lamb, Good, & Dweck, 2006).

These attributions are a result of implied theories about one's ability as immutable and outside of one's control (i.e. entity), or malleable with practice (i.e. incremental), thus making one's skills and abilities amenable to personal control. As in other cases presented thus far, we see that a greater sense of control in the face of failure allows for a mastery response instead of disengaging from challenging intellectual tasks. Notably, this approach to the study of perceived control includes both a dispositional and situational dimension: people have beliefs about the nature of intelligence, but those beliefs are malleable with feedback, which enables situational approaches as well and yields the same general conclusions whether the implicit theory of intelligence is measured as a chronic belief or manipulated as part of the experiment (Blackwell, Trzesniewski, & Dweck, 2007).

Self-efficacy captures one's estimated level of confidence that they can perform a task in a given context, defined with varying degrees of specificity (Bandura, 1989b). The estimate of self-efficacy is based in one's beliefs about their ability, past history of successes and failures as well as particular context. In correlational studies, self-reported self-efficacy has positive predictive value for academic success (Bandura, Barbaranelli, Caprara, & Pastorelli, 1996). Indeed, the more specific the domain that self-efficacy is measured for, such as math self-efficacy in comparison to academic achievement self-efficacy, the more predictive the value of the self-report measures used for that domain (Pajares, 1996). This conclusion is in line with the finding that person by situation interactions better predict behavior and bring us closer to the analysis of the process and the mechanism that gives rise to the effect in question (Mischel, 2004; Mischel & Shoda, 1995). Similarly, when self-efficacy is experimentally increased via social comparison to an ostensible competitor that falls behind, performance on the task improves (Bandura & Jourden, 1991). These results indicate that providing relative success feedback boosts performance.

Situational Approaches to the Study of Perceived Control

Changing the sense of agency of the narrative self in the present context is the explicit objective of experimental studies aiming to examine the impact of the sense of agency on cognitive functioning. When college students are prompted to think of a time when they were in control of others their executive function improves (specifically, they are better able to inhibit irrelevant information) compared to when they are prompted to think of a time when they were controlled by others (Smith, Jostmann, Galinsky, & van Dijk, 2008). In addition, asking college students to reflect on their agency by answering control related questions before a cued recall task improves their recall when the task is relatively well liked and performance is high, whereas it decreases memory performance when the task is less liked and more difficult (Chatman & Sparrow, 2010).

In order to assess how the sense of control impacts learning we might ask what happens when we make the concepts that have bearing on the idea of control and achievement more accessible in the given situation. Peoples' worldviews about the causes of their actions being external or internal, vary from determinism on one end of the spectrum to self-determination and free will approaches on the other. Whereas a common determinism claim is that all actions and behavior are determined by factors beyond one's own control, like the unconscious or fate, free will approaches emphasize the ability of each individual to control and determine one's actions and outcomes in the world. When study participants read and thought about determinism, which indirectly reduces their own sense of how in control or responsible they are for outcomes, they tended to cheat more when given the chance

(Vohs & Schooler, 2008), whereas thinking about self determination is associated with better work performance (Stillman, Baumeister, & Vohs, 2010).

Just as the previous study likely induces people to think of themselves as less in control outside of conscious awareness, other primes[1] may induce people to feel a lesser or greater sense of agency within a given task context. Activities that participants in experiments perrcieve to be unrelated to the task at hand, such as describing a day in the life of a professor or unscrambling sentences that contain achievement related words improve their performance on general knowledge questions (Dijskterhuis & Van Knippenberg, 1998) and increase persistence in intellectual tasks when they are asked to stop (Bargh, Gollwitzer, Lee-Chai, Barndollar, & Trotschel, 2001), respectively.

Conversely, when stereotypes about a group, of which a person is a member, become salient in a relevant domain they induce decreased performance relative to that person's potential performance had the stereotype not been activated (Steele & Aronson, 1995). This robust effect has repeatedly been documented with various negatively stereotyped groups in the relevant domain such as women in math and sciences (Shih, Pittinsky, & Ambady, 1999; Spencer, Steele, & Quinn, 1999), African-Americans in intelligence tests (Steele & Aronson, 1995), men in social sensitivity (Koenig & Eagly, 2005) Caucasian men in athletics (Stone, 2002), and elderly people in memory tasks (Levy, 1996).

Similarly, the phenomenon of stereotype lift (Walton & Cohen, 2003) empirically demonstrates the performance boost of those groups who are not experiencing negative stereotypes, within the context of another group experiencing negative stereotypes in a given domain. However, it seems that making "positive" stereotypes explicitly salient to people diminishes the comparably small advantage of stereotype lift (Cheryan & Bodenhausen, 2000) while subtle presentation of the comparatively "better than negatively stereotyped group" stereotype improves performance (Shih, Ambady, Richeson, & Fujita, 2002).

While the aforementioned literatures would not purport to study the sense of agency, recent work on the mechanism of stereotype threat effects indicates that tasks tend to be seen as more difficult under stereotype threat and the experienced difficulty is more likely to be attributed to the self (Schmader, Forbes, Zhang, & Mendes, 2009). Therefore, it is likely that the metacognition of agency is involved in the mechanism of both stereotype lift and threat and associated memory performance changes.

[1] Here we define primes as events in a persons' environment whose effect on their behavior they are not aware of, regardless of whether they are presented subliminally or supraliminally (Bargh & Chartrand, 2000)

Minimal Self Involvement

Exercising agency on-line, in the moment, seems to have cognitive consequences that differ from occasions when one perceives actions or observes events that are controlled by others. Self-produced actions are easier to identify, as well as those that are more similar to own actions (Flach, Knoblich, & Prinz, 2004; Repp & Knoblich, 2004). When two people share a task, the mere presence of another person doing their part causes prolonged reaction times compared to when the otherwise identical task is done alone (Sebanz, Knoblich, & Prinz, 2005). This suggests that the participant may be mentally representing the action of the other person.

The study of mirror neurons which are activated when primates and humans both observe and perform a self-initiated purposive (i.e. agentic) motor action (Rizzolatti, Fadiga, Gallese, & Fogassi, 1996), along with a burgeoning literature (for reviews see Gallese, Keysers, & Rizzolatti, 2004; Keysers & Gazzola, 2007; Rizzolatti & Craighero, 2004; Van Overwalle & Baetens, 2009) since this discovery also suggests that perception of others' action and own action have common neural substrates. In addition, peoples mirror neurons show increased activation for actions they are expert at performing (Calvo-Merino, Glaser, Grezes, Passingham, & Haggard, 2005).

Arguably, perception and action are intimately related and they subserve social interactions where one of the key distinctions is who is performing the actions observed (Knoblich & Sebanz, 2006). Considerably more subtle cues like going first or second in an otherwise independent task changes the sense of agency (Wegner & Sparrow, 2007) as well as brain activation (Chaminade & Decety, 2002). The sense that one is the author of their actions relies on an inference process that includes multiple types of cues, like bodily and sensory cues, environment orientation, action consequences action relevant thought and social cues (Wegner & Sparrow, 2004). The key principles for inferring agency are the same ones we may use to infer the causality of external events: priority (cause before the effect), consistency (of cause and effect) and exclusivity (absence of other possible causes) (Wegner & Wheatley, 1999). When people are provided illusory choice in a learning task they produce better recall than in the no choice condition and their recall decreases when the computer makes choices for them (therefore violating the exclusivity principle) in an otherwise equivalent task. Additionally, participants' estimates of agency follow the same pattern (Chatman & Sparrow, in prep), indicating that the two may be causally related.

Providing people the opportunity to evaluate and select produces a sense of agency of a minimal self. When choosing, a person is actively engaged with the task in a way that affords higher perceived control. Therefore, researchers have studied the effects of providing a choice, whether de facto or illusory, to unwitting

experiment participants (Cloutier & Macrae, 2008; Cordova & Lepper, 1996; Iyengar & Lepper, 1999; Takahashi, 1991; Watanabe & Soraci, 2004) and showing that it enhances learning.

The items that are chosen from a set are better remembered (Perlmutter, Scharff, Karsh, & Monty, 1980; Takahashi, 1991; Watanabe, 2001), even when preference is controlled for (Watanabe, 2001; Watanabe & Soraci, 2004) by allowing choice only insomuch as the participant selects the correct answer on a multiple choice test (Roediger & Marsh, 2005).

When children are allowed to make choices their motivation is enhanced and they learn more from an educational activity (Cordova & Lepper, 1996). Recent studies (Cloutier & Macrae, 2008; Cunningham, Turk, Macdonald, & Macrae, 2008; Kesebir & Oishi, 2010; Turk, Cunningham, & Macrae, 2008) show that memory enhancement occurs when information is incidentally associated with oneself via incidental choice or transient ownership. In a study of the self-reference effect (Rogers, Kuiper, & Kirker, 1977), Cloutier and Macrae (2008) find that when information is actively chosen, and only then viewed in relation to oneself, that information is remembered better than assigned information. Interestingly, the brain regions that are preferentially activated in the agentic self reference condition positively predict the memory enhancement obtained on the recall task, while relating information to oneself produces memory benefits, but the activation of the brain regions involved does not predict the obtained memory enhancement (Powell, Macrae, Cloutier, Metcalfe, & Mitchell, 2010).

However, it seems that providing choice doesn't have the same effect across cultures (Iyengar & Lepper, 1999). For East-Asian children, motivation and learning was enhanced when their mothers chose, compared to when they chose themselves, or when an out-group member chose. It is hypothesized that their concept of self includes close others (Markus & Kitayama, 1991), and therefore we should expect them to have an enhanced sense of agency when close others choose for them. While what has been termed choice-based processing (Cloutier & Macrae, 2008) does provide benefits in memory in US college students, there seem to be other ways of exercising one's agency. Therefore, we argue that it is not choice per se that causes the memorial benefits, but the perceived exercise of volitional control, or agency.

Outside of making a choice, enacting action verbs can allow for greater engagement in the task at hand (Cohen, 1981, 1989). Enacting action verbs rather than reading them off a list allows for a more long lasting memory of what was done and this phenomenon is known as the enactment effect. Additionally, generating answers (Slamecka & Graf, 1978) rather than having them provided by the instructor results in better long term memory.

As we've noted above, even completing a multiple choice test has been shown to be a better tool for learning than restudying. The now well documented testing

effect (Roediger & Karpicke, 2006), is the phenomenon that taking a test improves memory for the material more than if the students were to restudy the material twice before the second (criterion) test. In addition, when the format of the test requires students to generate what they know (essay or short answer) rather than recognize the right answer (multiple choice) the learning benefits are considerably greater. This relative advantage of tests that require greater engagement also points to a positive association of minimal self agency and learning.

Implications for Best Practices for Enhancing Learning

In the following section, implications for educational practice will be elaborated based on the findings presented in the previous section, following the same organization of material. The subheadings will refer to the same sources and findings and extrapolate them to possible uses in a learning setting, particularly in an education, classroom setting.

Narrative Self Involvement and Perceived Control – Implications for Learning

Dispositional Studies - Implications for Learning

Collectively, these findings suggest that increased perceived control may cause better academic performance, but making conclusions about causes of effects from observed correlations would be premature. Most of the studies conducted here rely on correlations and such studies do not rule out a possible third variable that may be causing both performance and perceived control boosts or a reverse causal pattern where performing better actually causes increased self-efficacy. Most of the approaches to control and learning outlined in this section have emphasized a chronic orientation, style or characteristic that individuals possess to varying degrees and therefore may lead the reader to conclude that these characteristics are not amenable to interventions. However, the goal of most of these approaches has been to increase perceived control and potentially performance.

Positive performance feedback relative to competitors has been shown to increase performance (Bandura & Jourden, 1991). However, when this happens outside of laboratory settings it is quite likely that another person will be on the negative end of that comparison and that their performance will be negatively affected.

In addition, the quality of the feedback, whether it is positive or negative about a person's performance is of the utmost importance. Studies providing feedback that supports effort and not an innate ability view (Mueller & Dweck, 1998). For example, praise or critique associated with the amount of effort and time that a student put into completing an assignment, particularly a challenging one, results in greater persistence when faced with an intellectual challenge, more

positive emotion after failure and fewer negative attributions of one's own ability. The studies that demonstrate the benefits of effort-focused feedback were conducted in a naturalistic classroom setting show that when provided consistent effort supportive feedback (in contrast to feedback about immutable ability such as "smart" or "dull") or providing information about ability as an acquired skill (Blackwell, Trzesniewski, & Dweck, 2007; Mueller & Dweck, 1998).

Situational Studies – Implications for Learning

The situatonal approach to the study of percieved control is fruitful for those who would benefit from specific interventions that would allow increased sense of agency and prevent decreased sense of agency. Cues in the environment that trigger a greater sense of agency like stereotypes that imply high ability, reminiscing of times when a person felt powerful and semantic achivement related cues in the environment enhance performance in intellectual tasks, as shown in studies of perceived control and learning, stereotype and achievement motivation priming described above.

However, many other cues like negative stereotypes and reminiscing of when one felt powerless are likely to decrease performance below the level of those individuals' capabilities. In order to reduce the negative effects of stereotype threat, one can referame the tasks that are meant to be diagnostic of one's ability explicitly as non-diagnostic (Steele & Aronson, 1995), or state that no group differences have been found or that the test is fair for a given group (Spencer et al., 1999), even if it is considered diagnostic (eg. "gender-fair" Good, Aronson, & Harder, 2008). In addition to the absence of threatening cues for one's self identity and efficacy in the task, it is important to ensure that the social environment does not contain cues that would signal to a person that their group is likely not capable to the same degree, marginalized and segregated (Purdie-Vaughns, Steele, Davies, Ditlmann, & Crosby, 2008). Other ways to ameliorate such threat are explict discussion and knowledge of stereotype threat phenomenon (Johns, Schmader, & Martens, 2005) as understanding stereotype threat seems to be instrumental in preventing its' deleterious effects. Understanding stereotype threat allows learners to attribute the difficulty, arousal and subjectively experienced axiety to a cause other than self. Other strategies of external attribution of arousal such as introducing another external source of arousal (Ben-Zeev, Fein, & Inzlicht, 2005), explaining arousal and anxiety as a common part of the academic struggle (Good, Aronson, & Inzlicht, 2003) as well as emphasizing that anxiety during a test can be positive and not detrimental (Johns, Inzlicht, & Schmader, 2008). Self-affirmation, operationalized as a simple essay expressing important values unrelated to the domain where performance is under threat (Garcia, Purdie-Vaughns, & Apfel, 2009; Purdie-Vaughns & Cohen, 2009) has been shown to improve school performance and grades in the long term. In addition, school interventions that improve the sense

of belonging of minority students who are at risk for perceiving common difficulties that come with adjustment to college as signals that they don't belong in their academic environment alleviate stereotype threat effects (Cohen, Garcia, Purdie-Vaughns, Apfel, & Brzustoski, 2009).

Beliefs about one's ability put forth by Dweck and colleagues (1995) are considered to be chronic and learned, domain specific, but also malleable. Thus, incremental view of intelligence has been shown to buffer individuals from the deleterious effects of stereotype threat, both by measuring people's beliefs (Sawyer & Hollis-Sawyer, 2005) and maniupulating beliefs about intelligence using an instructional video , an essay writing task (Goff, Steele, & Davies, 2008) or the the views communicated to adolescents by older mentor peers (Good et al., 2003).

Finally, some educational environments emphasize personal responsibility of the student for their learning and thus make considering one's own responsibility more frequently liklely. It is important to understand the consequences of that environment for the learning process. According to a recent study (Chatman & Sparrow, in prep) explicitly and frequently adressing questions of personal agency and control can increase or decrease recall performance depending on whether the task is liked or disliked, easy or difficult.

Minimal Self Involvement – Implications for Learning

Diverse lines of research presented in this section show that active engagement with the task at hand and the material to be learned produces improvements in memory. Engagement with the material has been induced by means of providing people a chance to choose, evaluate and select what is relevant to them and making those choices has a positive effect on memory above and beyond peoples' preferences for the chosen material itself (people may choose what they prefer or know better). It is important to note that it is the learners' perception of choice and agency that matters, even if that choice is made between options that are assigned by other people in their social environment. Conversely, when other people choose for them students in Western cultures may disengage from the material. Therefore, when other agents make their presence salient and make the choices for the learners, learning will be decreased and the learners will sometimes report being distracted and frustrated.

Agentic engagement in tasks can be achieved by enacting materials to be learned that are suitable for this purpose in a given learning setting. Alternately, generating answers to questions rather than receiving prepared answers or simply "knowledge" will improve learning in the long term. Testing can be used as a good tool to improve learning and the more open ended formats of tests that allow the learner to express (generate) their knowledge will enhance learning more, while timely feedback will correct any possible mistakes that a student may produce (Kang,

McDermott, & Roediger, 2007). These learning benefits, termed the testing effect, have been used in classroom interventions and studies have shown that frequent, low stakes tests work best, but the additional benefits gained from testing tend to decrease after the third test per semester (McDaniel, Roediger, & McDermott, 2007).

Concluding remarks

Across disparate levels of analysis reviewed here studies using different methodologies point to the positive effects of an increased the sense of personal control on learning. Different approaches used to understand the effects of perceived control on learning build on one another and enhance our understanding of the kind of cognitive processing that occurs when people perceive a high sense of agency. The refinement of this understanding in turn allows us to make more precise recommendations about the best ways to engage people in the learning process by enhancing their sense of agency.

Given the increased specialization of fields that constitute psychology and increased specialization of the training that the psychologists who participate in it receive, it seems necessary to provide venues for increased communication and integration of different levels of analysis and sub-disciplines engaged in the phenomena of interest. Future research on this topic would benefit from explicitly addressing the level of theoretical analysis of the phenomenon of agency as well as learning, which is being studied. This would allow integrating the work into a broader framework and open possibilities to study the interaction between different levels of perceived agency and learning.

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Lev S. Vigotski

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Znanstveni raziskovalnoempirični prispevek

Spol in starost učencev kot dejavnika razlik v učiteljevi naklonjenosti, zaznani podpori učitelja ter učni uspešnosti

Katja Košir[*]
Univerza v Mariboru, Pedagoška fakulteta

Povzetek: Osrednji namen raziskave je bil ugotoviti, kako učitelji ocenjujejo svojo naklonjenost dekletom in fantom v različnih obdobjih šolanja ter kako učenci zaznavajo morebitne razlike v naklonjenosti učitelja. Prav tako sem želela ugotoviti razlike med dekleti in fanti v povezanosti učiteljeve naklonjenosti ter zaznane podpore učitelja z učno uspešnostjo učencev. V raziskavi je sodelovalo 1155 učencev (učenci 5. in 8. razreda osnovne šole ter dijaki 2. letnika srednje šole) ter 50 učiteljev – razrednikov udeleženih učencev. Rezultati raziskave kažejo, da so učitelji v vseh starostnih obdobjih bolj naklonjeni dekletom kot fantom, kar je še posebej izrazito pri učencih 8. razreda osnovne šole. Dekleta so učno uspešnejša od fantov, vendar pa se dekleta in fantje ne razlikujejo v stopnji podpore, ki jo zaznavajo s strani učitelja.

Ključne besede: medosebni odnosi, učenčeve zaznave, učenci, učitelji, razlike med spoloma, osnovna šola, srednja šola, učna uspešnost

Pupils' gender and age as factors of differences in teacher's liking, perceived teacher's support and academic achievement

Katja Košir[*]
University of Maribor, Faculty of Education

Abstract: The main aim of the present research was to examine how teachers report their liking of girls and boys in different periods of schooling and how students perceive the potential differences in their teachers' preferences. Also, the differences between girls and boys in the relationship between teacher's liking and perceived teacher's support on one side and students' academic achievement on the other side were examined. 1155 students (fifth and eighth grade of elementary school and second grade of secondary school) and 50 teachers – their classteachers – participated in the study. The results show that teachers prefer girls to boys in all periods of schooling. This trend is especially evident in eight-graders. Compared to boys, girls have better academic achievement. However, there are no significant differences in the perceived teacher's support between girls and boys.

Key words: interpersonal relationships, student's perceptions, students, teachers, gender differences, elementary school, secondary school, academic achievement

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[*] Naslov / Address: Katja Košir, Pedagoška fakulteta, Univerza v Mariboru, Koroška cesta 160, 2000 Maribor
e-naslov: katja.kosir@uni-mb.si

Pomen kvalitetnega odnosa med učiteljem in učencem za šolsko prilagojenost učenca

Odnos med učenci in učitelji že desetletja predstavlja enega izmed osrednjih področij zanimanj raziskovalcev s področja pedagoške psihologije. To zanimanje se je izražalo v različnih oblikah in je izhajalo iz širokega razpona različnih konstruktov in paradigem. Raziskovalci so preučevali pričakovanja učiteljev in učencev drug do drugega, razredno disciplino in uravnavanje vedenja v razredu, prepričanja učiteljev o lastni učinkovitosti, občutja pripadnosti šoli, interakcije med učenci in učitelji, učiteljevo podporo učencem iz rizičnih skupin ipd. (Pianta, Hamre in Stuhlman, 2003).

Pozitiven odnos med učiteljem in učencem se pri učencih osnovne šole povezuje s številnimi za učenca ugodnimi izidi; učenci, ki z učitelji oblikujejo bolj pozitivne odnose, se uspešneje prilagodijo šoli, so učno uspešnejši in imajo šolo raje (Baker, 2006; Birch in Ladd, 1997). Nasprotno pa se negativni odnosi med učiteljem in učencem pri osnovnošolcih povezujejo z nižjimi učnimi dosežki učencev, manjšo povezanostjo s šolo ter slabšo samoregulacijo (Birch in Ladd, 1997).

Pianta idr. (2003) so izhajajoč iz sistemske teorije opredelili model odnosov med učitelji in učenci z naslednjimi ključnimi komponentami: (1) značilnosti obeh posameznikov, ki tvorita odnos; (2) predstave vsakega posameznika o odnosu; (3) procese izmenjave informacij med obema partnerjema v odnosu ter (4) zunanje vplive sistemov, v katere je odnos vpet. Za potrebe namena tega prispevka sta zanimivi predvsem prvi dve komponenti modela. V okviru prve komponente se bom osredotočila na spol in starost učencev, v okviru druge pa na zaznave odnosa tako s strani učitelja kot s strani učencev.

Spol učenca kot dejavnik odnosa med učencem in učiteljem

Spol učenca predstavlja pomemben dejavnik oblikovanja odnosa med učiteljem in učencem. Zgodnja zanimanja za razlike med spoloma v odnosu z učitelji izhajajo iz skrbi za učno prikrajšanost deklet v primerjavi s fanti. Tako Rydell Altermatt, Jovanovic in Perry (1998) povzemajo ugotovitve nekaterih starejših raziskav, ki kažejo, da učitelji s fanti že v začetnih letih šolanja oblikujejo bolj pozitivne odnose kot z dekleti, kar vključuje več možnosti za odgovarjanje na vprašanja, več individualnega poučevanja ter več nudenja povratnih informacij in spodbujanja. Obenem pa naj bi bili fantje s strani učiteljev deležni tudi več na vedenje vezanih negativnih povratnih informacij ter kaznovanja. Vendar pa bi se na podlagi ugotovitev sodobnejših raziskav (za pregled raziskav glej npr. Pellegrini in Blatchford, 2000) težko strinjali s tezo o učni prikrajšanosti deklet v procesu izobraževanja. Rezultati raziskav, v katerih so avtorji preučevali interakcije med učitelji in učenci v razredu, sicer dosledno kažejo, da so fantje deležni več učiteljeve pozor-

nosti in sicer v obliki tako pozitivnih kot negativnih povratnih informacij, obenem pa učitelji z dekleti običajno vzpostavljajo manj konfliktne odnose kot s fanti, medtem ko dekleta z učitelji vzpostavljajo bolj tesne odnose. Te razlike se kažejo tako pri poročanju učencev o lastnih odnosih z učitelji (npr. Moritz Rudasill, Reio, Stipanovic in Taylor, 2010) kot tudi pri opisovanju odnosov učiteljev z vrstniki. Tako so npr. v raziskavi Hughes, Cavella in Wilsona (2001), narejeni na vzorcu učencev tretjega in četrtega razreda osnovne šole, učenci poročali, da prejemajo dekleta več emocionalne podpore s strani učiteljev kot fantje, ki jih učenci zaznavajo kot pogosteje vpletene v konfliktne odnose z učitelji. Birch in Ladd (1998) ugotavljata, da tudi učitelji ocenjujejo svoje odnose z deklicami kot manj konfliktne in bolj intimne. Če k temu dodamo še v različnih raziskavah ugotovljene boljše učne dosežke deklet (glej npr. OECD, 2010; Pellegrini in Blatchford, 2010; PISA 2009, 2010), lahko zaključimo, da so skrbi v zvezi s prikrajšanostjo deklet v izobraževanju odveč.

Če torej te rezultate povzamemo in nekoliko (morda pretirano) poenostavimo, bi lahko rekli, da učitelji fantom pri pouku sicer posvečajo več pozornosti, so pa bolj naklonjeni dekletom. Poleg tega so dekleta kljub manjši pozornosti, ki so je pri pouku deležne s strani učiteljev, učno uspešnejša. Za dejstvo, da učitelji s fanti vzpostavljajo pogostejše interakcije in jih posvečajo več pozornosti, Pellegrini in Blatchford (2000) navajata tri možne razlage. (1) Možno je, da je odziv učitelja povsem ustrezen glede na različne potrebe učencev in je posledica tega, da fantje več pozornosti dejansko potrebujejo. (2) Prav tako rezultati nekaterih raziskav nakazujejo, da učitelji ne posvečajo več pozornosti fantom na splošno, pač pa gre pogosto za manjšo skupino fantov v razredu, ki zaradi svojih vedenjskih in učnih posebnosti od učitelja zahtevajo več pozornosti in nadzora (French in French, 1984; Swan in Graddol, 1988, cit. v Pellegrini in Blatchford, 2000). Ugotovljene razlike med dekleti in fanti v interakcijah z učitelji so torej bolj odraz vodenja razreda kot pristranosti do določenega spola. (3) Seveda pa je možno tudi, da gre za odraz implicitne, morda tudi neozaveščene večje naklonjenosti dečkom s strani učiteljev.

Nekateri avtorji so poskušali medspolne razlike v interakcijah z učitelji pojasniti z dejstvom, da je učiteljski poklic precej feminiziran – učiteljice naj bi torej dekletom predstavljale ustreznejši model, prav tako pa naj bi bil način poučevanja bolj prilagojen dekletom. Vendar pa raziskave pretežno kažejo, da razlike v učni uspešnosti v prid deklet ostajajo tudi, kadar je učitelj moškega spola (Ehrenberg, 1995; Hadjar in Lupatsch, 2011; Martin in Marsh, 2005).

Starost učenca kot dejavnik odnosa med učencem in učiteljem

Narava odnosa med učenci in učiteljem in pomen, ki ga ima ta odnos za učence, se med šolanjem spreminjata. Določeni odnosi se lahko pojavijo ter postanejo bolj ali manj pomembni v odvisnosti od učenčeve starosti in tipov okoljskih in razvojnih

nalog, s katerimi se učenec sooča v različnih časovnih obdobjih. Učitelji vsakodnevno delujejo kot pomembna odrasla figura v življenju učencev; Howes in Hamilton (1992) navajata, da je predvsem pri mlajših šolskih otrocih učitelj skrbnik, ki je odgovoren za emocionalno in fizično blagostanje učenca v odsotnosti staršev. Z zagotavljanjem varne strukture, iz katere lahko učenci raziskujejo svojo okolico, lahko učitelj spodbuja uspešno prilagojenost učencev na šolsko okolje.

Chang idr. (2004) povzemajo rezultate različnih raziskav in ugotavljajo, da na prehodu v zgodnjo adolescenco učitelj ostaja pomemben dejavnik vpliva na učence. Vendar pa je zaradi nekaterih razvojnih in okoljskih značilnosti odnos učitelj – učenec v tem obdobju manj tesen, kot je bil v otroštvu. To naj bi bilo deloma posledica spremenjenega šolskega konteksta (večji razredi, višje učne zahteve, manj individualnega stika z učitelji), deloma pa vse večje potrebe učencev po avtonomiji. Podobno Lynch in Cicchetti (1997) ugotavljata, da na prehodu v adolescenco učenci poročajo o upadu povezanosti z učitelji, vendar pa kakovost njihovih odnosov z učitelji ostaja pomembno povezana s pozitivnimi učnimi izidi. Mladostniki z bolj pozitivnimi odnosi z učitelji so učno uspešnejši (Danielsen, Wiium, Wilhelmsen in Wold, 2010; DiLalla, Marcus in Wright-Phillips, 2004; Košir, Sočan in Pečjak, 2007), se vedejo bolj prosocialno ter so bolj odgovorni in učno angažirani (Wentzel, 1998, 2002).

Moritz Rudasill idr. (2010) so longitudinalno spremljali odnos med učiteljem in učenci od otroštva do zgodnje adolescence. Ugotovili so, da predstavlja kvaliteta odnosa z učiteljem mediatorsko spremenljivko v odnosu med ekonomskim položajem družine in tveganimi oblikami vedenja pri učencih in ima torej potencial, da deluje kot zaščitni dejavnik pri učencih iz manj spodbudnega okolja. Kakovost odnosa med učiteljem in učenci od prvega do petega razreda osnovne šole upada, vendar pa je ta upad manjši pri učencih, katerih starši so pogosteje v stiku z otrokovo šolo, na šolah, kjer učitelji bolje zaslužijo, ter v razredih z bolj pozitivno emocionalno klimo.

Namen raziskave

Obstoječe raziskave torej kažejo, da predstavljata spol in starost učencev dva izmed pomembnih dejavnikov odnosa med učiteljem in učencem. Ključni problem te raziskave je bil ugotoviti učinek teh dveh spremenljivk ter njune interakcije na odnos med učiteljem in učencem na vzorcu slovenskih učencev. Ugotoviti sem želela, kako učitelji ocenjujejo svojo naklonjenost dekletom in fantom v različnih obdobjih šolanja. Kot mero učiteljevega odnosa do učenca sem uporabila poročanje učiteljev o naklonjenosti vsakemu posameznemu učencu. Da bi ugotovila, ali učenci morebitne ugotovljene razlike v naklonjenosti učitelja tudi zaznavajo, sem uporabila tudi dve meri s strani učenca zaznane podpore učitelja: zaznano učno in osebno podporo učitelja. Prva se nanaša na zaznavo učenca, da je učitelju mar za

njegov učni proces in dosežke in da mu želi pomagati pri učenju, druga pa na zaznavo učenca, da je njegovemu učitelju mar zanj in da mu bo pomagal. Gre za dva različna vidika učiteljeve podpore, ki pa se običajno visoko povezujeta (Patrick, Ryan in Kaplan, 2007). Prav tako sem želela ugotoviti razlike med dekleti in fanti v povezanosti učiteljeve naklonjenosti ter zaznane podpore učitelja z učno uspešnostjo učencev.

Metoda

Udeleženci

V raziskavi je bilo udeleženih 1155 učencev (48,8 % deklet) iz 50 oddelkov ljubljanskih osnovnih in srednjih šol. Od tega je bilo 421 učencev 5. razreda osnovne šole (povprečna starost 10,32 let; *SD* = 0,54; 48,9 % deklet), 404 učenci 8. razreda osnovne šole (povprečna starost 13,36 let; *SD* = 0,54; 46,3 % deklet) ter 330 dijakov 2. letnika srednje šole (povprečna starost 16,42 let; *SD* = 0,84; 51,8 % deklet). Sodelovali so le učenci, katerih starši so podpisali soglasje, da lahko njihov otrok sodeluje v raziskavi. V vzorec so bile vključene vse ljubljanske osnovne šole, ki so pristale na sodelovanje, vzorec učencev srednje šole pa je bil izbran tako, da so bili zastopani vsi programi srednješolskega izobraževanja - vzorčenje je bilo proporcionalno.

V raziskavi je sodelovalo tudi 50 učiteljic in učiteljev – razrednikov (v nadaljevanju učitelji) vključenih učencev, ki so ocenjevali svojo naklonjenost učencem (6 % moških). 20 učiteljev (40 %) je bilo razrednikov 5. razreda osnovne šole, torej učiteljev na razredni stopnji, 17 učiteljev (34 %) je bilo razrednikov 8. razreda in 13 učiteljev (26 %) je bilo razrednikov dijakom 2. letnika srednje šole.

Spremenljivke in inštrumenti

Naklonjenost učitelja do posameznega učenca

Da bi ugotovila, kako učitelji ocenjujejo svoje odnose z učenci, sem razrednikom podala naslednje navodilo: *»Glede na številne razlike med učenci v razredu je povsem običajno in človeško, da učitelj vsem učencem ni naklonjen v enaki meri, čeprav je do vseh enako pošten in pravičen. Prosim, da za vse učence v vašem razredu označite, v kolikšni meri bi si želeli imeti tega učenca v svojem razredu tudi naslednje šolsko leto.«* Ocenjevalna lestvica je bila petstopenjska (1– *nikakor ne*, 2 – *pretežno ne*, 3 – *niti posebej ne niti posebej da*, 4 – *pretežno da*, 5 – *da, zelo*). O takem načinu ugotavljanja učiteljevega odnosa do posameznih učencev poročajo tudi nekateri drugi avtorji (npr. Wentzel, 1994).

Zaznana učna in osebna podpora učitelja

Zaznano učno in osebno podporo učitelja sem ugotavljala z lestvicama, ki predstavljata podlestvici obširnejšega vprašalnika Vprašalnik življenja v razredu (Classroom Life Instrument; Johnson, Johnson in Anderson, 1983). Lestvici sem prevedla in priredila. Vsaka lestvica vsebuje štiri postavke. Učenci zaznano podporo učitelja ocenjujejo na petstopenjski lestvici (1 – *nikoli ne drži*, 2 – *večinoma ne drži*, 3 – *včasih drži*, *včasih ne drži*, 4 – *večinoma drži*, 5 – *vedno drži*). Večje število točk pomeni višjo stopnjo zaznane podpore s strani učitelja. Učenci so dobili navodilo, da naj imajo pri odgovarjanju na postavke v mislih svojega razrednika. Avtorji lestvic poročajo, da znaša α koeficient notranje skladnosti za lestvico učne podpore s strani učiteljev ,78, za lestvico osebne podpore učiteljev pa ,80. Na podlagi podatkov iz te raziskave pa znaša α koeficient notranje skladnosti za lestvico učne podpore učiteljev ,74, za lestvico osebne podpore učiteljev pa ,75.

Učna uspešnost

Ker je bila raziskava izvedena ob koncu šolskega leta, sem kot mero učne uspešnosti učencev uporabila predvideni učni uspeh v tekočem šolskem letu. Podatek o učnem uspehu učencev sem pridobila od njihovih razrednikov.

Postopek

Izpolnjevanje vprašalnika je potekalo ob koncu šolskega leta (meseca maja in junija) in sicer skupinsko po posameznih oddelkih. Učenci so izpolnili obe lestvici zaznane podpore učitelja ter navedli predvideni učni uspeh. Zaradi vzporejanja podatkov s podatki, pridobljenimi s strani učitelja, izpolnjevanje vprašalnikov ni bilo povsem anonimno – učenci so se podpisali s svojim imenom in po potrebi s prvo črko priimka.

Razredniki so vprašalnike večinoma izpolnjevali v razredu v času, ko je potekalo anketiranje učencev. Za vsakega učenca so ocenili stopnjo, do katere bi si tega učenca želeli imeti v razredu tudi prihodnje šolsko leto ter poročali o predvidenem učnem uspehu učenca. V kolikor v tem času niso utegnili ali želeli izpolniti vprašalnika, so ga izpolnili kasneje in ga poslali po pošti oziroma pustili pri šolski svetovalni službi.

Dobljene podatke sem vnesla v SPSS. Izračunala sem osnovne deskriptivne statistike ter Pearsonove koeficiente korelacij med spremenljivkami. Za ugotavljanje razlik v vključenih spremenljivkah glede na spol in starost sem uporabila dvosmerno analizo variance. Kot mero velikosti učinka sem uporabila η_p^2.

Rezultati

Tabela 1. *Deskriptivne statistike za učiteljevo oceno odnosa, s strani učenca zaznano učno in osebno podporo ter učni uspeh glede na spol in starost učencev*

		5. razred			8. razred			2. letnik			Skupaj	
		dekleta	fantje	skupaj	dekleta	fantje	skupaj	dekleta	fantje	skupaj	dekleta	fantje
Učiteljeva ocena odnosa	*M*	4,58	4,37	4,48	4,41	3,88	4,12	4,39	4,17	4,28	4,47	4,14
	SD	0,77	0,98	0,89	0,87	1,15	1,06	0,81	0,97	0,89	0,82	1,06
	N	206	215	421	187	217	404	171	159	330	564	591
Učna podpora učitelja	*M*	4,37	4,29	4,33	3,59	3,66	3,62	3,63	3,43	3,53	3,88	3,83
	SD	0,85	1,00	0,93	0,90	1,02	0,96	0,86	0,99	0,92	0,94	1,07
	N	183	190	373	165	187	352	150	142	292	498	519
Osebna podpora učitelja	*M*	4,35	4,41	4,38	3,21	3,31	3,26	3,33	3,21	3,27	3,66	3,68
	SD	1,06	1,04	1,05	1,16	1,23	1,20	0,94	1,12	1,03	1,18	1,26
	N	183	191	374	165	187	352	150	142	292	498	520
Učna uspešnost	*M*	4,24	4,13	4,19	3,84	3,52	3,67	3,13	2,44	2,79	3,78	3,46
	SD	0,86	0,90	0,88	1,10	1,23	1,18	1,24	1,07	1,21	1,16	1,27
	N	206	216	422	175	201	376	167	159	326	548	576

Tabela 1 prikazuje osnovne deskriptivne statistike za vse spremenljivke, vključene v raziskavo, in sicer tako glede na spol kot glede na starost učencev.

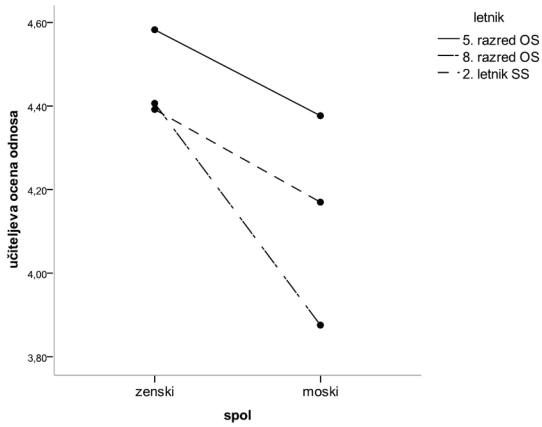
Razlike v učiteljevi naklonjenosti učencem glede na spol in starost učencev

Rezultati dvosmerne analize variance kažejo na pomemben učinek spola na učiteljevo naklonjenost učencu (F (1, 1149) = 32,94, p = ,000, η_p^2 = 0,03) in sicer učitelji dekleta preferirajo pred fanti, kar velja za vse vključene starostne skupine. Mera velikosti učinka kaže na majhen učinek spola – ta k variabilnosti rezultatov prispeva 3 %.

Prav tako je pomemben učinek starosti oziroma razreda/letnika (F (2, 1149) = 13,50, p = ,000, η_p^2 = 0,02) – učitelji v 5. razredu so najbolj naklonjeni svojim učencem, sledijo učitelji 2. letnika, o najmanjši naklonjenosti učencem pa poročajo učitelji 8. razreda. Pri tem je Bonferronijev post hoc test pokazal, da so statistično pomembne razlike med učenci 5. razreda ter učenci 8. razreda (p = ,000) in 2. letnika (p = ,020), niso pa statistično pomembne razlike med učenci 8. razreda ter dijaki 2. letnika (p = ,070).

Tudi učinek interakcije med spolom in starostjo je statistično pomemben (F (2, 1149) = 3,75, p = ,024, η_p^2 = 0,006). V 8. razredu prihaja do največje razlike pri učiteljevi naklonjenosti med dekleti in fanti. Učitelji v 8. razredu so bolj naklonjeni

dekletom kot fantom, medtem ko v 5. razredu in 2. letniku ni tako velikih razlik v njihovi naklonjenosti posameznemu spolu. Učinek interakcije med spolom in starostjo prikazuje Slika 1.



Slika 1. Poročanje učiteljev o naklonjenosti učencem glede na spol in starost učencev

Mere velikosti učinka (η_p^2) kažejo na majhen učinek spola in starosti – spol k variabilnosti rezultatov prispeva 3 %, starost pa 2 %. Velikost učinka za interakcijo med obema neodvisnima spremenljivkama je zanemarljivo nizka.

Kljub ugotovljenim razlikam glede na starost in spol so učitelji svoj odnos z učenci ocenjevali precej visoko, saj so z izjemo skupine dečkov 8. razreda aritmetične sredine za vse skupine višje od štiri (gre za oceno na petstopenjski lestvici).

V nadaljevanju me je zanimalo, ali se razlike v naklonjenosti učitelja glede na spol in starost kažejo tudi v s strani učencev zaznani učni in osebni podpori učitelja ter v učni uspešnosti.

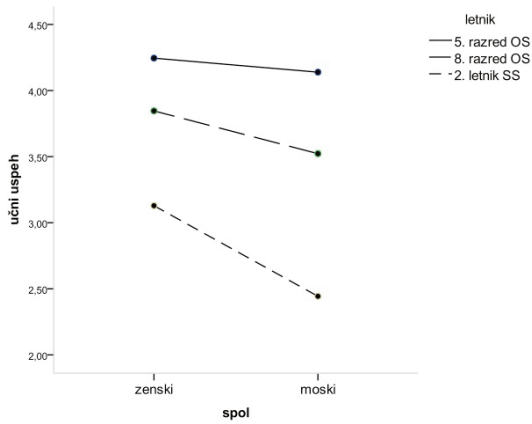
Razlike v zaznani učiteljevi učni in osebni podpori glede na starost in spol

Rezultati dvosmerne analize variance so pokazali, da se učenci glede na spol ne razlikujejo statistično pomembno v učni podpori, ki jo zaznavajo s strani svojega razrednika (F (1, 1011) = 1,30, p = ,254). Statistično pomembne razlike se pojavijo glede na starost oziroma razred/letnik učencev (F (2, 1149) = 75,85, p = ,000, η_p^2 = 0,13) in sicer je Bonferronijev post hoc test pokazal, da so statistično pomembne razlike med vsemi starostnimi skupinami (p = ,000) razen med skupinama učencev 8. razreda osnovne šole ter dijakov 2. letnika srednje šole, ki se ne razlikujejo pomembno v zaznani učni podpori s strani učitelja (p = ,627). Prav tako ni pomemben učinek interakcije med spolom in starostjo (F (2, 1149) = 1,43, p = ,230).

Za dimenzijo zaznane učiteljeve osebne podpore so rezultati podobni: učinek spola ni statistično pomemben (F (1, 1012) = 0,06, p = ,800), prav tako ni pomemben učinek interakcije med spolom in starostjo (F (2, 1012) = 0,88, p = ,414). Statistično pomembne razlike se pokažejo le glede na starost učencev (F (2, 1012) = 122,69, p = 0000, η_p^2 = 0,195) in sicer so enako kot za dimenzijo zaznane učne podpore učitelja statistično pomembne razlike med vsemi tremi skupinami (p = ,000) razen med učenci 8. razreda in dijaki 2. letnika (p = ,999), ki se torej ne razlikujejo v stopnji osebne podpore, ki jo zaznavajo s strani svojih razrednikov.

Razlike v učnem uspehu glede na starost in spol

Rezultati dvosmerne analize variance so pokazali, da se učenci statistično pomembno razlikujejo v učnem uspehu tako glede na spol (F (1, 1118) = 33,60, p = ,000, η_p^2 = 0,03) kot tudi glede na starost (F (2, 1118) = 160,54, p = ,000, η_p^2 = 0,22), prav tako je statistično pomemben učinek interakcije med obema spremenljivkama (F (2, 1118) = 6,79, p = ,001, η_p^2 = 0,01). Dekleta so učno uspešnejša od fantov in učni uspeh upada s starostjo učencev; najvišji je pri učencih 5. razreda, najnižji pri dijakih 2. letnika, pri čemer je Bonferronijev post hoc test pokazal, da so statistično pomembne razlike med vsemi tremi starostnimi skupinami (p = ,000). Učinek interakcije med spolom in starostjo je prikazan na Sliki 2. Razlike v učnem uspehu med dekleti in fanti so največje v 2. letniku srednje šole in sicer v prid deklet. Pri obeh mlajših starostnih skupinah učencev se kaže enak trend, vendar pa so razlike manjše.



Slika 2. Učni uspeh glede na spol in starost učencev

Če pogledamo mere velikosti učinka (η_p^2), vidimo, da so te za učinek starosti bistveno višje kot za učinek spola; tako starost k variabilnosti rezultatov na dimenziji učne podpore učitelja prispeva 13 % za učno podporo učitelja in 23 % za osebno

podporo učitelja, spol pa 0 %. K variabilnosti učencev v učnem uspehu sicer prispevata tako spol kot starost, vendar pa je prispevek starosti precej večji: za spol znaša 3 %, za starost pa 22 %. Starost je torej pomembnejši dejavnik razlik med učenci v preučevanih spremenljivkah kot spol.

Na podlagi zgornjih rezultatov lahko zaključimo, da učitelji poročajo o večji naklonjenosti dekletom kot fantom, vendar pa učenci tega očitno ne zaznavajo, saj se dekleta in fantje ne razlikujejo v zaznani podpori s strani učitelja. Dekleta so kljub temu učno uspešnejša od fantov. Ta trend (ne)povezanosti med preučevanimi odvisnimi spremenljivkami se kaže tudi v vzorcu korelacij med njimi (glej tabelo 2): učiteljeva naklonjenost se nizko povezuje z učiteljevo podporo, kot jo zaznavajo učenci, kar še posebej velja za fante, kjer sta obe korelaciji zanemarljivo nizki in statistično nepomembni. Se pa učiteljeva naklonjenost zmerno in statistično pomembno povezuje z učnim uspehom. Slednji se nizko, a statistično pomembno povezuje z obema oblikama učne podpore (izjema je povezanost z osebno podporo učitelja pri dekletih, ki je zmerna).

Tabela 2. *Korelacije med učiteljevo naklonjenostjo učencu, učiteljevo učno in osebno podporo ter učnim uspehom, prikazane posebej za dekleta (N = 498) in fante (N = 519)*

Učni uspeh	1	2	3	4
1. Učiteljeva naklonjenost učencu	-	,06	,21*	,47*
2. Učiteljeva učna podpora	,06	-	,36*	,12*
3. Učiteljeva osebna podpora	,07	,28*	-	,26*
4. Učna uspešnost	,40*	,13*	,18*	-

Opombe: Nad diagonalo so prikazani Pearsonovi koeficienti korelacije za dekleta, pod diagonalo pa za fante.

*$p \leq ,01$.

Razprava

V raziskavi so me zanimale razlike v učiteljevi naklonjenosti do dečkov in deklic v različnih obdobjih šolanja ter kako se te razlike odražajo v učni in osebni podpori učitelja, kot jo zaznavajo učenci, ter v učni uspešnosti učencev. Rezultati raziskave kažejo, da so učitelji v vseh starostnih obdobjih bolj naklonjeni deklicam kot dečkom. Ta učinek je še posebej izrazit pri učencih 8. razreda osnovne šole. Ta podatek je skladen z ugotovitvami drugih raziskav (npr. Birch in Ladd, 1998) in je torej pričakovan. Kar preseneča, je ugotovitev, da se učiteljeva večja naklonjenost dekletom ne odraža tudi v zaznavah učencev: dekleta in fantje se ne razlikujejo v zaznani (učni in osebni) podpori učitelja. To se kaže tudi v vzorcu povezanosti med vključenimi spremenljivkami: povezanost med učiteljevo naklonjenostjo učencu ter tako osebno kot učno podporo je nizka, skoraj ničelna (nekoliko višja je za učno podporo učitelja pri dekletih). Kaže torej, da se raznolikost v

učiteljevi naklonjenosti posameznim učencem v razredu ne odraža tudi v stopnji podpore, ki jo nudijo učencem oziroma tega učenci vsaj ne zaznavajo.

Ugotovitev, da učitelji poročajo o večji naklonjenosti dekletom kot fantom, sama po sebi še ni problematična in ne pomeni nujno pristranosti v vedenju ter s tem prikrajšanosti fantov. Enake naklonjenosti vsem učencem od učiteljev ne moremo zahtevati oziroma je pričakovati. Prej nasprotno: izhajanje iz imperativa »vsem učencem moram biti enako naklonjen« lahko ima za posledico neozaveščenost negativnih čustev do določenih učencev. Prav ti neracionalni in neozaveščeni načini obdelovanja informacij pa so tisti, ki močneje usmerjajo vedenje in vodijo v pristrano vedenje do učencev, ki pa se ga učitelj ne zaveda (Korthagen in Vasalos, 2005). Ključno je torej, da učitelj ozavesti in se sooči z razlikami v svoji naklonjenosti do različnih učencev; le tako je zmožen nadzirati svoja čustva tako, da se ne kažejo v pristranem vedenju do določenih učencev ali skupin učencev.

So učitelji zmožni regulirati svoja občutja tako, da se ne kažejo v pristranem vedenju do različnih skupin učencev? Zgolj na podlagi rezultatov te raziskave tega sicer ne moremo trditi, je pa je takšna razlaga vsekakor ena izmed možnih. Če je pravilna, razlike v preferencah učiteljev do učencev različnega spola glede na zaznave učiteljeve podpore s strani učencev niso zaskrbljujoče v smislu učne prikrajšanosti fantov. V tem primeru nižji učni uspeh fantov v primerjavi z dekleti, ugotovljen tudi v tej raziskavi, ni pogojen z razlikami med učenci v kakovosti odnosa z učiteljem. Zanimivo bi bilo raziskati, ali se podoben trend kaže ne le v razlikah med spoloma, temveč tudi pri bolj specifičnih ciljnih skupinah učencev, še posebej ranljivejših skupinah (npr. učenci s posebnimi potrebami).

Rezultati raziskave kažejo tudi na razlike v učiteljevi naklonjenosti glede na starost učencev: učitelji mlajših učencev poročajo o večji naklonjenosti svojim učencem kot učitelji starejših učencev. Prav tako se pojavljajo razlike v zaznani podpori učitelja glede na starost - najmlajša skupina učencev s strani svojih razrednikov zaznava največ učne in osebne podpore, najstarejša, torej dijaki 2. letnika srednje šole, pa najmanj. Kvaliteta odnosa učitelj – učenec torej s starostjo upada, kar je najverjetneje pogojeno s spremembami v socialnem razvoju mladostnikov in je skladno tudi z ugotovitvami drugih raziskav (npr. Chang idr., 2004; Lynch in Cicchetti, 1997; Moritz Rudasill idr., 2010).

Dekleta so v vseh obdobjih šolanja učno uspešnejša od fantov, obenem pa učna uspešnost tako deklet kot fantov upada s starostjo. Povezanost med učiteljevo naklonjenostjo učencu in učenčevo učno uspešnostjo je tako pri fantih kot pri dekletih zmerna. Učitelji so torej bolj naklonjeni učno uspešnejšim učencem, kar ugotavljajo tudi nekatere druge raziskave (npr. Wentzel, 1993). Učni uspeh se nizko povezuje z učno in osebno podporo učitelja – zanimivo je, da je povezanost z osebno podporo nekoliko višja kot povezanost z učno podporo, kar pa v večji meri velja za dekleta kot za fante.

Izhajajoč iz ključnega namena raziskave, ki je ugotoviti razlike v učiteljevi naklonjenosti glede na spol učencev, lahko torej sklenem naslednje: učitelji v vseh obdobjih šolanja poročajo o večji naklonjenosti dekletom kot fantom, vendar pa se dekleta in fantje ne razlikujejo v stopnji podpore, ki so zaznavajo s strani učitelja.

Obenem so dekleta učno uspešnejša od fantov. Ker v raziskavi nisem ugotavljala vzročnih učinkov med spremenljivkami, so nadaljnja razmišljanja na ravni neprevrjenih domnev (ki lahko predstavljajo smernice za nadaljnje raziskovanje), pa vendar: zdi se, da razlike glede na spol v učnem uspehu niso pogojene z razlikami v učiteljevi naklonjenosti. Možno je sicer, da obstaja med učiteljevo naklonjenostjo učencu in učno uspešnostjo učenca neposredna povezava kot posledica subjektivnih napak pri ocenjevanju, vendar pa lahko domnevamo, da bi učenci takšno »krivično« ocenjevanje zaznali – torej bi se pokazale razlike v zaznani učiteljevi podpori glede na spol. Domnevamo lahko torej, da odnos med učiteljevo večjo naklonjenostjo dekletom in boljšimi učnimi dosežki deklet ni neposredno vzročen in je najverjetneje bolj zapleten. Če rezultate te raziskave dopolnimo z ugotovitvami drugih raziskav, ki kažejo, da učitelji fantom pri pouku posvečajo več pozornosti kot dekletom, gredo lahko razmišljanja v prid domnevi Pellegrinija in Blatchforda (2000), da fantje iz različnih razlogov preprosto potrebujejo več pozornosti učitelja, torej so za učitelja »napornejši«. To nakazujejo različne raziskave, ki so ugotovile razlike med spoloma v učenju kot v socialnem vedenju: tako na primer dekleta pri učenju uporabljajo več spretnosti samoregulacije (npr. Ablard in Lipschultz, 1998; Pečjak in Košir, 2003) ter jih učitelji ocenjujejo kot bolj socialno kompetentne (Pečjak, Puklek Levpušček, Kalin, Valenčič Zuljan in Peklaj, 2009). Možno je, da večja naklonjenost učiteljev dekletom kot fantom, ugotovljena v tej in številnih drugih raziskavah, izhaja iz tega, da je delo z dekleti za učitelja manj zahtevno in manj čustveno obremenjujoče.

Pri interpretiranju rezultatov te raziskave je seveda potrebno upoštevati tudi nekatere njene pomanjkljivosti in omejitve. Tako ne smemo pozabiti, da osnovnošolci na predmetni stopnji šolanja ter srednješolci (torej učenci 8. razreda ter dijaki 2. letnika v tej raziskavi) vzpostavljajo različne odnose z učitelji. V tej raziskavi sem vključila le poročanje o naklonjenosti posameznim učencem s strani razrednika, učenci pa so ocenjevali učno in osebno podporo, kot jo zaznavajo s strani razrednika. Prav tako so bile ocene učiteljev o naklonjenosti učencem zelo visoke (za fante 4,14, za dekleta pa 4,47 na petstopenjski ocenjevalni lestvici); glede na naravo ocenjevanega pojava lahko sklepamo tudi na učinek dajanja socialno zaželenih odgovorov pri učiteljih.

Z vidika praktičnih implikacij rezultatov dejstvo, da učitelji poročajo o večji naklonjenosti dekletom kot fantom ni problematično – to nakazuje, da gre najverjetneje za ozaveščena občutja, ki so jih učitelji sposobni uravnavati tako, da se v njihovem vedenju ne kažejo (na kar nakazuje odsotnost razlik v zaznani učiteljevi podpori glede na spol). Pri delu z učitelji je smiselno še nadaljnje razbijanje imperativa »vsem učencem moram biti enako naklonjen« in njegovo spreminjanje v »do vseh učencev moram biti pravičen in dobronameren«. To pa je mogoče le, če učitelji dobijo dovoljenje, da v varnem okolju (supervizija, intravizija, pogovor s kolegi) izrazijo in si priznajo tudi negativna čustva do določenih učencev. Šele ko so ta ozaveščena, jih lahko učitelj v svojem vedenju nadzira ter ustrezno individualizira delo glede na različne potrebe učencev v razredu, zato je za učinkovito delo učiteljev še posebej pomembna sistema-

tična refleksija kot ozaveščanje občutkov, mišljenja in vedenja z namenom, da so se v prihodnje zmožni soočiti z novo izkušnjo z bogatejšim repertoarjem vedenj.

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Znanstveni teoretsko pregledni prispevek

From Frogs to Fish: »The Big-Fish-Little-Pond« Effect Then and Now

Marjorie Seaton[*] and Rhonda G. Craven
University of Western Sydney, Centre for Educational Research

Abstract: This paper traces the development of »the big-fish-little-pond« effect (BFLPE), which asserts that students in high-ability classes and schools have lower academic self-concepts than their equally able counterparts in low- and mixed-ability environments. The paper begins with a description of the problem outlined in the BFLPE model and continues by examining early BFLPE research and by tracing advances in the field. Criticisms of the BFLPE are outlined and research is described that addresses these criticisms. The paper concludes by presenting suggestions for future BFLPE studies.

Key words: academic achievement, self-concept, social comparison

Od žab k ribi: preučevanje učinka »velike ribe v majhnem ribniku«

Marjorie Seaton[*] in Rhonda G. Craven
Univerza Western Sydney, Center za raziskovanje na področju vzgoje in izobraževanja

Povzetek: V prispevku je predstavljen razvoj učinka »velike ribe v majhnem ribniku« (ang. Big-Fish-Little-Pond-Effect), ki ugotavlja, da imajo učenci v oddelkih na najvišjem nivoju nižjo učno samopodobo kot njihovi enako sposobni vrstniki v oddelkih na nižjih nivojih in heterogenih oddelkih. Uvodoma je v prispevku opisan izpostavljeni problem BFLPE modela, nato pa doprinosi na področju njegovega zgodnjega raziskovanja. Na osnovi raziskovalnih spoznanj je predstavljena tudi kritika BFLPE modela ter smernice oziroma predlogi za raziskovanje obravnavanega učinka v prihodnje.

Ključne besede: učni uspeh, samopodoba, socialne primerjave

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[*] Naslov / Address: Marjorie Seaton, Educational Excellence and Equity Research Program University of Western Sydney Bankstown Campus Locked Bag 1797 Penrith South DC NSW 1797 Australia Email: m.seaton@uws.edu.au

In the first study to demonstrate the big-fish-little-pond effect (BFLPE), Davis (1966) reviewed the career decisions of college men attending colleges of different academic standards. He found that students who were high achievers had higher career ambitions if good grades were easily obtained in the college they attended compared to equally able students who attended colleges where good grades were harder to receive. Using the maxim "It is better to be a big frog in a small pond than a small frog in a big pond" (Davis, 1966, p. 31), he warned parents against sending their sons to top performing colleges if they thought their sons would be among the poorer performing students. Hence, the first reference in the literature pertaining to the effect now known as the BFLPE did not mention fish; rather it talked about frogs!

Since Davis's (1966) study was published, the phenomenon that he noted has been widely researched, especially by Marsh and his colleagues (e.g., Craven, Marsh, & Print, 2000; Marsh & Hau, 2003; Marsh, Kong, & Hau, 2000; Marsh & Parker, 1984; Marsh et al., 2008) and is now known as "the big-fish-little-pond effect" (BFLPE). This paper begins with a description of the problem outlined in the BFLPE model, examines early BFLPE research, traces advances in the field, addresses some criticisms of the BFLPE, and finishes by presenting options for future BFLPE studies.

The BFLPE Model

Overview

The BFLPE model links academic self-concept (defined as one's knowledge and perceptions about one's academic ability; Bong & Skaalvik, 2003), with individual and school or class-average achievement. The model posits that individual ability and academic self-concept are both positively associated with academic self-concept, but that school- and class-average ability are negatively related to academic self-concept (see Figure 1). According to this model, one's academic self-concept partly depends on one's own ability and partly on the ability of other students in one's class or school. This comparison with classmates is at the heart of the BFLPE, as it is postulated that students use this frame of reference as one basis for forming their academic self-concepts.

An example may help elucidate the underlying relations posited in the BFLPE model. Consider two equally able female students who are in their first year of high school. Both were at the top of their year group in primary school, having excelled in school-based tests, standardised state-wide tests, and external academic competitions. Since they both have high-ability, their academic self-concepts are high. However, one student attends the local comprehensive high school, a school that does not select students based on academic merit, while the other student attends an academically selective school in the next suburb. The student in the comprehensive high school is performing well academically and so feels good about her abilities. Also, compared to the other students in the school, this student is among the most intelligent, being at the top of the year group

(a big fish in a little pond). The student who attends the academically selective high school is performing around the middle of the year group. There are many other extremely intelligent students at this school, and competition for grades is fierce. Compared to these other students, this student feels that she is not very intelligent (a little fish in a big pond). Compared to the student who attends the local comprehensive school, the academic self-concept of the student who attends the academically selective school is lower: The environment of the academically selective school has had a negative effect on this student's academic self-concept (the BFLPE). Hence, while individual ability is positively related to one's level of academic self-concept, in classes or schools where the ability level is higher, equally able students tend to have lower academic self-concepts than students who are educated in settings where the average ability or achievement levels of classmates is lower. This positive relation between individual ability and academic self-concept and the negative relation between class- and school-average ability and academic self-concept are depicted in Figure 1.

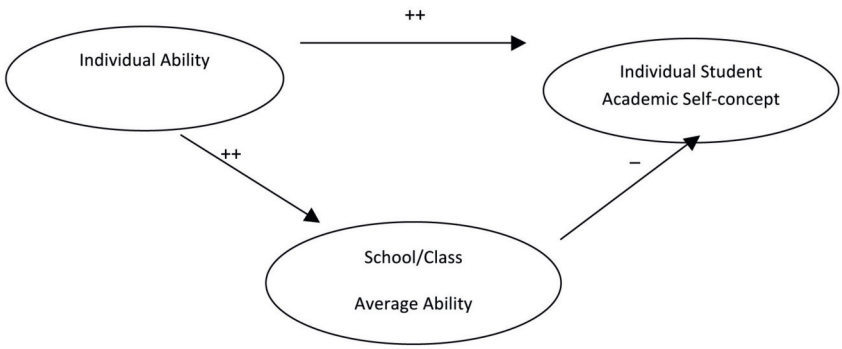

Figure 1. The Big-Fish-Little-Pond Effect. Adapted from "Big-fish-little-pond-effect on academic self-concept. A cross-cultural (26 country) test of the negative effects of academically selective schools", by H. W. Marsh, & K. Hau, 2003, American Psychologist, 58(5), p. 369. Copyright 2003 by the American Psychological Association.

Does the BFLPE Matter?

Does it matter if students do not have an accurate perception of their abilities – an accurate self-concept? Self-concept research, especially research pertaining to the reciprocal effects model (REM; for review see Marsh & Craven, 2006), would suggest that having a lower self-concept does matter. REM research has demonstrated that academic self-concept and achievement have a dynamic and mutually reinforcing relation whereby self-concept shares a causal relation with subsequent achievement and achievement shares a causal relation with subsequent academic self-concept (see Figure 2). As such, prior academic achievement is significantly positively associated with subsequent academic self-concept and

controlling for individual ability, prior self-concept is also significantly positively related to subsequent achievement (e.g., Guay, Marsh, & Boivin, 2003; Marsh & Craven, 2006; Marsh, Trautwein, Lüdtke, Köller, & Baumert, 2005; Marsh & Yeung, 1997; Muijs, 1997; Valentine & Dubois, 2005).

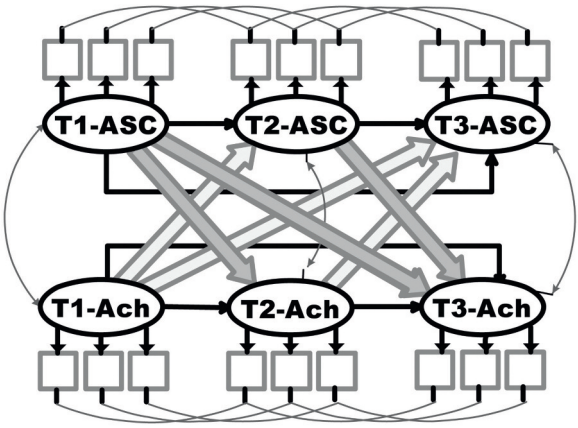

Figure 2. Reciprocal Effects Model. Adapted from "Self-concept theory, measurement and research into practice: The role of self-concept in Educational Psychology", by H. W. Marsh, 2007. Copyright 2007 by British Psychological Society.

The implications of the REM for educational interventions are clear. To maximise the full potential of students and ensure achievement gains are enduring, both academic self-concept in a specific domain (e.g., mathematics) and achievement (e.g., skills training in solving a mathematical problem) need to be targeted simultaneously. Hence, if attending high-ability schools lowers academic self-concept as in the BFLPE and lower academic self-concept has been associated with lower achievement as in the REM, then having a lower self-concept of one's abilities does matter, as self-concept shares a causal relation with subsequent achievement. As such, high-ability students who attend high-ability schools may not be performing to their potential. Moreover, despite the pervasive significance of a positive self-concept in obtaining favourable achievement outcomes, research has shown that when compared with similar ability students in average- and low-ability schools, students in high-ability schools are more likely to have lower general self-concepts, lower grade point averages, and lower educational and occupational aspirations (Marsh, 1991). This is of concern as these high ability students are the future of tomorrow.

Criticisms of BFLPE Research

Dai and Rinn (2008) have been the most notable critics of the BFLPE paradigm. Inter alia, they have argued that the BFLPE paradigm implicitly assumes

that social comparison is involved in the effect, rather than directly measuring it. They have also contended that BFLPE research has not focused on potential BFLPE mediators or moderators, that the effect is short-lived, and that the effect sizes associated with the BFLPE are not large enough to warrant attention. While a full discussion of these and the other issues raised by Dai and Rinn is outside the scope of this article and have been addressed elsewhere (Marsh et al., 2008), as will be seen in the ensuing discussion, these criticisms have been the focus of BFLPE research and are in the process of being addressed by BFLPE researchers.

BFLPE Research

Early Research

In their meta-analysis investigating the effects of ability grouping on high school students, Kulik and Kulik (1982) located 15 studies that reported self-concept results. Their analyses indicated that the average effect of grouping on self-concept was almost zero, which they considered trivial and concluded that ability grouping had little effect on self-concept. However, Marsh (1984) argued that this conclusion was based on average results and that if different ability groupings (e.g., high-ability students in high-ability schools versus high-ability students in low-ability schools) were considered, then the effect of ability grouping on self-concept would be substantially greater. In support of this argument, Marsh described a study – the Marsh and Parker (1984) study – that was designed to replicate previous research that had displayed a "paradoxically negative correlation between school-average SES and self-concept" (Marsh, 1987, pp. 282 – 283).

The Marsh and Parker (1984) study assessed the self-concepts of 305 sixth grade Australian students from high and low SES schools. On average, students in the high SES schools had slightly above average IQ scores (M =109, SD = 13.1), while those in the low SES schools had IQ scores slightly below average (M = 96, SD = 13.1). Thus, these students were not explicitly streamed according to ability, but de facto ability grouping occurred as a consequence of differing SES levels. Their results showed that whereas academic ability had a positive impact on academic self-concept, when individual ability was controlled, the effect of school-average ability on academic self-concept was negative – a BFLPE. Equally able students in the high-ability/high SES schools had lower academic self-concepts than students in the low-ability/low SES schools. This study was one of the first to provide evidence of the negative effects of school-average achievement on academic self-concept – the BFLPE. This early research has spawned numerous BFLPE studies examining the BFLPE for different levels of education, testing its impact on different educational outcomes, its lasting effects, the generalisability of the BFLPE, studies examining how students may bask in the reflected glory of attending a high-ability school, and an assessment of potential moderating constructs. In the following sections we provide an overview of some aspects of this research.

The BFLPE at Different Levels of Education

In addition to the Marsh and Parker (1984) study that demonstrated the existence of the BFLPE at the high school level, many other studies have shown that the BFLPE exists for high school students (e.g., 7th graders (Marsh, Köller, & Baumert, 2001); 10th graders, (Marsh, 1987); senior high students (Marsh, 1991)). However, the BFLPE has also been shown to be evident at the class level in primary schools. For example, Craven et al. (2000) contrasted the academic self-concepts of gifted students who attended streamed and mixed ability primary classes with those of students who attended special Gifted and Talented primary classes. Craven et al. (2000) found that compared to the gifted students in streamed and mixed ability classes, a greater decline in academic self-concept over time was reported by students in the special Gifted and Talented classes.

Relations between the BFLPE and Other Educational Outcomes

In a re-analysis of the Youth in Transition data, Marsh (1987) demonstrated the BFLPE, and observed that equally able students in low-ability schools had higher grade point averages compared to students in high-ability schools. Marsh suggested that this frame of reference effect for grades, although separate, was a contributing factor to the BFLPE for academic self-concept. Additionally, as noted previously, compared to attending an average- or low-ability school, attending a high-ability school can have detrimental effects on general self-concept, grade point average, educational and occupational aspirations, and the likelihood of taking advanced English and math classes (Marsh, 1991). Furthermore, in their evaluation of students in Gifted and Talented classes and streamed and mixed ability primary classes, Craven et al. (2000) also examined student achievement and motivation. The Gifted and Talented students' scores were significantly more negative than those of the other two groups (streamed and mixed ability) for three of six motivational orientations, and the groups did not differ on achievement.

Lasting Effects of the BFLPE

Dain and Rinn (2008) claimed that there was no evidence to show that the BFLPE was long-lasting. However, studies have shown that the BFLPE is not a short-term effect (e.g., Marsh 1991; Marsh et al., 2001). For example, Marsh, Trautwein, Lüdtke, Baumert, and Köller (2007) conducted two large longitudinal studies examining the long-term stability and persistence of the BFLPE on German high school students. In the first study, 2,306 students were assessed in their last high school year and again two years later. At Time 1, the final year of high school, school-average achievement negatively predicted math self-concept. This was also the case at Time 2, two years after graduation from high school. Furthermore, controlling for the negative effect of school-average achievement on math self-concept at Time 1, school-average achievement continued to

significantly negatively predict math self-concept at Time 2, although the effect was small. Marsh et al. also demonstrated that the BFLPE was still occurring four years after students had left high school, attesting to the long lasting effects of the BFLPE.

Generalisability of the BFLPE

One way to test the external validity of research findings is to establish whether they can be supported in different cultural settings. The BFLPE has been shown to be evident in Australia (e.g., Craven et al., 2000; Marsh, 2004; Marsh & Parker, 1984; Marsh, Chessor, Craven, & Roche, 1995), the United States (e.g., Marsh, 1987, 1991; Mulkey, Catsambis, Steelman, & Crain, 2005), Israel (Zeidner & Schleyer, 1998), Germany (Marsh et al., 2001), the United Kingdom (Ireson, Hallam, & Plewis, 2001; Tymms, 2001), and Hong Kong (Marsh et al., 2000). The validity of BFLPE findings was also supported by Marsh and Hau (2003), who undertook an extensive study of the BFLPE across 26 countries. However, most of the countries in this sample were economically developed and individualist nations. Seaton, Marsh, and Craven (2009) overcame this limitation by examining the BFLPE in 41 countries that included nations that were culturally and economically diverse. Results indicated that there was evidence of the BFLPE in both collectivist and individualist cultures and in economically developing and developed nations, thereby validating its place as a pan-human theory. Interestingly, the effect size found in this study for the BFLPE was -.49. Although Dain and Rinn (2008) argued that BFLPE effect sizes "do not warrant a strong argument for the BFLPE" (p. 299), this effect size was "clearly large enough to be of theoretical and practical importance" (Seaton et al., 2009, p. 410).

Reflected Glory

Marsh and his colleagues have also posited that the academic self-concepts of students attending academically selective schools may actually be enhanced simply because they had gained entry into such an academically elite school. Their reasoning was that these students might consider themselves intelligent by virtue of the fact that they were in a school where the other students are highly intelligent (e.g., "If I am good enough to be in this selective school with all these other very smart students, then I must be very smart" (Marsh et al., 2000, p. 338)). They referred to this identification process as an assimilation or reflected glory effect. Conversely, students in academically selective schools may also use their classmates as a basis of comparison (e.g., "There are a lot of students better than I am so I must not be as good a student as I thought" (Marsh et al., 2000, p.338)), resulting in lower academic self-concepts. This contrast effect is the classic BFLPE.

This reflected-glory effect was investigated in a longitudinal study by Marsh et al. (2000). The study took place in Hong Kong where high schools are highly segregated on the basis of academic achievement. At the end of primary schooling, students are grouped according to ability on the basis of a public placement test (Wong

& Watkins, 2001), and admission to one of Hong Kong's most prestigious high schools is much sought after. Marsh et al. surmised that the increase in social status gained for oneself and one's family by being admitted to one of these prestigious high schools (reflected glory) should outweigh the contrast effect (lower self-concepts in comparison to other higher ability students). However, consistent with other BFLPE research, they found that attending a high ability school had a negative effect on academic self-concept (a contrast effect). They also found a positive, but weaker, counterbalancing effect. They concluded that this was an assimilation or reflected-glory effect from attending a school of higher status and that the BFLPE was the net result of the contrast and the assimilation effects. Moreover, Marsh et al. found that controlling for reflected-glory also resulted in a more negative BFLPE. This led these authors to advocate to BFLPE researchers that future studies should include measures of reflected glory.

Moderators of the BFLPE

Dai and Rinn (2008) criticized the BFLPE for not specifying "possible situational or personal variables that might moderate the BFLPE" (p. 291). However, this is not the case. The most often examined moderator of the BFLPE is individual ability. However, results generally show small or non-significant moderating effects that are not always consistent in direction. For example, Reuman (1989) demonstrated that for students of low-ability, between-class ability grouping resulted in higher academic self-concepts, but for high-ability students that type of grouping led to lower academic self-concepts. Conversely, although students of all ability levels displayed a BFLPE, Marsh and Rowe (1996) reported that it was average ability students who suffered the most. The general conclusion from studies investigating individual ability as a moderator has been that the BFLPE generalises across all ability levels.

Seaton, Marsh, and Craven (2010) conducted a comprehensive study of BFLPE moderators, in which the generalizability and robustness of the BFLPE was evaluated across 16 individual student characteristics. The 16 constructs covered two broad areas: socio-economic status and academic self-regulation (e.g., motivation, self-efficacy, study methods, and behaviour; see Zimmerman, 1994, 1998, for the theoretical framework used). Of the 16 constructs, only three were found to moderate the BFLPE. Results indicated that students who reported being highly anxious, who used surface learning as a method of self-regulation, or who endorsed a cooperative orientation suffered more from the BFLPE. Overall, the authors concluded that results provided "support for the generalizability of the BFLPE and suggest that students are more similar than different in relation to the BFLPE" (p. 36).

Social Comparison

Another of Dai and Rinn's (2008) criticisms was that "the BFLPE research program has had minimal contact with the social comparison literature" (p. 290).

However, one of the most important advances in BFLPE research has been to link it with social comparison theory. Researchers (e.g., Marsh & Hau, 2003) have claimed that social comparison is at the heart of the BFLPE. It was argued that students used comparisons of achievement with their classmates as one way to evaluate their performance. Moreover, it was further hypothesised that it was these comparisons with classmates, forced on students by virtue of attending schools where ability levels are high, which led to lowered self-concepts. Given students in high-ability classes and schools have other high-ability classmates with whom to compare their achievements (upward comparisons), it was argued that these upward comparisons with high-achieving classmates were at the root of the BFLPE.

The first study to investigate the link between the two theories was made in 2008. This study (Seaton et al., 2008) reanalysed two social comparison studies from a BFLPE perspective. These studies (Blanton, Buunk, Gibbons, & Kuyper, 1999; Huguet, Dumas, Monteil, & Genestoux, 2001) had shown that students who made comparisons with classmates whose performance was better than theirs' (upward comparisons) performed better themselves on subsequent tests, but the comparisons had no effect on self-evaluations. Herein lay the problem: If upward comparisons can have positive benefits (better performance) how can they also be associated with lower academic self-concepts (the BFLPE)? Results from the reanalysis of the data from these two studies indicated that the negative effects of the BFLPE co-existed with, but were not moderated by, selected upward comparisons with individual students that improved performance.

The Seaton et al. (2008) study was limited as it did not include appropriate measures of academic self-concept or achievement. Hence, a further study was conducted by Huguet et al. (2009) to address these limitations. Huguet et al. found that when students' comparisons with their classmates as a whole were controlled for, the BFLPE was eliminated. Additionally, the BFLPE co-existed with assimilative and contrastive effects of selected upward social comparisons with individuals on academic self-concept. As Huguet et al. concluded, the BFLPE "is rooted in *how students compare with their class taken as a whole*, a comparison which proved to be more invidious as class average ability increased" (p. 26). This study is important as it was the first study to demonstrate that the roots of the BFLPE were in social comparison.

Experimental BFLPE Studies

Due to the nature of the sample in BFLPE studies it is very difficult, if not impossible, to undertake experimental empirical research: Random assignment of students to either an academically selective school or a non-selective school is, ethically (among other considerations), not an option. However, some experimental studies have been conducted. While school aged students have not been the participants in these studies, studies that utilise an experimental methodology are

nonetheless important in advancing knowledge of the BFLPE.

McFarland and Buehler (1995) were intrigued by the paradox that they saw in BFLPE findings that showed that high-performing students in a poorly performing peer group (a school that performs less well academically) had higher self-evaluations than students of similar ability in a well performing peer group (a school that performs well academically). Using university students as participants, they performed four laboratory studies in which they manipulated feedback about the performance of individuals within a group and the overall group's performance. They found that the BFLPE was strongest among people "with lower collective self-esteem, an individualistic cultural heritage, or a weaker bond toward a particular social group" (p. 1055). Furthermore, an asymmetry occurred for those who had a strong bond towards their group. These people seemed able to focus on their own performance when they themselves performed well in comparison to the group and to focus on the group's performance when they did poorly compared to the group. The authors concluded that this ability to re-focus depending on one's standing vis-a-vis the group may be protective of self-concept. This finding may be especially important for future intervention studies aimed at reducing the negative consequences of the BFLPE.

Alicke, Zell, and Bloom (2010) conceptualised the BFLPE within what they termed the *local dominance effect*: The tendency of people to rely more heavily on easily accessible local comparison information when self-evaluating rather than on more general comparison data from a larger population. Their participants were university students. Performance feedback for a local group (5 people) and a more general group (10 people) was manipulated. Results indicated that people favoured the local information over that of the larger group. Moreover, within the local groups, those who were told that they had performed well in a low-ability group had significantly higher self-evaluations than participants of (bogus) equal ability who had performed poorly in a high-ability group. Hence, Alicke et al. were able to demonstrate the existence of the BFLPE experimentally.

Directions for Future Research

The BFLPE has come a long way since Davis' frog pond study. Although the BFLPE has been extended to other areas (e.g., Chanal, Marsh, Sarrazin, & Bois, 2005 demonstrated the BFLPE in gymnastics and Trautwein et al., 2006 showed that the BFLPE occurred for academic interest), there are still many questions that remain unanswered. For example, in regard to social comparison processes Marsh et al. (2008) have suggested that BFLPE studies should place more emphasis on comparison strategies used when students select an individual for comparison. Perhaps focussing on how individuals actively regulate their comparisons and how developmental trends affect the BFLPE may prove fruitful. Additional moderators could also be examined. Perhaps the BFLPE may be moderated by different psycho-social constructs (e.g., motivational orientations, academic resilience, sense of

school belonging, personality, mental health). For example, perhaps students who are more neurotic will suffer more from the BFLPE, but those who are more conscientious or open to new experiences will suffer less. Perhaps the BFLPE will be reduced for more resilient students, but be heightened for those who are generally highly anxious or depressed. Further research is needed to elucidate these issues. In addition, it would be useful to extend BFLPE research into other settings such universities and employment settings.

Concluding Comments

Since the Marsh and Parker study of 1984, we have learned a great deal about the BFLPE. We now know that it affects children at all stages of their academic life whether they hail from a collectivist or an individualist culture, or an economically developing or developed nation. The BFLPE is also long-lasting, has effects on other academic outcomes, and is not ameliorated by any of the constructs that have been tested to date. Moreover, there is an element of reflected glory within the BFLPE and the existence of the BFLPE has been demonstrated experimentally. Finally, the BFLPE has been shown to have its theoretical basis in how students compare with their classmates as a whole and in a recent paper it was described, not just as an effect, but as a theory (Seaton et al., 2009). Throughout the years, the BFLPE has been a topical and controversial subject in education circles and much more remains to be done to fully understand and address its effects.

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Znanstveni raziskovalnoempirični prispevek

Analiza izvorov stresa osnovnošolskih učiteljev

Katja Depolli Steiner[*]
Univerza v Ljubljani, Filozofska fakulteta, Oddelek za psihologijo, Ljubljana

Povzetek: Učitelji so pri svojem delu izpostavljeni mnogim različnim izvorom stresa. V pričujoči raziskavi nas je zanimalo, kako se potencialni stresorji pri delu osnovnošolskega učitelja razlikujejo po svoji moči in pogostosti, ter kateri od njih so najpomembnejši izvori stresa učiteljev. V raziskavo smo vključili 242 osnovnošolskih učiteljev iz cele Slovenije. Uporabili smo Lestvico stresa, s katero ugotavljamo moč in pogostost 49 pojavov, ki pri učiteljih lahko delujejo kot potencialni stresorji. Rezultati so pokazali, da so najpomembnejši izvori stresa dejavniki, povezani z učiteljevo delovno obremenjenostjo, vedenjem in motiviranostjo učencev ter šolskim sistemom. Ugotovili smo nekaj manjših razlik v zaznavi stresorjev med spoloma ter med skupinami učiteljev glede na stopnjo, na kateri poučujejo.

Ključne besede: učitelji, stres, osnovne šole

Analysis of primary teacher stress' sources

Katja Depolli Steiner[*]
University of Ljubljana, Faculty of Arts, Department of Psychology, Ljubljana, Slovenia

Abstract: Teachers are subject to many different work stressors. This study focused on differences in intensity and frequency of potential stressors facing primary schoolteachers and set the goal to identify the most important sources of teacher stress in primary school. The study included 242 primary schoolteachers from different parts of Slovenia. We used Stress Inventory that is designed for identification of intensity and frequency of 49 situations that can play the role of teachers' work stressors. Findings showed that the major sources of stress facing teachers are factors related to work overload, factors stemming from pupils' behaviour and motivation and factors related to school system. Results also showed some small differences in perception of stressors in different groups of teachers (by gender and by teaching level).

Keywords: teachers, stress, primary schools

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[*] Naslov / Address: asist. dr. Katja Depolli Steiner, Univerza v Ljubljani, Filozofska fakulteta, Oddelek za psihologijo, Aškerčeva 2, 1000 Ljubljana, Slovenija, e-mail: katja.depolli-steiner@ff.uni-lj.si

Modeli razlage stresa

Ko govorimo o stresu, imamo v mislih telesno in psihološko stanje napora ali napetosti. Izraz stres se uporablja tako v laičnih kot v strokovnih krogih, vendar pa splošno sprejete definicije stresa ni moč najti; po mnogih letih preučevanja stresa so se namreč oblikovali različni pogledi na stres, iz njih pa izhaja cela množica definicij. Z razvojem razumevanja pojava stresa so eden za drugim nastali trije znani modeli, ki z različnih vidikov skušajo pojasniti stres; to so inženirski, medicinski in transakcijski model (Cartwright in Cooper, 1997; Rickert, 1994). Ti trije pogledi na stres so prisotni še danes.

Za *inženirski model* stresa je značilna na dražljaj usmerjena opredelitev stresa: stres vidi kot neko obremenitev (silo), ki prihaja iz zunanjega okolja (Cartwright in Cooper, 1997; Cooper, Dewe in O'Driscoll, 2001; Rickert, 1994). To pojmovanje stresa je analogija tehničnega pojmovanja obremenitve oziroma pritiska in kot tako predpostavlja, da ima vsak posameznik vrojeno kapaciteto za upiranje silam iz okolja (tj. prožnost); kadar je nakopičeni stres močnejši od posameznikove tolerance, se njegovo telesno in duševno delovanje poslabša. Izhajajoč iz tega pogleda se razvije tudi pojmovanje, da stres, kateremu je izpostavljen posameznik, lahko merimo na isti način, kot merimo fizikalni pritisk na katerikoli fizični objekt, na primer na stroj ali most. Zagovorniki inženirskega modela stresa se zato pri preučevanju stresa usmerjajo na značilnosti okolja in skušajo s pomočjo identifikacije stresorjev (tj. stresnih situacij), ki so bili v določenem časovnem obdobju prisotni v posameznikovem življenju, določiti stres, kateremu je ta posameznik izpostavljen; stres je torej vsota vseh stresorjev.

Na začetku dvajsetega stoletja, ko so raziskovalci ugotovili, da obstaja povezava med stresom in boleznijo, so na stres prvič začeli gledati kot na odvisno spremenljivko. Za *medicinski model* stresa je tako značilna na odziv usmerjena opredelitev stresa: stres ni pojmovan kot določen zunanji dražljaj oziroma zunanja situacija, ampak je odziv organizma na ta dražljaj oziroma situacijo (Cartwright in Cooper, 1997; Cooper idr., 2001; Rickert, 1994). V skladu s tem pojmovanjem je stres stanje notranje obremenjenosti organizma. Avtorji, ki zagovarjajo medicinski model, se pri preučevanju stresa usmerjajo na značilnosti posameznikovega funkcioniranja in stres, ki ga doživlja posameznik, skušajo določiti s pomočjo identifikacije pri njem opaznih (telesnih, psiholoških in vedenjskih) stresnih odzivov.

Tudi avtorji, ki zagovarjajo *transakcijski model*, stres pojmujejo kot določeno notranje stanje obremenjenosti, vendar pa poudarjajo, da je to stanje posledica interakcije med določenimi dejavniki iz okolja in mediatorskimi oziroma moderatorskimi dejavniki, kot so različni psihološki dejavniki, npr. osebnostne značilnosti, socialna opora, strategije spoprijemanja s stresom idr. (Cartwright in Cooper, 1997; Cooper idr., 2001; Rickert, 1994). Na stres zaradi njegove splošne prisotnosti ne gledajo kot na pojav, ki je prisoten ali odsoten, temveč ga razlikujejo glede na njegovo intenzivnost in vpliv, ki ga ima na posameznika. Kadarkoli je posameznik soočen z zahtevami ali s priložnostmi, ki od njega zahtevajo neke vrste spremembo, namreč doživi določeno stopnjo stresa. Stres je

potemtakem posledica transakcije med posameznikom in njegovim okoljem. Pri preučevanju stresa se zato zagovorniki transakcijskega modela stresa usmerjajo na tri elemente stresne situacije: značilnosti okolja, značilnosti posameznikovega odzivanja na dražljaje iz okolja in različne s posameznikom povezane spremenljivke, kot so na primer njegove osebnostne lastnosti. Stres, ki ga doživlja posameznik, skušajo določiti s pomočjo identifikacije interakcije med stresorji, katerim je izpostavljen, njegovimi mediatorskimi/moderatorskimi dejavniki in stresnimi odzivi.

Razširjenost in intenzivnost stresa učiteljev

Preučevanje stresa posega na različna področja, usmerjeno je na stres v zasebnem in v poklicnem življenju. Tako nas zanima tudi stres v šoli, torej stres, ki ga doživljajo učenci, in stres, ki ga pri svojem delu doživljajo učitelji. Učiteljski poklic je že dolgo prepoznan kot zelo stresen. Večina raziskav na to sklepa glede na oceno stresnosti poklica, ki jo podajo učitelji. Na tem mestu moram opozoriti, da učiteljeva ocena stresnosti učiteljskega poklica ni nujno enaka intenzivnosti stresa, ki ga sam doživlja pri delu. Četudi učitelj poklic oceni kot zelo stresen, je možno, da sam zaradi različnih mediatorskih dejavnikov (npr. osebnostne lastnosti ali učinkovitost pri spoprijemanju s stresom) doživlja le zmeren ali nizek stres.

Za evropske in severnoameriške učitelje največkrat zasledimo podatek, da jih približno ena četrtina do ena tretjina svoje delo ocenjuje kot stresno ali izjemno stresno (na primer Borg in Riding, 1991, 1993; Fontana in Abouserie, 1993; Pithers in Fogarty, 1995). Podobno stanje je bilo ob prelomu tisočletja ugotovljeno tudi pri naših osnovnošolskih učiteljih predmetnega pouka, in sicer je v letu 1999 in v letu 2002 svoje delo kot zelo ali izjemno stresno ocenila ena tretjina učiteljev (Depolli, 1999, 2002). Najnovejša obsežna raziskava stresa slovenskih osnovnošolskih in srednješolskih učiteljev, ki je bila v letu 2008 izvedena po naročilu Sindikata vzgoje, izobraževanja, znanosti in kulture Slovenije (SVIZ), pa je pokazala še precej bolj neugodno stanje, in sicer njen avtor ugotavlja, da dobre štiri petine osnovnošolskih in srednješolskih učiteljev svoj poklic doživlja kot močno oziroma izjemno stresen (Slivar, 2009). To kaže, da se je pri naših osnovnošolskih učiteljih v manj kot desetih letih zaznava stresnosti učiteljskega poklica v veliki meri spremenila v negativno smer. Za slovenske srednješolske učitelje imamo podatke o tem, kako doživljajo svoje delo, iz leta 2001: ena tretjina učiteljev je učiteljski poklic ocenila kot zmerno stresen, dobra polovica kot močno stresen in več kot ena desetina kot izjemno stresen (Slivar, 2003).

Kaj pa se pokaže, ko učitelje povprašamo, kako intenziven je stres, ki ga doživljajo, oziroma ko skušamo stopnjo doživljanega stresa določiti z merski instrumenti? Ugotovitve omenjenih raziskav s preloma tisočletja so sledeče: v letu 1999 sta dve petini osnovnošolskih učiteljev doživljali zmeren in slaba desetina učiteljev visok stres, v letu 2002 pa je polovica učiteljev doživljala zmeren stres in približno dvajsetina učiteljev visok stres (Depolli, 1999, 2002). Ugotovitve novejše SVIZ-ove študije so bolj

zaskrbljujoče: skoraj polovica učiteljev je po lastnem poročanju pri delu doživljala zmeren stres, dobri dve petini učiteljev pa sta doživljali močan ali izjemno močan stres (Slivar, 2009). Pri gimnazijskih učiteljih je bilo stanje v letu 2001 sledeče: dobra polovica jih je doživljala zmeren stres, tri desetine močan stres, slaba dvajsetina pa izjemno visok stres (Slivar, 2003).

Izvori in mediatorji stresa učiteljev

Največji del raziskav stresa učiteljev se usmerja na identifikacijo njegovih izvorov, t. i. stresorjev. Te lahko razdelimo na dve večji skupini, in sicer na dejavnike, ki so vezani na razredni kontekst, ter na dejavnike, ki so vezani na šolski kontekst.

Kot so pokazale številne tuje raziskave (npr. Al-Mohannadi in Capel, 2007; Antoniou, Polychroni in Vlachakis, 2006; Borg in Riding, 1993; Boyle, Borg, Falzon in Baglioni, 1995; Brown, Ralph in Brember, 2002; Golaszewski in Duquette, 1984; Gordon, 2002; Jin, Yeung, Tang in Low, 2007; Ko, Chan, Lai in Boey, 2000; Kyriacou in Sutcliffe, 1978; Milstein, Manthei, Gilmore, Tuck in Adair, 1996) velik del učiteljevega stresa, vezanega na razredni kontekst, izvira iz njegovega stika z učenci, še zlasti iz njegove zaznave nedisciplineranosti učencev. Učitelje običajno izčrpavajo blažje oblike motečega vedenja, ki se pogosto ponavljajo, na primer stalen hrup, pomanjkljiva vljudnost učencev ali pa njihov splošen nezainteresiran, slab odnos do dela. Enake ugotovitve navajajo tudi naši avtorji (npr. Depolli, 1999, 2002; Glavač, 1999; Horvat, 2001; Kofjač, 2005; Rostohar, 2002; Slivar, 2003, 2009; Zdešar, 2007). Drugo skupino stresorjev, vezanih na razredni kontekst, predstavljajo dejavniki, ki izhajajo iz samega dela učitelja, še zlasti kvantitativna delovna preobremenjenost in časovni pritiski (npr. Al-Mohannadi in Capel, 2007; Borg in Riding, 1991; Boyle idr., 1995; Brown idr., 2002; Chaplain, 2008; Jin idr., 2007; Ko idr., 2000; Kyriacou in Sutcliffe, 1978; Manthei idr., 1996). Preobremenjenost se največkrat nanaša na preveliko količino administrativnega dela in številčno prevelike razrede, časovni pritisk pa na premalo časa za delo s posameznimi učenci in na pomanjkanje prostega časa (ker ga učitelji velikokrat porabijo za službene obveznosti). Samo delo je za učitelje stresno tudi takrat, ko se uvajajo spremembe na področju šolstva (npr. Antoniou idr., 2006; Brown idr., 2002; Travers in Cooper, 1990, cit. v Dunham, 1992).

V skupini dejavnikov, vezanih na šolski kontekst, učiteljem pomemben izvor stresa predstavljajo predvsem njihovi medosebni odnosi izven razreda, to so odnosi s sodelavci in drugimi strokovnimi delavci na šoli, z vodstvom šole ter s starši učencev (npr. Borg in Riding, 1991; Boyle idr., 1995; Brown idr., 2002; Jin idr., 2007; Ko idr., 2000; Kyriacou in Sutcliffe, 1978; Litt in Turk, 1985). Nadalje učiteljem izvor stresa lahko predstavlja njihova vloga v organizaciji, na primer konfliktnost vlog (Litt in Turk, 1985), zadolžitve, ki niso povezane s poučevanjem (Jin idr., 2007), in odgovornost za učence oziroma za njihovo prihodnost (Milstein idr., 1984). Tudi razvoj kariere oziroma status poklica je lahko vir stresorjev. Učitelji tako pogosto poročajo, da je njihov poklic

premalo cenjen v družbi, imajo občutek, da jih vlada premalo podpira, ter menijo, da so za svoje delo preslabo plačani in nagrajeni (npr. Antoniou idr., 2006; Al-Mohannadi in Capel, 2007; Jin idr., 2007; Ko idr., 2000; Manthei idr., 1996; Travers in Cooper, 1990, cit. v Dunham, 1992).

V vlogi mediatorjev stresa učiteljev nastopajo različni dejavniki. Prvi tak dejavnik je spol. Raziskave stresa kažejo, da je za učiteljice značilen višji doživljani stres (npr. Chaplain, 2008). Poleg tega učiteljice določene stresorje doživljajo bolj negativno kot njihovi moški kolegi (npr. Antoniou idr., 2006; Slivar, 2003). Naslednji tak dejavnik je delovni staž učiteljev, in sicer neizkušeni učitelji v primerjavi s svojimi izkušenimi sodelavci doživljajo višjo stopnjo stresa (npr. Yagil, 1998; Zdešar, 2007). Stres je povezan tudi s šolskim programom in sicer višji stres doživljajo srednješolski učitelji (npr. Jepson in Forrest, 2006). Pomembno skupino mediatorskih dejavnikov predstavljajo osebnostne lastnosti, in sicer so z doživljanjem višjega stresa povezani psihoticizem, nevroticizem in introvertnost (npr. Fontana in Abouserie, 1993). Višji stres je povezan tudi z vzorcem vedenja tipa A (npr. Jepson in Forrest, 2006; Zurlo, Pes in Cooper, 2007), z manjšo notranjo motivacijo za poučevanje (npr. Davis in Wilson, 2000; Levesque, Blais in Hess, 2004) in s slabo socialno oporo na delovnem mestu (npr. Griffith, Steptoe in Cropley, 1999; Hodge, Jupp in Taylor, 1994; Littrel in Billingsley, 1994; Russell, Altmaier in Van Velzen, 1987).

Namen raziskave

V preučevanju izvorov stresa pri učiteljih je značilna uporaba samoocenjevalnih lestvic, sestavljenih iz manjšega ali večjega števila postavk, ki predstavljajo izbor potencialnih delovnih stresorjev. Učitelji dobijo navodilo, naj podane stresorje glede na določen kriterij ocenijo na večstopenjski ocenjevalni lestvici. Običajno je kriterij, po katerem učitelji ocenjujejo stresorje, njihova moč, le redkokdaj pa njihova prisotnost (pogostost pojavljanja).

V pričujoči raziskavi, ki predstavlja del moje širše raziskave stresa in izgorelosti učiteljev, sem se usmerila na analizo izvorov stresa pri naših osnovnošolskih učiteljih. Take analize so bile seveda že opravljene, vendar se raziskave običajno usmerijo le na omejen obseg potencialnih stresorjev (npr. le na motiviranost in vedenje učencev), sama pa sem se odločila, da pri analizi izvorov stresa čim bolj zaobjamem učiteljevo delovno situacijo. Poleg tega sem se odločila za hkratno preučevanje stresorjev z dveh vidikov, tj. z vidika njihove moči in njihove pogostosti. Tak pristop je v preučevanju stresa neobičajen, še zlasti v našem prostoru, vendar pa nam omogoča, da si o stresorjih ustvarimo jasnejšo sliko kot zgolj na podlagi ene same njihove lastnosti. Glede na to, da se stresorji med seboj razlikujejo tako po svoji moči kot tudi po svoji prisotnosti, enostransko preučevanje izvorov stresa lahko izkrivi sliko o pomembnosti posameznih izvorov stresa. Stresorji so seveda zelo raznovrstni, segajo od t. i. mikrostresorjev, tj. situacij, ki so le blago obremenjujoče, pa do zelo močnih stresorjev, ki posameznika intenzivno obreme-

nijo, npr. življenjskih dogodkov in prelomnic ali travmatičnih doživetij. Zagotovo nas majhna frustracija ne bo tako obremenila kot neko travmatično doživetje, vendar pa se pomembnost mikrostresorjev skriva v njihovi številčnosti - več majhnih frustracij skupaj lahko povzroči močan stres. To razmišljanje je empirično podprto, in sicer so raziskave pokazale, da nakopičen vpliv mikrostresorjev na posameznikovo telesno in psihično počutje (ter posledično tudi na njegovo zdravje) vpliva celo bolj negativno kot pomembni življenjski dogodki in prelomnice (Bernstein, Clarke-Stewart, Roy in Wickens, 1997; Brehm, Kassin in Fein, 1999; Landy, 1987; Taylor, 1991). Ker tudi stresorji, ki izhajajo iz učiteljevega dela, stres učiteljev ustvarjajo tako s svojim pojavljanjem, kot tudi s svojo močjo, torej ni nujno, da se bodo kot najpomembnejši izvori stresa pokazali tisti stresorji, ki so ocenjeni kot najbolj močni, ali tisti, ki so zaznani kot najbolj pogosti.

Predvidevam, da se bodo ocene moči in pogostosti posameznih stresorjev med seboj razlikovale ter da se bodo preučevani stresorji pokazali kot različno pomembni izvori stresa. Glede na ugotovitve drugih raziskav pričakujem, da se bodo kot najpomembnejši izvori stresa učiteljev pokazali tisti stresorji, ki so povezani z nemotiviranostjo in nedisciplinirano stjo učencev ter učiteljevo delovno preobremenjenostjo. Odločila sem se tudi za preverjanje razlik med učitelji glede na spol in glede na stopnjo, na kateri poučujejo. Glede na ugotovitve drugih raziskav predvidevam, da bodo stresorje bolj negativno zaznale učiteljice ter učitelji, ki poučujejo na višji stopnji.

Metoda

Udeleženci

V raziskavo je bilo zajetih 242 učiteljev (84 % žensk, 16 % moških), in sicer od tega 57 % učiteljev iz mestnega, 43 % pa iz podeželskega okolja. Skoraj vsi učitelji (96 %) so bili v času izvedbe raziskave zaposleni za polni delovni čas. Večina učiteljev je poučevala v rednih oddelkih, in sicer 39 % na nižji ter 48 % na višji stopnji, 8 % učiteljev je poučevalo v oddelkih podaljšanega bivanja, 2 % učiteljev sta na šoli namesto poučevanja opravljala druge delovne naloge, 3 % učiteljev pa niso navedli podatka o stopnji, na kateri poučujejo.

Pripomočki

Za ugotavljanje stresa sem na podlagi svojih dveh predhodnih raziskav stresa pri učiteljih (Depolli, 1999, 2002) skonstruirala Lestvico stresa. Sestavljajo jo kratki opisi pojavov, ki pri učitelju lahko delujejo kot potencialni stresorji. V lestvico vključeni pojavi se nanašajo na različna področja učiteljevega dela: delo z učenci, odnose s starši, odnose s sodelavci in vodstvom šole, šolski sistem, delovne pogoje in delovno obremenjenost. Ta področja so opredeljena z 49 postavkami, ki se razvrščajo na sedem faktorjev:

1. Odnos in vedenje staršev (koeficient notranje konsistentnosti: α = ,87)
2. Vedenje in motiviranost učencev (α = ,86)
3. Šolski sistem (α = ,87)
4. Učiteljeva delovna obremenjenost (α = ,84)
5. Odnos in vedenje vodstva šole (α = ,86)
6. Ekološki pogoji in opremljenost šole (α = ,79)
7. Odnosi s sodelavci (α = ,88)

Učitelji so vsako postavko glede na svoje doživljanje ocenili na petstopenjski lestvici Likertovega tipa: prvič glede na njegovo moč na kontinuumu od "*pojav me sploh ne vznemirja*" (ocena 0) do "*pojav me zelo vznemirja*" (ocena 4), drugič pa glede na njegovo pogostost na kontinuumu od "*s pojavom se nisem srečal*" (ocena 0) do "*s pojavom se srečujem zelo pogosto*" (ocena 4).

Z Lestvico stresa lahko pridobimo več podatkov:

a) Moč stresorjev: Za vsak faktor izračunamo povprečno oceno moči vseh vanj vključenih stresorjev; razpon ocene je od 0 (*ni stresen*) do 4 (*zelo stresen*).
b) Prisotnost stresorjev: Za vsak faktor izračunamo povprečno oceno pogostosti vseh vanj vključenih stresorjev; razpon ocene je od 0 (*ni prisoten*) do 4 (*zelo pogosto prisoten*).
c) Pomembnost stresorjev: Uporabimo kombinirane ocene (tj. zmnožek ocene moči in ocene pogostosti), ki jih predhodno transformiramo (korenimo). Za vsak faktor izračunamo povprečno kombinirano oceno vseh vanj vključenih stresorjev; razpon ocene je od 0 (*nepomemben stresor*) do 4 (*zelo pomemben stresor*).

Postopek

Raziskava je bila izvedena v februarju in marcu leta 2005, na 14 slovenskih osnovnih šolah. Pri izbiri šol sem upoštevala tudi urbanost okolja, in sicer je bilo pet udeleženih šol iz mestnega, devet pa iz podeželskega okolja. Po dogovoru z vodstvom in ob sodelovanju šolske svetovalne službe udeleženih osnovnih šol je bil učiteljem predstavljen namen raziskave, skupaj s prošnjo, da v njej sodelujejo. Učiteljem je bilo zagotovljeno, da je njihovo sodelovanje anonimno, ter da bodo dobljeni podatki uporabljeni samo v raziskovalne namene. Na vseh šolah so predstavitev namena raziskave ter razdeljevanje in zbiranje vprašalnikov izpeljale svetovalne delavke. Učitelji so vprašalnike izpolnjevali doma in jih v dogovorjenem roku v zaprti kuverti vrnili svetovalni delavki na šoli.

V času izvedbe raziskave sta na udeleženih šolah lahko potekala še oba osnovnošolska programa, torej program osemletke in program devetletke. Pri programu osemletke sem kot nižjo stopnjo opredelila t. i. razredno stopnjo (predmetne stopnje takrat ni bilo več), pri programu devetletke pa sem 1. do 5. razred opredelila kot nižjo

stopnjo ter 6. do 9. razred kot višjo stopnjo (5. razred sem v nižjo stopnjo uvrstila zato, ker so mi na vseh udeleženih šolah posredovali podatek, da pri njih v 5. razredu skorajda izključno poučujejo učitelji razrednega pouka).

Pri obdelavi podatkov sem za opis stresorjev uporabila mere deskriptivne statistike, za preverjanje pomembnosti razlik med preučevanimi skupinami udeležencev pa *t*-test (v primeru iskanja razlik med dvema skupinama) oziroma enosmerno analizo variance (v primeru iskanja razlik med tremi skupinami).

Rezultati

Najprej poglejmo, kakšne so ocene moči, ocene pogostosti ter kombinirane ocene za posamezne stresogene faktorje. V tabeli 1 prikazujem povprečne ocene vseh udeležencev.

Tabela 1. *Povprečne ocene posameznih stresogenih faktorjev (ocena moči, ocena pogostosti in kombinirana ocena)*

	Ocena moči		Ocena pogostosti		Kombinirana ocena	
	M	*SD*	*M*	*SD*	*M*	*SD*
Odnos in vedenje staršev	2,77	0,83	1,31	0,71	1,87	0,69
Vedenje in motiviranost učencev	2,98	0,73	2,00	0,70	2,44	0,61
Šolski sistem	2,57	0,94	2,11	0,84	2,39	0,81
Učiteljeva delovna obremenjenost	2,34	0,85	2,41	0,79	2,47	0,75
Odnos in vedenje vodstva šole	2,22	1,15	0,89	0,83	1,21	0,95
Ekološki pogoji in opremljenost šole	1,95	1,04	1,50	0,96	1,79	0,92
Odnosi s sodelavci	2,34	1,06	1,29	1,00	1,61	1,01

Iz tabele 1 je razvidno, da se preučevani stresogeni faktorji med seboj razlikujejo tako glede na grožnjo, ki jo predstavljajo učiteljem (dimenzija moči), kot tudi glede na svojo prisotnost med šolskim letom (dimenzija pogostosti). Kot najmočnejši stresorji so se pokazali faktorji vedenje in motiviranost učencev, odnos in vedenje staršev ter šolski sistem, kot najpogosteje prisotni pa faktorji učiteljeva delovna obremenjenost, šolski sistem ter vedenje in motiviranost učencev. Ker pa stresorji na učiteljevo doživljanje stresa delujejo tako preko svoje moči kot tudi preko svoje pogostosti, nam sliko o pomembnosti stresogenih faktorjev daje kombinirana ocena, v kateri sta ti dve njihovi

lastnosti združeni. Kot najpomembnejši izvori stresa v šolski situaciji se kažejo trije stresogeni faktorji, ki imajo najvišje povprečne kombinirane ocene, in sicer so to faktorji učiteljeva delovna obremenjenost, vedenje in motiviranost učencev ter šolski sistem. Povprečna ocena moči je pri vseh treh relativno visoka, nahaja se v zgornji polovici uporabljene ocenjevalne lestvice, kar kaže, da povprečnemu učitelju vsi predstavljajo vsaj zmerno grožnjo. Povprečna ocena pogostosti pa je takoj nad sredino lestvice in kaže na to, da so prisotni občasno. Njihove povprečne kombinirane ocene so sicer skoraj identične, a natančnejši pregled pokaže, da imajo različno ozadje: k visoki stresnosti faktorja učiteljeva delovna obremenjenost v enaki meri prispevata moč in pogostost, pri faktorju vedenje in motiviranost učencev ter pri faktorju šolski sistem pa je njuna stresnost v nekoliko večji meri izraz moči kot pogostosti. Ostali štirje faktorji (odnos in vedenje staršev, ekološki pogoji in opremljenost šole, odnosi s sodelavci ter odnos in vedenje vodstva šole) so se pokazali kot manj pomembni izvori stresa, a le na račun svoje redkejše prisotnosti; tudi njihove povprečne ocene moči se namreč nahajajo v zgornji polovici uporabljene ocenjevalne lestvice, torej povprečnemu učitelju predstavljajo vsaj zmerno grožnjo, njihove povprečne ocena pogostosti pa so relativno nizke, in sicer se nahajajo v spodnji polovici uporabljene ocenjevalne lestvice, kar kaže na to, da so v šolskem letu le redko prisotni.

Poglejmo si, kaj nam o zaznavanju posameznih stresogenih faktorjev povedo primerjave med izbranimi skupinami učiteljev. V vseh primerjavah sem uporabila kombinirane ocene moči in pogostosti.

Tabela 2. *Pomembnost razlik med spoloma v doživljanju stresogenih faktorjev*

Faktor	Spol	*N*	*M*	*SD*	*df*	*t*	*P*
Odnos in vedenje staršev	Ženske	203	1,93	0,68	240	3,52	,00
	Moški	39	1,52	0,60			
Vedenje in motiviranost učencev	Ženske	203	2,46	0,61	240	1,52	,13
	Moški	39	2,30	0,56			
Šolski sistem	Ženske	203	2,43	0,81	240	1,49	,14
	Moški	39	2,22	0,81			
Učiteljeva delovna obremenjenost	Ženske	203	2,53	0,74	240	3,09	,00
	Moški	39	2,14	0,76			
Odnos in vedenje vodstva šole	Ženske	203	1,23	0,95	240	0,55	,58
	Moški	39	1,13	0,99			
Ekološki pogoji in opremljenost šole	Ženske	203	1,82	0,92	240	1,28	,20
	Moški	39	1,62	0,87			
Odnosi s sodelavci	Ženske	203	1,65	1,00	240	1,58	,12
	Moški	39	1,38	1,06			

Opombe: Na vseh faktorjih so bili izpolnjeni pogoji za uporabo parametričnih testov, zato sem za ugotavljanje razlik med spoloma uporabila *t*-test.

Tabela 3. *Pomembnost razlik med učitelji glede na stopnjo poučevanja v doživljanju stresogenih faktorjev*

Faktor	Stopnja poučevanja	*N*	*M*	*SD*	df_1	df_2	*F*	*p*
Odnos in vedenje staršev	Nižja stopnja	95	1,94	0,68	2	228	1,01	,36
	Višja stopnja	117	1,80	0,69				
	Odd. podalj. biv.	19	1,85	0,58				
Vedenje in motiviranost učencev	Nižja stopnja	95	2,40	0,53	2	228	3,38	,04
	Višja stopnja	117	2,42	0,64				
	Odd. podalj. biv.	19	2,78	0,50				
Šolski Sistem	Nižja stopnja	95	2,34	0,81	2	228	1,75	,18
	Višja stopnja	117	2,47	0,78				
	Odd. podalj. biv.	19	2,14	0,91				
Učiteljeva delovna obremenjenost	Nižja stopnja	95	2,51	0,72	2	228	2,44	,09
	Višja stopnja	117	2,51	0,79				
	Odd. podalj. biv.	19	2,10	0,76				
Odnos in vedenje vodstva šole	Nižja stopnja	95	1,14	0,99	2	228	1,37	,26
	Višja stopnja	117	1,27	0,93				
	Odd. podalj. biv.	19	0,90	0,84				
Ekološki pogoji in opremljenost šole	Nižja stopnja	95	1,84	0,90	2	228	0,65	,52
	Višja stopnja	117	1,77	0,90				
	Odd. podalj. biv.	19	1,58	0,99				
Odnosi s sodelavci	Nižja stopnja	95	1,74	1,03	2	228	3,58	,03
	Višja stopnja	117	1,55	1,00				
	Odd. podalj. biv.	19	1,08	0,78				

Opombe: Na vseh faktorjih so bili izpolnjeni pogoji za uporabo parametričnih testov, zato sem za ugotavljanje razlik med skupinami uporabila enosmerno analizo variance.

Za vse stresogene faktorje velja, da jih učiteljice doživljajo bolj negativno kot učitelji (tabela 2). Opažene razlike med spoloma pa so majhne in statistična

analiza je pokazala, da so pomembne le pri faktorju odnos in vedenje staršev ter pri faktorju učiteljeva delovna obremenjenost.

Pokazale so se tudi razlike med skupinami učiteljev glede na stopnjo poučevanja. Učitelji, ki poučujejo v oddelkih podaljšanega bivanja, večino stresogenih faktorjev doživljajo manj negativno kot njihovi kolegi, ki poučujejo na nižji ali višji stopnji, izjema je le faktor vedenje in motiviranost učencev, ki ga ti učitelji doživljajo bolj negativno (tabela 3). Razlike med skupinami so statistično pomembne na tem faktorju in na faktorju odnosi s sodelavci - slednji so najmanj stresogeni za učitelje v oddelkih podaljšanega bivanja.

Razprava

Cilj pričujoče raziskave je bil analizirati izvore stresa pri osnovnošolskih učiteljih. Preverjala sem, kakšni sta moč in pogostost stresorjev, ki so prisotni pri učiteljevem delu, oziroma kako se stresorji v teh dveh lastnostih med seboj razlikujejo. Zanimalo me je, kateri stresorji so zaradi kombinacije svoje moči in pogostosti najpomembnejši izvori stresa učiteljev. Učitelje sem med seboj primerjala glede na spol ter glede na stopnjo, na kateri poučujejo.

Moje predvidevanje, da se stresogeni faktorji glede na pomembnost med seboj razlikujejo, se je potrdilo, in sicer sta se kot najpomembnejša izvora stresa pokazala faktor učiteljeva delovna obremenjenost ter faktor vedenje in motiviranost učencev. Ta ugotovitev je pričakovana. Presenetila pa me je visoka uvrstitev faktorja šolski sistem; sama sem namreč pričakovala, da bo ta faktor precej nižje na lestvici pomembnosti, tako pa je (sicer z majhno razliko) prisoten celo pogosteje kot faktor vedenje in motiviranost učencev in ima višjo moč kot faktor učiteljeva delovna obremenjenost. Zanimivo je tudi to, da sta oba stresogena faktorja, povezana z odnosi v okviru širše delovne organizacije (odnosi s sodelavci ter odnos in vedenje vodstva šole), na repu vseh treh razvrstitev. Za oba velja, da takrat, ko sta prisotna, učitelje zmerno vznemirjata, vendar pa sta prisotna relativno redko. To seveda še ne pomeni, da drugi učitelji in vodstvo šole učiteljem nudijo ustrezno socialno oporo, kaže pa, da sami po sebi niso tako pomemben vir stresa, kot bi pričakovali na podlagi ugotovitev drugih študij.

Kot najpomembnejši stresogeni faktor se torej kaže faktor *učiteljeva delovna obremenjenost*, ki ima najvišjo kombinirano oceno. Z njim se učitelji precej pogosto srečujejo in ga doživljajo kot precej močnega. To kaže, da se mnogi učitelji srečujejo z delovnimi nalogami, ki so zanje zelo zahtevne s strokovnega vidika (gre za kvalitativno obremenjenost) in/ali zelo časovno obsežne (kvantitativna obremenjenost). Ugotovljena pomembnost tega stresogenega faktorja je v skladu z ugotovitvami drugih študij (npr. Al-Mohannadi in Capel, 2007; Borg in Riding, 1991; Boyle idr., 1995; Brown idr., 2002; Chaplain, 2008; Jin idr., 2007; Ko idr., 2000; Kyriacou in Sutcliffe, 1978; Manthei idr., 1996).

Podobna slika se kaže pri faktorju *vedenje in motiviranost učencev*. Ta faktor ima celo najvišjo povprečno moč med vsemi preučevanimi stresogenimi faktorji, je pa nekoliko manj prisoten kot faktor učiteljeva delovna obremenjenost. Ugotovitev, da učitelji kot najbolj močne stresorje doživljajo nedisciplineranost in nemotiviranost učencev, ni nepričakovana; podobne ugotovitve prinašajo izsledki naših in tujih študij (na primer Antoniou idr., 2006; Brown in drugi, 2002; Depolli, 2002; Gordon, 2002; Ko idr., 2000; Kofjač, 2005; Slivar, 2009). Sama razlog za visoko moč teh dveh dejavnikov vidim predvsem v učiteljevi odgovornosti, da za učence ustvari čim boljše pogoje, v katerih jim bo omogočeno pridobivanje z učnim načrtom predvidenega znanja. Nedisciplinirano vedenje namreč deluje kot motnja ali celo prekinitev normalnega, načrtovanega poteka dela v razredu in kot tako za učitelja predstavlja oviro na poti do zastavljenega cilja. Podobno bi lahko veljalo tudi za nemotiviranost učencev; če so učenci nemotivirani za (šolsko) delo, učitelj zagotovo potroši več časa in energije, da doseže zastavljeni cilj. Zaradi občutka odgovornosti do učencev bo učitelj to motnjo zelo verjetno ocenil kot grožnjo. Predvidevam pa še, da učitelji stresorje v okviru tega faktorja v veliki meri zaznavajo kot nenadzorljive oziroma da krivdo za nezaželeno (problematično) vedenje učencev (pa naj si bo to njihova nemotiviranost ali nedisciplineranost) pripisujejo dejavnikom izven sebe, predvsem staršem in samim učencem. Neposredne empirične evidence za moje predvidevanje nimam, saj raziskave, v kateri bi učitelje spraševali tudi po nadzorljivosti stresorjev, v dostopni literaturi nisem zasledila. Posredno evidenco pa mi dajejo izsledki Millerja, ki ugotavlja, da je tudi za učitelje značilna osnovna napaka atribucije: vzroke za uspeh raje pripisujejo sebi, vzroke za neuspeh pa drugim. Na splošno so učitelji v njegovi študiji vzroke za vedenje svojih učencev v sebi videli le v polovici primerov (Miller, 1995).

Zelo verjetno pa je visoka moč faktorja vedenje in motiviranost učencev povezana tudi z razpoložljivostjo ustreznih pogojev za vodenje učencev. S tem mislim predvsem na učiteljevo avtoriteto in na ustrezne ukrepe za vzpostavljanje in zagotavljanje discipline. Učitelju pri delu v razredu avtoriteta ni podarjena, ampak mora v njeno vzpostavljanje vložiti veliko dela in truda. Menim, da je pri zmanjševanju disciplinskih problemov in povečevanju motiviranosti učencev v naših šolah prispevek staršev ključnega pomena, saj so prav oni tisti, ki imajo za otroka največjo avtoriteto in moč vplivanja nanj. Otroku s svojim odzivom na njegovo vedenje v razredu pokažejo, kakšna je sprejemljivost tega vedenja; če se na neprimerno vedenje ustrezno odzovejo, ga bo otrok spremenil, če pa se nanj ne odzovejo ali pa je njihov odziv celo odobravanje tega vedenja, bo otrok pri svojem vedenju verjetno vztrajal še naprej. Starši bi morali stalno sodelovati z učiteljem, spremljati otrokovo vedenje in usklajevati svoje odzive z učiteljevimi; na ta način bi učitelju pomagali vzpostavljati potrebno avtoriteto v razredu.

Tudi za faktor *šolski sistem*, ki je na tretjem mestu razporeditve glede na kombinirano oceno, je značilno, da ga učitelji, kadar se z njimi srečajo (to je precej po-

gosto), doživljajo kot močnega. Ta faktor dejansko izraža različne zunanje pritiske na učitelja oziroma zmanjševanje njegove avtonomije in podcenjevanje njegovega dela in videti je, da učitelje tak odnos do njihovega dela zelo vznemirja. Če to združim z ugotovitvijo, da se učitelji čutijo močno delovno obremenjene, lahko sklepam, da je v očeh učiteljev njihov poklic hkrati visoko zahteven in premalo cenjen, kar pa me napeljuje k nadaljnjemu predvidevanju, da učitelji pri svojem delu zelo verjetno občutijo pomanjkanje recipročnosti, in sicer tako medosebnem nivoju (neprimerno vedenje učencev lahko zaznavajo kot nepriznavanje svojega truda) kot tudi na organizacijskem nivoju (prenizka plača je izraz odnosa, ki ga ima do učitelja njegov delodajalec, tj. šola oziroma ministrstva za šolstvo).

Faktorji *odnos in vedenje staršev*, *ekološki pogoji in opremljenost šole*, *odnosi s sodelavci* ter *odnos in vedenje vodstva šole* imajo povprečne ocene moči, ki kažejo, da so vsaj zmerno močni, povprečne ocene njihove pogostosti pa so relativno nizke (nahajajo se v spodnji polovici uporabljene ocenjevalne lestvice), kar pomeni, da so v šolskem letu le redko prisotni. V primerjavi s faktorji učiteljeva delovna obremenjenost, vedenje in motiviranost učencev ter šolski sistem so torej manj pomembni izvori stresa. Med seboj se najbolj razlikujejo v povprečni moči, in sicer ima najvišjo povprečno moč stresogeni faktor odnos in vedenje staršev (je na drugem mestu razporeditve po moči, tesno za faktorjem vedenje in motiviranost učencev). Tudi moč tega stresogenega faktorja lahko povežem z zgornjim razmišljanjem o avtoriteti učitelja, in sicer se mi zdi smiselna razlaga, da starši, ki s svojim odnosom in vedenjem posegajo v učiteljevo avtonomijo, učitelja s tem dodatno ovirajo pri vzpostavljanju avtoritete v razredu, zato je razumljivo, da večino učiteljev tudi ta stresogeni faktor zelo vznemirja.

Pomembna je tudi ugotovitev, da prav nobeden od stresogenih faktorjev nima tako nizke povprečne ocene moči, da bi zanj lahko dejali, da je mikrostresor. Torej prav vsi preučevani potencialni stresorji takrat, ko so prisotni, pri učiteljih povzročijo vsaj zmerno razburjenje. Na srečo so nekateri med njimi relativno redki.

Preverila sem obstoj morebitnih razlik v zaznavanju stresorjev med učiteljicami in njihovimi moškimi kolegi. Ugotovitev, da učiteljice stresogena faktorja vedenje in motiviranost učencev ter učiteljeva delovna obremenjenost zaznavajo kot bolj stresne kot jih zaznavajo učitelji, je v skladu z ugotovitvami drugih študij (na primer Antoniou idr., 2006; Slivar, 2003). Sklepam pa, da so opažene razlike najverjetneje izraz posledica tega, da se, kot menita Crane in Iwanicki (1986, cit. v Epanchin, Townsend in Stoddard, 1994), ženske pod vplivom družbe socializirajo za vlogo vzgajanja, kar bi lahko pomenilo, da jih zato ovire pri njihovem delu bolj prizadenejo kot njihove moške kolege. To idejo lahko povežem z ugotovitvijo Jaoula in Kovessa (2004), da je delež tistih, ki se čutijo poklicane za učiteljski poklic, pri učiteljicah pomembno večji kot pri učiteljih (tj. dve tretjini učiteljic proti dobri polovici učiteljev), iz česar lahko sklepam, da imajo učiteljice bolj izražen čut moralne odgovornosti do učencev in zato bolj negativno doživljajo njihovo nemotiviranost

in nedisciplinirano (ker to ovira njihovo delo z učenci) ter si naložijo več delovnih obveznosti oziroma za delo za šolo porabijo več časa kot učitelji (ker želijo svoje delo zares dobro izpeljati).

Zanimalo me je še, ali se v zaznavanju stresorjev med seboj razlikujejo skupine učiteljev glede na stopnjo, na kateri poučujejo. Razlike so se pokazale le pri dveh stresogenih faktorjih, tj. pri vedenju in motiviranosti učencev ter pri odnosih s sodelavci, in sicer se učitelji v rednih oddelkih pomembno razlikujejo od učiteljev v oddelkih podaljšanega bivanja. Menim, da je do teh razlik prišlo zaradi različnih pogojev, s katerimi pri svojem delu srečujejo učitelji v rednih oddelkih in učitelji v oddelkih podaljšanega bivanja. Zelo smiselna se mi zdi razlaga, da imajo učitelji v oddelkih podaljšanega bivanja v primerjavi z učitelji v rednih oddelkih: (a) pri učencih že a priori manjšo avtoriteto (zaradi drugačne dinamike dela) in se zato pogosteje srečujejo s stresorji v okviru faktorja vedenje in motiviranost učencev, ter (b) manj možnosti za stike z drugimi učitelji (saj so prosti v času, ko so drugi učitelji v razredu oziroma ravno obratno) in so zato manj pogosto izpostavljeni stresorjem v okviru faktorja odnosi s sodelavci.

Vsekakor pa moram opozoriti, da so tako razlike med spoloma kot tudi razlike med skupinami učiteljev glede na stopnjo poučevanja majhne in jim zato ne smemo pripisovati prevelikega pomena. Pri razlikah med spoloma je treba opozoriti tudi na majhno število moških udeležencev (kar je seveda odsev razmerja med spoloma v učiteljskem poklicu).

Zaključek

Zaključim lahko, da so učitelji pri svojem delu izpostavljeni delovanju mnogih stresorjev ter da se ti izvori stresa med seboj razlikujejo tako po svoji moči kot tudi po svoji pogostosti. Glede na njihovo moč med njimi ne najdemo nobenega mikrostresorja, na srečo pa so nekateri od njih relativno redko prisotni, kar zmanjša njihov prispevek k stresu učiteljev.

Potrdilo se je, da z uporabo merskih instrumentov, ki ugotavljajo le moč oziroma le pogostost stresorjev, izgubimo velik del informacij o teh stresorjih, zato je tudi v prihodnjih raziskavah stresa smiselno hkratno preverjanje moči in pogostosti potencialnih stresorjev.

Kako lahko pomagamo učiteljem? Enostavne rešitve seveda ni. Menim, da bi se morali problema stresa lotiti sistematično, preko več korakov. Prvi korak je odstranitev ali zmanjšanje potencialnih dejavnikov, ki povzročajo stres. Predlagam, da pri načrtovanju ukrepov v tem koraku izhajamo iz ugotovitve, da sta najpomembnejša povzročitelja stresa učiteljev stresogena faktorja učiteljeva delovna obremenjenost ter vedenje in motiviranost učencev. Potreben je resen razmislek o tem, katere stresorje v okviru teh dveh faktorjev lahko odpravimo ali pa vsaj zmanjšamo njihovo moč in pogostost. To je prvi korak, ki ga šolska oblast lahko naredi na ma-

kronivoju, ravnatelji in učitelji pa na mikronivoju, na ravni posameznih šol. V nadaljevanju bi bilo seveda potrebno na enak način preučiti še ostale stresorje, predvsem tiste, ki izstopajo po svoji moči in/ali pogostosti (takšni so na primer pomanjkanje podpore strokovnih ustanov, šolska pravila, pričakovanja staršev ipd.). V drugem koraku je nujno tudi delovanje na mediatorske dejavnike, ki sodelujejo v učiteljevem oblikovanju kognitivne ocene stresorja, in sicer tako na ravni šole (organizacije) kot tudi na ravni učitelja (posameznika). Na ravni šole to pomeni delovanje na tiste vidike učiteljevega delovnega okolja, ki učitelju pomagajo, da se lažje spoprime s stresorji, na primer ustvarjanje pozitivne šolske klime, pa tudi oblikovanje učiteljskih opornih skupin (sestavljajo jih drugi učitelji in svetovalni delavci). Delovanje na mediatorske dejavnike na ravni učitelja pa pomeni predvsem izboljševanje njegovih odzivov na stresorje in razvijanje njegovih spretnosti za spoprijemanje s stresorji. Ustaljeni ukrepi, ki jih predlagajo strokovnjaki na tem področju, vključujejo razumevanje telesnih stresnih odzivov, trening asertivnosti, izboljšanje spretnosti spoprijemanja s stresorjem, kognitivno vedenjski trening, telesno vadbo in zdrave življenjske navade (povzeto po Tyler, 1998). V zadnjem koraku pa se moramo usmeriti še na odpravljanje negativnih posledic stresa. Intervencije na tem nivoju bi bilo smiselno izvesti v obliki strokovnega individualnega dela z učiteljem, ki trpi za posledicami stresa.

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Intervju

"Gifted lives": An Interview with Professor Joan Freeman

*By Mojca Juriševič**
University of Ljubljana, Faculty of Education

Professor Joan Freeman is a chartered Psychologist with a private practice in London specialising in the potential of young children. She obtained her PhD in gifted children at the Manchester University and is currently Visiting Professor at Middlesex University (London), Founding President of the European Council for High Ability (ECHA), Honorary Fellow of the College of Teachers and Patron of the National Association for Able Children in Education (NACE), and an elected Fellow of the British Psychological Society, which has honoured her in 2007 with a Lifetime Achievement Award for her work with the gifted and talented. She has recently become the Founder and Chair of the think-tank, the Tower Education Group, which is carrying out the world-wide research on gifted and talented. Joan Freeman has conducted and supervised substantial research, notably her continuing study of gifted children since 1974, and has published widely in this area: 17 books (many of them translated into other languages, none of them in Slovenian yet), two government reports on educating the gifted and talented, more than 140 refereed publications and 350 non-academic articles and book reviews on child development and general psychology.

But on the whole, chatting with Professor Joan Freeman I have found her a very pleasant, modest and charismatic woman, a mother who raised four children, and a scientist who travels around the world to share the knowledge and expertise to help professionals and parents to understand giftedness better. She has also her own web page (www.joanfreeman.com) where you can find further information about her work and also free publications which is a rare example but worthy of imitation.

In her most recent book *Gifted Lives: What Happens when Gifted Children Grow Up***,** she describes the dramatic lives of 20 of the 210 adults (gifted and non-gifted) she followed for 35 years since they were aged five to 14. She shows how those 20 people, who all had IQs over 160, lived with such amazing gifts. Such a long intimate study has never been done before in psychology and science in general. It is unique both in its use of matched comparison groups and in its deep one-to-one approach to understand the development and lives of the gifted.

* Naslov / Address: Mojca Juriševič, Oddelek za temeljni pedagoški študij, Pedagoška fakulteta Univerze v Ljubljani, Kardeljeva ploščad 16, 1000 Ljubljana; mojca.jurisevic@pef.uni-lj.si

Professor Freeman, my sincere congratulations for the Gifted lives. You have received many excellent reviews from different psychological journals (e.g., British Journal of Educational Psychology, Psychology Today, The Psychology of Education Review...). What value has this book for you personally? What was your main message of the "research report" to the world? Is there some special message for psychologists?

For me, as for any researcher, it is thrilling to have one's lifetime work highly praised by all the important media, both professional and general. My main message is quite simply that the gifted and talented are normal individuals – but with exceptional abilities that make differences to their lives. My 35-year intimate follow-up has shown the deep effects of long-term aspects of high ability, such as acceleration in school, but most of all it has shown what it is to be labelled gifted with all the expectations that so often go with it.

You started your research on gifted children more than 40 years ago and the research circumstances and the research climate were quite different to the ones we live in today. Could you tell us more about how it was to start a psychological research on the gifted at that time? What attracted you most in this area of research? Has somebody or something had special influence on you?

It was not so long ago that the gifted were considered to be very rare and strange, so much so that it was impossible to compare them with other children. So research would look at, say, six advanced boys (few girls were seen as gifted then) without any comparison with other children. Even now, much research is trapped by this idea that comparisons are unecessary. Case studies are always interesting and informative, but there is a great need for comparisons. Perhaps it was the scientist in me which found so much poor research to be irritating because it was influencing ideas and the lives of the brightest children. A scientist searches for the truth and for what can be put to use.

How do you differentiate the two concepts: giftedness and talents? In my opinion, we have reached a very high level of "terminological democracy" in last century with the development of different conceptual models, from psychometrical to developmental ones (e.g. Feldhusen, Gagné, Tannebaum), which may cause misunderstandings also at the conceptual level. What is your view on this?

Using different meanings for exceptionally high ability is confused. Prof. Gagné, for example, has changed the normally used meanings of gifts and talents. Talents, he says, are the end product of gifts – or maybe the other way round! I cannot see the usefulness of this proposal. If we cannot agree on what our terms mean, each resercher has to define their understanding of those words, and each reader has to

understand what the researcher means by them. Rather a waste of energy. In general, gifts are normally referred to as intellectual potential, and talents refer to the arts. Although the two understandings overlap, there is an international basis of common understanding.

As one of the most established researchers on gifted population you reject the equality principle in the area of human potentials. This view contradicts directly with current educational mainstream view which was also expressed at the last conference in Budapest[1], namely that we are all gifted in something. Could you explain this controversy?

I accept absolutely that we are all different, but I insist that some of us are oustandingly better at doing some things than others are. I do not believe that we are all gifted (or talented) at something. It makes no sense because those adjectives imply a comparison - gifted compared with who else? Every normal person has strengths in particular areas, such as drawing or being empathetic. But that does not mean they are gifted in those areas, whether in comparison with the population they live in or internationally.

In your longitudinal research you have used intelligence tests to identify giftedness in children. On the other hand, in your recent international study[2] you have found out that the most important identification criteria world-wide are teachers' judgements (80%), as the sole or as a combined procedure, and that psychological instruments are much less rarely used, i.e. intelligence tests (55%) and creativity tests (22%), also in comparision with grade marks (62%) and parents' opinion (62%). How do you comment on these findings? What is the best way to measure giftedness in children and adolescents in school?

It is one of the unavoidable problems of long-term research that what was acceptable at its start is not so at its end, as in any developing science. Marie Curie, for example, would no longer be boiling up huge barrels of tar to extract radium. Intelligence tests are not only less in favour than they were, but can only be used by psychologists. It was surprising to me from the world-wide survey of educating the gifted, that 55% of teachers use intelligence tests for selection. But then ... an intelligence test is the most reliable measure of all for school success. I find it rather shocking that 80% of teachers choose children as gifted without objective measurement and with all the unconcious stereotypes they may have in their minds.

[1] Hungarian EU Presidential Conference on Talent Support and First European Talent Day, 7.-9.4.2011, Budapest, Hungary.

[2] Freeman, J., Raffan, J. & Warwick, I. (2010). *World-wide Provision to Develop Gifts and Talents: An International Survey*. Berkshire: CfBT Education Trust.

What are the main obstacles for psychologists in researching giftedness?

The great problem in researching giftedness is its definition, which you have referred to. What is gifted to one person is not gifted to another because the circumstances are always different. As I wrote in Permission to be Gifted[3]. Often unrecognised cultural and political expectations, as well as provision, change the choice of who is chosen. In research, the sample, as well as the methodology, makes all the difference to the findings. Too much research into gifts and talents is concerned with tiny samples of children with no comparisons, drawn from comfortable Western communities, by far the most being North American involving cultural influences which may be very different elsewhere.

Your evidence-based study confirmed the fact that some of the gifted children fell by the wayside whilst others reached fame and happiness in adult life which was already proven by Terman. Who or what has a key role in this dynamic considering your research experience?

To succeed at a high level in life you need three wonderful things - extremely high ability, a strong personality and a good dose of luck. When any one of them is missing the path may be too difficult to negotiate. Advancement in school is not necessarily a sure route to adult excellence for many reasons in a culture. In real life, one has to spend time earning a living. For example, Terman found that in 1920s America, women had to give up family life if they were to succeed in the wider world, which is no longer the case there. Although in Saudi Arabia where a woman is put in prison for driving a car, not covering her face or getting permission to leave the house, it is unlikely that her gifts and talents can be developed outside the home.

What does it mean to be gifted in childhood and what in adulthood?

Gifted in childhood normally means being advanced over others of the same age. In adulthood it means pushing back the frontiers of knowledge or producing high level creative endeavour, which (although built on a great deal of preparation) is different and startling.

The fear of elitism is constantly present in the area of gifted education. It is really elitism when we identify gifted children in school and provide them with a more personalized education? What does elitism in gifted education mean to you? How could you define it?

[3] Freeman, J. (2005). Permission to be gifted: how conceptions of giftedness can change lives. In R. Sternberg & J. Davidson, *Conceptions of Giftedness* (pp. 8 –97), Cambridge: Cambridge University Press.

Elitism implies some sort of privilege; that the children of the rich or those who know how to work the system will get more than their fair share. It certainly exists. But to me, providing every child with a suitable education is not elitism – it is the opposite. If the highly able need something special, it is no more elitist than providing the less able with something special. The key is to look at potential rather than giftedness, which implies achievement.

There are many myths about giftedness that impede our deeper understanding and more effective provision for gifted students in school. Which are the most dangereous and why?

The most dangerous are the emotional myths, that the gifted are emotionally fragile, unable to make friends and grow up socially normal. It is something I have shown to be false, yet it lives on. Perhaps because somehow it makes other people feel better, and parents can blame a child's unhappiness on giftedness. Children's difficult behaviour is not a product of giftedness, but I've found is normally due to other reasons. This myth is so strong that parents bring their children to see me in my private practice because of thier children's behaviour which they hopefully blame on potential gifts when the child may not be gifted.

Gifted individuals in your study have obtained different modes of provision during their schooling. You have recently[2] pointed out world-wide different types of provision, from full inclusion to special schools (e.g. grouping, pull-out programmes, enrichment, acceleration…). Which provision is the most worthwhile in your opinion? Which one emerged as more effective than others in your studies?

Above all, a gifted child's education must be appropriate for that particular individual. Although this depends on what is available, some moves, such as grade-skipping can be detrimental, especially in the years to come. Almost all research on this has taken place within education. Pull-out classses work very well and do not take the child away from friends. They are probably the best compromise.

How do you see the contemporary trends and further developments in gifted education? Which are the main research and educational issues that have to be faced in the future?

The old problems of elitism, stereotyping and choosing only already advanced children as gifted are fading, although in some cultures this is almost too slow to notice. The trend in the search for giftedness is more concerned with potential in all children while allowing for the effects of their circumstances on their achievements.

It is becoming more acceptable to see the gifted as normal, but with special needs. International provision is broadening to cover volountary entrance to higher level teaching, particularly within specialist subject areas, such as mathematics.

Would you like to add anything else that would be relevant for psychologists who work with gifted students? Please, welcome.

When children are encouraged to see themselves as worthy human beings, they feel they have the right to aim higher and function at their best. Accordingly, their achievements are also likely to be higher. The big comparative example is gender. In areas of the world where girls are refused the same opportunities (and even food) as boys, the girls do less well. But in most modern countries where this discrimination has largely gone, girls are achieving at a higher level than the boys, even in the sciences. Given the opportunity, and with encouragement and moral support, it is amazing how any child can develop and take their place in the world, each in the best way for them as individual people.

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Ocena knjig

Ocena znanstvene monografije »Psihološki vidiki bralne pismenosti: od teorije k praksi«

*Cveta Razdevšek Pučko**
Pedagoška fakulteta Univerze v Ljubljani, Pedagoška fakulteta, Univerza v Ljubljani

Ključne besede: bralna pismenost, branje, pedagoška psihologija, recenzije

Review of the book »Psychological aspects of reading literacy: from theory to practice«

*Cveta Razdevšek Pučko**
Faculty of Education, University of Ljubljana

Key words: reading literacy, reading, educational psychology, reviews

CC = 3500

PEČJAK, S. (2010). Psihološki vidiki bralne pismenosti: od teorije k praksi Ljubljana: Znanstvena založba Filozofske fakultete Univerze v Ljubljani.

Znanstvena monografija dr. Sonje Pečjak je izšla v zbirki Razprave FF; skupaj z bogatim seznamom virov, imenskim in stvarnim kazalom obsega 193 strani.

Avtorica v predgovoru (str. 9) zapiše, da je »v monografiji poskušala združiti obstoječa spoznanja na področju bralne pismenosti z rezultati tujih študij ter večletnega lastnega raziskovanja tega področja«. Monografija je zanimivo, koristno in uporabno branje za študente psihologije in študente pedagoških smeri študija, svetovalne delavce v šolah, učitelje, bibliotekarje in druge strokovnjake, pa tudi za starše, ki bi želeli izpopolniti svoje znanje o fenomenu bralne pismenosti ali najti uporabna spoznanja za delo z otroki. Knjiga obsega šest poglavij, kjer je le »prvo poglavje povsem teoretično, v ostalih so teoretska spoznanja podprta s tujimi, predvsem pa z domačimi (avtoričinimi) raziskovalnimi spoznanji« (str. 10).

* Naslov / Address*:* Cveta Razdevšek Pučko, Univerza v Ljubljani, Pedagoška fakulteta, Kardeljeva pl. 16, 1000 Ljubljana, Slovenija, e-mail: cveta.pucko@guest.arnes.si

V prvem poglavju z naslovom *Pismenost in bralna pismenost* je obravnavan danes zelo pogost pojem pismenosti, ki ga večkrat srečujemo v kritičnih zapisih, ki poročajo o pomanjkljivi funkcionalni pismenosti odraslih, o slabi bralni pismenosti učencev in mladostnikov, o potrebi po računalniški pismenosti, pa tudi o nujnosti informacijske in medijske pismenosti, ki postajajo še posebej aktualne v današnjem času. Zato je nadvse dobrodošla predstavitev teh pojmov, avtorica navaja tudi različne definicije in podrobno obravnava različne vidike pismenosti. Opozori, da je temeljni element vseh vrst pismenosti prav bralna pismenost (str. 15). Ob obravnavi strukturnih vidikov bralne pismenosti predstavi raziskave o strukturnih elementih bralnega razumevanja oz. bralne pismenosti osnovnošolcev. V tem kontekstu posebej opozori na metakognitivno znanje ter na motivacijske elemente bralne pismenosti. Avtorica ob tem razmišlja tudi o spodbujanju bralne motivacije.

Glede na to, da je bralna pismenost povezana tudi z razvojem, se avtorica v posebnem poglavju posveti razvojnim vidikom bralne pismenosti in obravnava različne (sodobne) modele razvoja bralne pismenosti. Ko predstavlja stopnje bralnega razvoja (po Gillet, Temple, Crawford in Cooney, 2003), postanemo pozorni na velike individualne razlike, saj se npr. najvišja stopnja (»*zrelo branje*«) lahko oblikuje v razponu od osem do 18 let. Ob tem se nam pojavi neprijetno vprašanje o tem, koliko je mladostnikov in odraslih, ki te stopnje nikoli ne dosežejo.

Za učitelje in druge strokovne delavce, ki se ukvarjajo bodisi s poučevanjem branja in pisanja ali s pomočjo učencem, ki imajo bralne težave, je posebej dragoceno poglavje, ki obravnava izobraževalne vidike bralne pismenosti. V tem poglavju se ob spoznavanju strategij za razvijanje bralne pismenosti seznanimo z različnimi teoretičnimi spoznanji in raziskovalnimi ugotovitvami o metodah in strategijah začetnega opismenjevanja, dopolnjenimi s številnimi praktičnimi primeri in didaktičnimi napotki. To poglavje je nedvomno najbolj praktično zasnovano ter za pedagoške praktike najbolj uporabno, saj lahko bralci ob konkretnih primerih spoznajo nekatere manj znane strategije za razumevanje bistva (npr. Paukova strategija, časovni trak, VŽN strategija); pa tudi strategije za spodbujanje bralne motivacije pri učencih.

V petem poglavju avtorica obravnava edukometrijski vidik bralne pismenosti, oz. pregled različnih pristopov pri ugotavljanju/merjenju bralne pismenosti. Seznani nas z različnimi instrumenti za merjenje posameznih vidikov bralne pismenosti, ki so jih v raziskavah uporabili tuji in domači raziskovalci ter s pomembnejšimi ugotovitvami teh raziskav. Zanimiva in hkrati zaskrbljujoča je npr. ugotovitev o razlikah v hitrosti branja učencev, kjer se pokaže, da dosegajo učno neuspešni učenci le 50 % povprečne hitrosti branja učencev 3. razreda (Magajna, Gradišar, Pečjak, 1999). Raziskave potrjujejo tudi splošna opažanja, da se s starostjo učencev zmanjšuje ugodno emocionalno počutje ob branju (kar je pomemben motivacijski dejavnik); razlike pa so statistično pomembne tudi med spoloma – dekleta se ob branju počutijo bolje, zato berejo raje, več in pogosteje.

Zadnje poglavje z naslovom *Profesionalni razvoj učiteljev za pismenost* je posvečeno spoznavanju prepričanj, stališč in znanja učiteljev o bralni pismenosti z namenom, da opozori na te vidike, ki pomembno oblikujejo vsakodnevno pedagoško prakso na področju bralnega opismenjevanja. Navaja tri pogosta prepričanja učiteljev, kot jih je strnil Bintz (1997) in jih srečujemo tudi pri naših učiteljih:

– branje je stvar učencev,
– branje je stvar drugih učiteljev,
– branje je stvar učbenikov.

Spremembe so torej najprej stvar spreminjanja stališč, vendar to ni dovolj, saj ugotovitve (S. Pečjak in K. Košir, 2006) opozarjajo, da kognitivne spremembe (spremembe v prepričanjih) še ne vodijo do vedenjskih sprememb v delovanju – so le prvi korak do dejanskih sprememb v pedagoškem delovanju.

Poglavje (in knjigo) zaključi z odgovori na dve pomembni in aktualni praktični vprašanji: kaj lahko stori šola in kako povečati motivacijo fantov za branje. Bralcu, ki ga zanimajo odgovori, priporočam, da prebere ne le ta del, ampak knjigo v celoti.

Po tem kratkem vsebinskem pregledu lahko povzamem, da predstavlja monografija celovit pregled teoretičnih in empirično-raziskovalnih spoznanj o različnih vidikih bralne pismenosti, in sicer v razponu od jezikovnega, razvojnega, sociokulturnega, kognitivnega, izobraževalnega in edukometrijskega. V delu se tako združujejo in povezujejo spoznanja slovenistične, sociološke, pedagoške in psihološke znanosti. Pri tem avtorica sicer izhaja iz relevantnih domačih in tujih spoznanj različnih področij, ki pa jih nadgrajuje s spoznanji lastnih raziskav oz. raziskav, ki so nastajale (v naši praksi) pod njenim mentorstvom. Zadnje dejstvo je posebna odlika te monografije, saj ima bralna pismenost določene jezikovne specifike, zato izsledki tujih raziskav niso vselej enostavno prenosljivi v naš jezikovni prostor. Dodatno vrednost monografiji daje tudi pregled izobraževalnih vidikov bralne pismenosti (začetno opismenjevanje) ter razmišljanja o vlogi učitelja (še posebej njegovih stališč do bralne pismenosti) in njegovem delovanju v razredu.

Med pomembna znanstvena spoznanja nedvomno sodijo strukturni modeli bralne pismenosti, oblikovani na podlagi avtoričinega (s sodelavkami) raziskovanja, ki opozarjajo na pomembne razlike v bralnem razumevanju mlajših in starejših osnovnošolcev.

Ko avtorica razpravlja o kognitivnih vidikih bralne pismenosti, nas opozori na metakognitivne elemente (fonološko zavedanje, dekodiranje, besedišče, predvsem pa metakognitivni vidik, ki vodi v učinkovite bralne strategije), ki so bistveni za bralno razumevanje oz. bralno pismenost. Med psihološkimi vidiki ozavestimo pomen motivacijskih elementov bralne pismenosti, ki se po rezultatih raziskave (avtorica s sodelavkami) pomembno povezujejo z bralno uspešnostjo. V monografiji so predstavljeni različni modeli razvoja bralne pismenosti, pa tudi strategije razvijanja bralne pismenosti (opismenjevanja). Skladno s podnaslovom monografije nam avtorica v tem poglavju predstavi ne samo različne strategije,

ampak hkrati postreže tudi z didaktičnimi napotki. Tako tudi v poglavju edukometrijski vidiki bralne pismenosti spoznamo različne pristope, ki omogočajo empirično-raziskovalno spoznavanje različnih vidikov bralne pismenosti, pomembno ne le raziskovalce tega področja, ampak tudi za učitelje-praktike, ki lahko na podlagi empiričnih podatkov načrtujejo najprimernejši način poučevanja za razvijanje bralne pismenosti.

Vsebina monografije je sodobna in v današnjem času nadvse pomembna, saj je pismenost »*srce razvoja sveta in človekovih pravic*« (Mayor, cit. v Pečjak, str. 11). Odlika monografije je tudi, da avtorica strokovno terminologijo sloveni in pojasnjuje ter s tem besedilo, kljub visoki ravni strokovnosti, približa tudi nepsihologom. Zato besedilo, kljub opredelitvi, da gre za znanstveno monografijo ni hermetično ali razumljivo le ozkemu krogu strokovnjakov. Ne nazadnje omenimo tudi didaktične odlike, saj avtorica vsako poglavje uvede z napovedjo tematike in tako prispeva na le k bolj usmerjenemu branju, ampak tudi k preglednosti in uporabnosti monografije.

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Novi doktorati

Predstavitev doktorske disertacije Agresivnost kot odgovor na anksioznost in vloga obeh v šolskem prostoru (dr. Ana Kozina)

Anja Podlesek[*]
Univerza v Ljubljani, Filozofska fakulteta, Oddelek za psihologijo, Ljubljana

Ključne besede: anksioznost, agresivnost, učenci, dijaki, osnovne šole, srednje šole, doktorske disertacije, recenzije

Presentation of the Ph. D. thesis »Aggression as a response to anxiety and the role of both in school« (Ana Kozina, Ph. D.)

Anja Podlesek[*]
University of Ljubljana, Faculty of Arts, Department of Psychology, Ljubljana, Slovenia

Key words: anxiety, aggression, students, elementary schools, secondary schools, dissertations, reviews

CC = 2360, 3500

Kozina, A. (2011). *Agresivnost kot odgovor na anksioznost in vloga obeh v šolskem prostoru* (*n*eobjavljena doktorska disertacija). Univerza v Ljubljani, Filozofska fakulteta, Oddelek za psihologijo, Ljubljana.

Dr. Ana Kozina v svoji doktorski disertaciji *Agresivnost kot odgovor na anksioznost in vloga obeh v šolskem prostoru*, ki jo je izdelala pod mentorstvom red. prof. dr. Maksa Tuška in po njegovi smrti pod mentorstvom doc. dr. Anje Podlesek, preučuje odnos med anksioznostjo in agresivnostjo učencev in dijakov ter njuno povezanost z nekaterimi dejavniki domačega in šolskega okolja. Osnovna teza disertacije je, da povečana anksioznost vodi v povečano agresivnost. Da je lahko preverjala to tezo, je morala najprej razviti nova pripomočka za merjenje obeh konstruktov v osnovnošolski in srednješolski populaciji in ju validirati. En del disertacije je zato namenjen preučevanju merskih značilnosti novih pripomočkov, skozi analizo postavk in analizo zanesljivosti ter konstruktne veljavnosti. Drugi del disertacije pa se posveča odnosu med preučeva-

[*] Naslov / Address*:* doc. dr. Anja Podlesek, Univerza v Ljubljani, Oddelek za psihologijo, Aškerčeva 2, 1000 Ljubljana, Slovenija, e-mail: anja.podlesek@ff.uni-lj.si

nima konstruktoma in preverjanju strukturnega modela tega odnosa, avtorica pa razišče tudi povezanost obeh konstruktov z dejavniki domačega in šolskega okolja, da bi preverila, s spreminjanjem katerih od teh dejavnikov bi lahko vplivali na anksioznost in agresivnost v smeri njunega zmanjšanja.

Avtorica uvod začne s predstavitvijo različnih opredelitev anksioznosti in njenih komponent, vrst anksioznosti, teorij anksioznosti, predstavi razvoj anksioznosti, načine njenega raziskovanja in merjenja ter načine njenega preprečevanja in zmanjševanja. Nato predstavi, kakšna je povezanost anksioznosti z nekaterimi dejavniki na ravni posameznika (s spolom, starostjo, značilnostmi družinskega okolja, odnosi z vrstniki) in na ravni šole (s šolsko klimo in stališči do šole, z izraženostjo agresivnih vedenj na šoli, z znanjem in učnimi dosežki). V drugem delu uvoda v podobnem zaporedju podpoglavij predstavi agresivnost. Pri tem se osredotoča na pojava v splošni, ne klinični populaciji. Poudari različnost definicij in z njimi povezana različna pojmovanja strukture konstruktov. V tretjem delu razpravlja o odnosu med obema konstruktoma. Oba konstrukta se skupaj pojavljata pri različnih kliničnopsiholoških motnjah, pa tudi sicer različne raziskave odkrivajo njuno povezanost. Oba se povezujeta z osebnostnimi potezami, npr. nevroticizmom in samokontrolo, negativnimi vzorci odnosov v družini, in depresivnostjo. Po modelu M. F. Delfos (2004) je anksioznost prvotna reakcija na zaznano nevarnost, ki se bodisi nadaljuje v akcijo (kar se v ekstremni obliki kaže kot agresivnost), ob kateri se anksioznost zmanjša, bodisi se ne nadaljuje v akcijo (kar se v ekstremni obliki kaže kot depresivnost), zaradi česar se anksioznost stopnjuje. Na ta model se avtorica nasloni v nadaljevanju disertacije, ko preverja možnost vzročno-posledičnega odnosa med anksioznostjo in agresivnostjo. Predstavi raziskave, ki potrjujejo tako pozitiven odnos med anksioznostjo in agresivnostjo, kot tudi raziskave, ki kažejo negativen odnos med tema dvema konstruktoma, in s tem opozori, da odnos med njima ni jasen in do kraja raziskan.

Osrednja tema disertacije je povezanost anksioznosti in agresivnosti pri učencih in dijakih ter preverjanje možnosti obstoja vzročnega odnosa med tema dvema konstruktoma. Glavna hipoteza disertacije je, da na podlagi povečane anksioznosti lahko pomembno napovemo povečano agresivnost, pri čemer avtorica izhaja iz modela M. F. Delfos (2004) in raziskave K. Levy, C. Hunt in S. Heriot (2007), ki so pokazale, da terapija, usmerjena na anksioznost, lahko privede tudi do zmanjšanja agresivnosti.

Za preverjanje strukturnega modela (usmerjenega odnosa med anksioznostjo in agresivnostjo) je morala avtorica najprej razviti ustrezne pripomočke za merjenje obeh konstruktov ter preveriti merski model. Tako v prvem delu empiričnega dela disertacije opisuje korake razvoja svojih pripomočkov za merjenje anksioznosti in agresivnosti ter utemelji potrebo po posebnem instrumentu za slovensko okolje. Pri razvoju Lestvice anksioznosti se je oprla na opredelitev anksioznosti po Spielbergerju idr. (1970) in na trisistemski seznam znakov anksioznosti. Lestvico je validirala v dveh korakih. V prvem koraku je pripomočka preizkusila na manjših priložnostnih vzorcih (N = 300) učencev 4. in 8. razreda, v drugem koraku pa je validirala popra-

vljeno verzijo merskega pripomočka na vzorcih učencev 4. in 8. razreda in na dveh vzorcih dijakov 4. letnika srednje šole. V drugem koraku je izkoristila možnost dodajanja lestvice k predraziskavi in glavni raziskavi znanja matematike in naravoslovja TIMSS v letih 2007 in 2008, s čimer je lahko zbrala velike količine podatkov (preko 5000 vključenih učencev 4. razreda, 5000 učencev 8. razreda, 1400 dijakov v predraziskavi in 3000 dijakov v glavni raziskavi). V prvem koraku odkrita trikomponentna struktura se je v drugem koraku na polovici vzorca učencev ter na vzorcu dijakov iz predraziskave ponovila, prav tako jo je potrdila konfirmatorna analiza, ki jo je avtorica izvedla na preostali polovici podatkov učencev in na dijakih iz glavne raziskave z uporabo strukturnega modeliranja v paketu Mplus 5.2 (Muthen in Muthen, 2007). Pri primerjavi različnih merskih modelov je ugotovila, da se hierarhični tridimenzionalni model anksioznosti (s komponentami *čustva*, *odločanje*, *skrbi*) z enim splošnim faktorjem drugega reda različnim vzorcem podatkov bolje prilega kot enodimenzionalni model. Zanesljivost posameznih komponent je dobra, dosežki na lestvici zadovoljivo konvergirajo z dosežki na lestvici STAI X-2, posamezne postavke končne verzije Lestvice anksioznosti pa so tudi ustrezno občutljive (kar je avtorica ugotavljala prek mer razpršenosti, povezanosti posamezne postavke s skupnim rezultatom in metode skrajnih skupin). Na podoben način se je avtorica lotila tudi razvoja in validacije Lestvice agresivnosti. Za končno verzijo njene Lestvice agresivnosti, ki je nastala po izpopolnjevanju pripomočka v več korakih in vključuje le postavke, ki imajo ustrezne lastnosti tako pri dijakih kot pri učencih, je značilna štirikomponentna struktura (telesna agresivnost, notranja agresivnost, besedna agresivnost in agresivnost do avtoritete), pri čemer se komponente združujejo v en faktor drugega reda (splošno reaktivno neposredno agresivnost). Pri primerjavi hierarhičnega štiridimenzionalnega modela in enodimenzionalnega modela agresivnosti se je izkazalo, da so indeksi prileganja ustreznejši pri prvem modelu tako pri učencih kot tudi dijakih. Postavke v končni verziji Lestvice agresivnosti so občutljive, komponente notranje konsistentne, zanesljivost po metodi test-retest je primerna. Dosežek na lestvici prav tako visoko korelira z dosežkom na Buss-Durkeejevi lestvici sovražnosti (BDHI).

Ko je avtorica izdelala pripomočka za merjenje anksioznosti in agresivnosti, ki sta imela dobre psihometrične značilnosti, je s strukturnim modeliranjem preverila veljavnost teoretičnega modela povezanosti med anksioznostjo in agresivnostjo. Povezala je hierarhični model anksioznosti in hierarhični model agresivnosti, in sicer tako, da je predvidela vzročni odnos med splošno anksioznostjo in splošno agresivnostjo. Ocenjeni vrednosti koeficienta poti sta znašali 0,36 na vzorcu učencev in 0,34 na vzorcu dijakov (standardizirani vrednosti 0,38 in 0,43) in sta bili statistično pomembni, zato je avtorica zaključila, da je postavljeni model verjeten, torej da obstaja verjetnost, da sta anksioznost in reaktivna agresivnost vzročno povezani in da reaktivno agresivnost lahko napovedujemo na osnovi poznavanja anksioznosti pri učencu ali dijaku (pojasnljive je približno 13 % variance agresivnosti). Višina povezanosti je primerljiva vrednostim, ki so jih prek korelacij med konstruktoma odkrivale druge raziskave.

Avtorica je v nadaljevanju raziskala tudi povezave obeh konstruktov z značilnostmi učencev in dijakov ter njihovega domačega in šolskega okolja. Ugotovila je, da učenci izražajo višje stopnje agresivnosti kot učenke. Za starejše učenke je značilna višja stopnja anksioznosti kot za starejše učence, medtem ko pri mlajših učencih in dijakih med spoloma ni razlik v anksioznosti. Dijaki izražajo nižje stopnje telesne in besedne agresivnosti v primerjavi z učenci in tudi manj anksioznosti, a več notranje agresivnosti. Multipla regresija je pokazala, da med značilnostmi domačega okolja anksioznost učencev statistično pomembno napovedujejo dejavnosti v prostem času in spremenljivke, povezane s socialno-ekonomskim statusom družine, pri dijakih pa nobena družinska spremenljivka ni bila pomemben napovednik anksioznosti. Od šolskih dejavnikov so se kot pomembni napovedniki anksioznosti pri učencih izkazali pogostost agresivnega vedenja na šoli, ocena lastne uspešnosti v šoli in znanje matematike (ki je bila v letu izvedbe raziskave osrednji predmet raziskave TIMSS), pri dijakih pa le znanje matematike. Agresivnost pri učencih napovedujejo naslednji dejavniki: pogostost agresivnega vedenja na šoli, značilnost šolske klime, odnos do učnih predmetov in znanje matematike, pri dijakih pa agresivnosti ne napoveduje nobena od preučevanih spremenljivk šolskega okolja. S spremenljivkami šolskega okolja se pri učencih lahko napove večji delež variance agresivnosti (do 20 %) kot anksioznosti (do 14 %).

V splošni razpravi avtorica ovrednoti verjetnost vzročne povezave med anksioznostjo in agresivnostjo. Pri tem ostaja previdna in navaja, da bi lahko zaključke o vzročno-posledičnih odnosih veljavno izpeljali zgolj z eksperimentalno raziskavo, medtem ko strukturno modeliranje lahko le nakaže verjetnost obstoja vzročne povezave med konstrukti. Navede omejitve študije (npr. problem samoocenjevanja, omejenost zaključkov na populacijo dijakov splošnih gimnazij) in odprte probleme. Na osnovi ugotovitev disertacije poda predloge za zmanjševanje agresivnosti skozi kognitivno-vedenjsko terapijo, usmerjeno na zmanjševanje anksioznosti. Ker so pri napovedovanju anksioznosti in agresivnosti, vsaj pri učencih, pomembne spremenljivke šolskega okolja, avtorica meni, da bi ju lahko zmanjšali tudi z vzpostavljanjem pozitivnejše šolske klime, s posebno pozornostjo, namenjeno učencem z nižjim socialno-ekonomskim statusom ali iz družin imigrantov, in z aktivnim preživljanjem prostega časa otrok.

Disertacija Ane Kozina predstavlja obširno raziskovalno delo, v katerem se je avtorica sistematično lotila preučevanja odnosa med anksioznostjo in agresivnostjo, kot se izražata pri učencih in dijakih v šolskem okolju. Izviren doprinos znanosti je predvsem v preverjanju vzročnosti odnosa med anksioznostjo in agresivnostjo pri populaciji otrok in mladostnikov, vezano na šolsko okolje, česar se tako sistematično predhodne raziskave še niso lotile. Skladnost posamičnih delov rezultatov z rezultati predhodnih študij govorijo v prid posplošljivosti ugotovitev izven meja preučevanih vzorcev. Pokazala se je povezanost anksioznosti in agresivnosti pri šolski populaciji, skladna s predhodnimi študijami na odraslih, in nakazana je verjetnost vzročnega

odnosa med anksioznostjo in agresivnostjo. Vprašljivo je, če bi se sploh lahko lotili preučevanja smeri vzročnosti tega odnosa na drugačen način, saj eksperimentalno manipuliranje z ravnjo anksioznosti ter opazovanje spremljajočih sprememb v agresivnosti ne bi bilo etično, kot ugotavlja tudi avtorica. V prihodnosti tako ostaja odprta le možnost longitudinalne, prospektivne raziskave za natančnejši odgovor o smeri odnosa med preučevanima konstruktoma.

Poleg osrednje znanstvene vrednosti, tj. preverjanja veljavnosti modela odnosa med anksioznostjo in agresivnostjo otrok in mladostnikov, pa ima disertacija tudi aplikativno vrednost. S temeljitostjo in natančnostjo ter v več zaporednih korakih čiščenja in izpopolnjevanja sta bila razvita in validirana nova pripomočka v slovenskem jeziku za merjenje konstruktov anksioznosti in agresivnosti pri otrocih in mladostnikih. Uporabna vrednost dela pa je tudi v razjasnitvi, katere spremenljivke domačega in šolskega okolja so povezane s posameznim konstruktom. Tako je avtorica nakazala možnosti zmanjševanja agresivnosti, bodisi neposredno bodisi posredno prek zmanjševanja anksioznosti, še posebej pa je pomembno, da se je osredotočila na šolsko populacijo in nakazala tudi možnosti spreminjanja dejavnikov na makrosocialni ravni, v šoli, kjer je dosegljivost otrok in mladostnikov za preventivne skupinske programe boljša, kot je dosegljivost posameznih otrok in mladostnikov izven šole oz. njihovih družin.

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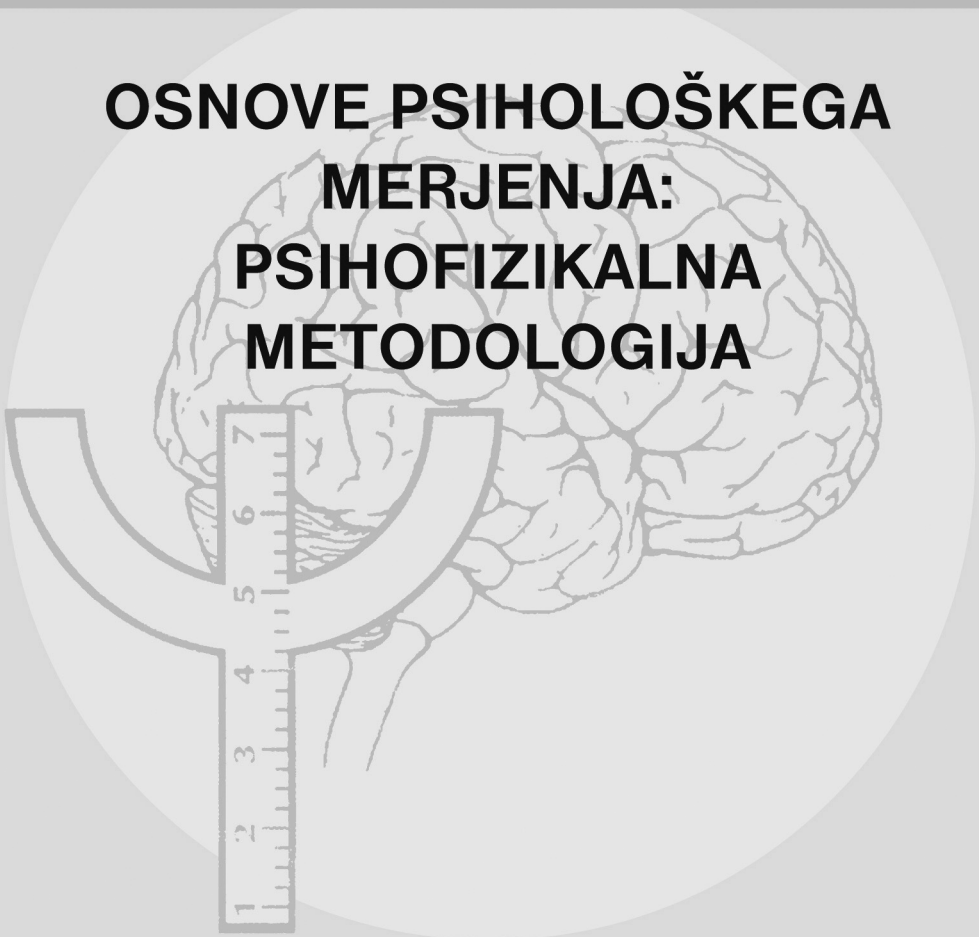
Univerza v Ljubljani
FILOZOFSKA FAKULTETA

Anja Podlesek
Klas Brenk

OSNOVE PSIHOLOŠKEGA MERJENJA: PSIHOFIZIKALNA METODOLOGIJA



Psihološka obzorja / Horizons of Psychology, 20, 3, 155 (2011)

Popravek

Lepoša, P. (2011). Dnevi psihologov 2011: poročilo o srečanju. *Psihološka obzorja*, *20*(2), 149–154.

V prispevku Dnevi psihologov 2011, poročilo o srečanju v 2. številki 20. letnika Psiholoških obzorij je navedeno, da sem na okrogli mizi na Dnevih psihologov predlagal, da se ohrani en oddelek za psihologijo s 60-imi razpisanimi študijskimi mesti, kar ni v skladu z dejstvi. Moji predlogi na tej okrogli mizi so bili, naj se:

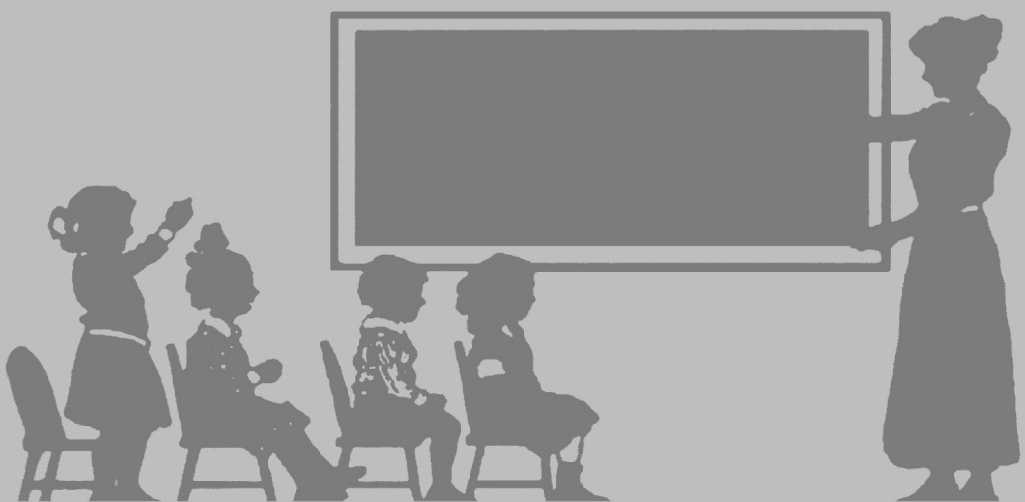
— če obstajajo analize, ki so pokazale, da je smiselno vpisovati tolikšno število študentov, kot jih oddelki vpisujejo sedaj, ohrani sedanje stanje,
— če te analize niso bile opravljene, dokler ne bodo, oddelki uskladijo, koliko študentov bo vpisoval vsak izmed njih, da diplomantov ne bi bilo več kot 60 na leto,
— če uskladitev ni možna, dijake izčrpno in korektno informira o zaposlitvenih možnostih, Društvo psihologov Slovenije pa naj zaprosi Ministrstvo oziroma Vlado, naj argumentirano razmisli o tolikšnem številu vpisnih mest in opravi arbitražo med oddelki.

Boštjan Bajec

Univerza v Ljubljani
FILOZOFSKA FAKULTETA

Sonja Pečjak
Katja Košir

POGLAVJA IZ PEDAGOŠKE PSIHOLOGIJE
Izbrane teme



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Obvestila

DRUŠTVO PSIHOLOGOV SLOVENIJE
SLOVENIAN PSYCHOLOGICAL ASSOCIATION

PEDAGOŠKA FAKULTETA
Univerza v Ljubljani
Pedagoška fakulteta

Strokovni posvet:

VLOGA PSIHOLOGA V VZGOJI IN IZOBRAŽEVANJU NADARJENIH

PRVO OBVESTILO

Sekcija psihologov v vzgoji in izobraževanju pri Društvu psihologov Slovenije in **Center za raziskovanje in spodbujanje nadarjenosti** Pedagoške Fakultete UL organizirata **enodnevni strokovni posvet na temo**:

»Vloga psihologa v vzgoji in izobraževanju nadarjenih«

Posvet bo potekal v petek, **27.1.2012,** na Pedagoški fakulteti v Ljubljani in bo razdeljen na dopoldanski plenarni ter popoldanski diskusijski del (9.30 – 17.00).

Namen posveta je z vidika različnih psiholoških disciplin (pedagoške, razvojne, socialne, klinične, metodološke in drugih) premisliti obstoječe stanje na področju vzgoje in izobraževanja nadarjenih ter v skladu s konceptualnimi smernicami iz Bele knjige opredeliti vlogo psihologa ter psihološki prispevek znotraj danega konteksta.

Organizacijski odbor:

Božena Stritih, predsednica Sekcije psih. v VIZ
dr. Mojca Juriševič, doc.
mag. Gordana Rostohar, asist.
Nataša Fabjančič
Milica Bučar

Predvideni prispevki v naslednji številki (letnik 20, številka 4, 2011)

Jelena Želeskov Djorić, Janko Medjedovic
Romantic adult attachment and basic personality structure

Zlatka Cugmas
Odnosi študentov s starši, prijatelji in romantičnimi partnerji

Ana Kozina
Anksioznost učencev in dijakov v Sloveniji: vzorec razlik po spolu in starosti

Andreja Avsec, Marina Vidmar
Socialna inteligentnost, empatija in agresivno vedenje: je stereotipna predstava agresivnega človeka kot socialno nekompetentnega zavajajoča?

Maja Milavec, Domen Novak, Matjaž Mihelj in Marko Munih
Vpliv občutljivosti motivacijskih sistemov BIS in BAS na izvajanje rehabilitacijskih nalog po možganski kapi

Ana Ožura in Vita Štukovnik
Uporaba RORSCHAHOVEGA TESTA v klinični nevropsihologiji

Dušica Boben
Mnenje slovenskih in evropskih psihologov o uporabi psiholoških testov danes in pred desetimi leti

Frank M. Dattilio
Globalna priljubljenost kognitivno-vedenjske teorije

Marko Polič
Ocena knjige »Človek in ekološka kriza« prof. dr. Vida Pečjaka

Navodilo avtorjem prispevkov

Opredelitev prispevkov

V Psiholoških obzorjih so objavljeni prispevki, napisani v slovenskem ali angleškem jeziku (izjemoma, po presoji uredniškega sveta, še v kakšnem drugem svetovnem jeziku). Znanstveni in strokovni prispevki morajo biti napisani v jedrnatem, razumljivem, jasnem in logičnem ter jezikovno ustreznem slogu. Avtorji morajo sami poskrbeti za jezikovno lekturo prispevkov. *Empirični članek* avtor napiše kot poročilo o raziskavi. Vsebovati mora vse značilne dele, ki odslikujejo korake raziskovalnega procesa: *uvod*, *metodo* (s podpoglavji *udeleženci*, *pripomočki* oziroma *inštrumenti* ter *postopek*), *rezultate, razpravo* in *literaturo*. Za *teoretski članek* se predvideva, da v podrobnostih preuči in kritično analizira določene modele ali teorije. Empirični podatki so predstavljeni le, če so v neposredni zvezi s teorijo. *Pregledni članek* kritično ovrednoti na različnih mestih že objavljene prispevke. Značilni deli preglednega članka so opredelitev in razlaga problema, povzetek predhodnih raziskav, pojasnitev medsebojnih odnosov, protislovij, pomanjkljivosti in na koncu predlogi za nadaljnje raziskovanje.

Struktura prispevka

Prispevek mora vsebovati v slovenskem in angleškem jeziku napisane: *naslov* prispevka, *ključne besede* (okrog pet), ki najbolje opredeljujejo vsebino, in *povzetek* prispevka, ki vsebuje bistvene informacije o prispevku. Povzetek naj obsega do 300 besed (če je članek po dogovoru napisan v katerem od drugih svetovnih jezikov, morajo biti navedene informacije v tem, a tudi nujno v slovenskem in angleškem jeziku). V besedilu naj (zaradi postopka slepe recenzije) ne bo navedeno ime in/ali naslov avtorjev.
Empirični prispevek naj v nadaljevanju sledi naslednjim splošnim pravilom:

1. Uvodni del ne sme biti preobširen, vendar mora ponuditi glavno teoretično ali konceptualno ogrodje, v katerega je vpet raziskovalni problem.
2. Raziskovalni problem mora biti jasno formuliran, predstavljati mora logično nadaljevanje uvodnega dela prispevka. Problem mora biti relevanten in v zastavljeni obliki še neraziskan. Poudarjeno mora biti, katere nove dileme odpira.
3. Raziskovalne hipoteze in spremenljivke morajo biti operacionalizirane in postopki opazovanja in merjenja morajo biti natančno opisani. Kratek, a natančen opis izbire udeležencev, uporabljenih psiholoških inštrumentov in raziskovalnega načrta je nujen.
4. Uporabo statističnih postopkov in rezultate morajo avtorji opisati s potrebno natančnostjo. Tabele morajo vsebovati le nujne informacije. Če je potrebno, so podrobnosti lahko predstavljene v dodatku (prilogi).
5. Razprava in interpretacija izsledkov se mora nanašati na znane koncepte in teorije, ne glede na to, ali jih dobljeni rezultati podpirajo ali ne.
6. Trditev ali dognanja drugih avtorjev so v besedilu potrjena z referenco. Na koncu prispevka je priložen seznam literature, na katero se besedilo sklicuje.

Za druge vrste sestavkov se ta struktura ustrezno in smiselno prilagodi.

Tehnična navodila za predložitev prispevkov

APA standardi

Oblika poslanih rokopisov naj sledi standardom in priporočilom, opisanim v priročniku za pisanje raziskovalnih poročil, ki ga je izdalo ameriško združenje psihologov (APA Publication Manual, 5. izd., 2001). Vsak rokopis, ki bo prispel v objavo v revijo Psihološka obzorja, ki bo ustrezal tehničnim (oblikovnim) zahtevam in bo sodil v okvir *"namena in ciljev revije"*, bo po postopku dvojne slepe recenzije poslan v oceno dvema kompetentnima ocenjevalcema.

Oblikovni izgled

Avtorji besedilo prispevka pripravijo v enem od standardnih računalniških programov za obdelavo besedil (npr. Word za Windows) in ga shranijo v datoteki standardnega formata, npr. .doc ali .rtf. Besedilo naj bo napisano z dvovrstičnim ali 1,5 vrstičnim razmikom, z razločnimi naslovi, podnaslovi in oštevilčenimi stranmi. Napisano naj bo z eno osnovnih oblik pisave (Times Roman, Arial, Helvetica, Courier) velikosti 12, besedilo naj bo levo poravnano. Začetki odstavkov naj ne bodo umaknjeni navznoter, pač pa naj bo pred vsakim novim odstavkom, naslovom, podnaslovom, predvidenim mestom za sliko ali tabelo vrinjena prazna vrstica. Prispevek naj ne bo daljši od dveh avtorskih pol (32 strani po 32 vrstic z okoli 60 znaki v vrstici oziroma 60.000 znakov, vključno z razmiki).

Tabele, slike, opombe

Za vsako tabelo in sliko mora biti v prispevku nakazano približno mesto, kjer je predvidena (npr. *'vstaviti sliko 1'* ali *'vstaviti tabelo 1'*). Tabel in slik avtorji ne vstavljajo v besedilo, pač pa jih pripravijo v ločeni datoteki, v katero najprej vstavijo vse tabele in nato vse slike, vsak prikaz na svoji strani (če je potrebno, lahko slike shranijo tudi v več ločenih datotekah).
Zaporedna številka slike in besedilo, ki sliko opisuje, naj bosta v besedilo vstavljena takoj za mestom, kjer je označen predvideni položaj slike (npr. najprej v svoji vrstici podamo informacijo: *'vstaviti sliko 1'*, pod njo pa ime in za piko naslov slike: *'Slika 1.* Odnos med X in Y …'). Slike morajo biti izdelane brezhibno in z dovolj velikimi črkami, številkami in ostalimi znaki (nabora Arial ali podobno), ki omogočajo pomanjševanje brez večje izgube preglednosti. Avtorji ne uporabljajo barv, pač pa, če je potrebno, različne dobro razločljive rastre, sivine in/ali vzorce. Avtorji naj grafe v datoteko s tabelaričnimi in grafičnimi prikazi prilepijo v taki obliki, da jih bo možno urejati v izvornem programu (npr. Excelov grafikon naj prilepijo kot predmet in ne kot sliko ali metadatoteko). Fotografije z visoko ločljivostjo (> 300 dpi) naj bodo shranjene v kar najboljši kvaliteti grafičnega formata JPG, TIF ali PNG. Sheme in diagrami naj bodo iz izvornega programa prilepljene v datoteko kot predmet, izjemoma kot slike navedenih grafičnih formatov z visoko ločljivostjo. V primeru posebnih zahtev (npr. pri uporabi manj običajnih programov za generiranje slik ali če se določene slike ne da izdelati računalniško), naj se avtorji o načinu priprave slik predhodno posvetujejo s tehničnim urednikom revije (e-naslov: luka.komidar@ff.uni-lj.si).
Tabele naj bodo natipkane z enojnim razmikom. Nad tabelo naj bo (v datoteki s tabelaričnimi in slikovnimi prikazi) izpisana zaporedna

številka tabele in za piko njen naslov (npr. Tabela 1. *Korelacije med …*). Tabela mora biti informativna brez posebnega sklicevanja na besedilo, torej opremljena s potrebnimi informacijami in po potrebi z opombami. Avtorji se v besedilu sklicujejo na sliko ali tabelo (npr. z 'glej sliko 1', 'v tabeli 2' ...), saj prikaz ne bo nujno na mestu, ki ga je predvidel avtor.
V poglavju o rezultatih naj bo isti podatek vedno prikazan le enkrat. Avtorji naj se odločijo, kateri način (slika, tabela ali prikaz v vezanem besedilu) je najbolj primeren in informativen. Opombe pod črto naj bodo vključene v prispevek le izjemoma.

Citiranje, literatura

Uporabljene reference drugih avtorjev naj bodo v besedilu citirane po harvardskem sistemu: npr. Rostohar (1952) ali (Rostohar, 1952). Kadar je citiranih več avtorjev, so navedeni v abecednem redu, npr. (Bujas, 1953; Rostohar, 1952; Trstenjak, 1953). Citati posameznih referenc so ločeni s podpičjem, npr. (Petrič, 1970; Petrovič, 1969). Kadar sta citirano delo napisala dva avtorja, se ves čas v prispevku navaja priimka obeh avtorjev (npr. Schutz in Gessaroli, 1993). Kadar so citirano delo napisali trije, štirje ali pet avtorjev, so pri prvem citiranju vedno navedena imena vseh soavtorjev, npr. (Toličič, Šebek, Pečjak in Zorman, 1957), pri morebitnih naslednjih citatih pa le ime prvega avtorja, za druge pa je dodano le "idr."; drugi citat bi se tako glasil (Toličič idr., 1957). Kadar je citirano delo napisalo šest avtorjev ali več, se v vsem prispevku navaja le ime prvega avtorja in doda "idr.". Kadar je citiranih več del istega avtorja, napisanih v istem letu, so letnicam dodane male črke po abecednem redu, npr. (Peršič, 1968a, 1968b).
V seznamu literature na koncu prispevka so navedena po abecednem redu avtorjev (in brez zaporednih številk) vsa v besedilu citirana dela (in samo ta). Celoten seznam literature mora biti napisan v skladu z APA standardi citiranja. Pri navedbi vira so vedno izpisana imena vseh avtorjev prispevka, ne glede na to, koliko jih je.
Navedki prispevkov v revijah morajo vsebovati priimek avtorjev, začetnice imena, leto izdaje, naslov prispevka, polno (neokrajšano) ime revije (v poševnem tisku), letnik (v poševnem tisku), če se v vsakem zvezku znotraj istega letnika število strani začne z 1, tudi številko zvezka (v oklepaju, stičnim z letnikom, v navadnem tisku), in navedbo strani, na katerih je natisnjen prispevek (pri tem uporabljamo pomišljaj –, ne vezaj -). Paziti je potrebno na ločila, ki ločijo posamezne enote navedka. Primer navedbe:

> Plomin, R. in Caspi, A. (1998). DNA and personality. *European Journal of Personality, 12*, 387–407.

Navedba avtorske knjige vsebuje priimek avtorjev, začetnice imena, leto izdaje, naslov knjige (v poševnem tisku), kraj izdaje in založbo. Primer navedbe:

> Lazarus, R. S. (1991). *Emotion and adaptation.* Oxford: Oxford University Press.

Navedba poglavja avtorja v knjigi z urednikom vsebuje priimek avtorjev, začetnice imena, leto izdaje, naslov poglavja v knjigi, začetnice imena ter priimek urednikov, označbo, da gre za urednike, naslov knjige (v poševnem tisku), strani, na katerih je natisnjeno poglavje, kraj izdaje in založbo. Primer navedbe:

> Schutz, R. W. in Gessaroli, M. E. (1993). Use, misuse and disuse of psychometrics in sport psychology research. V R. N. Singer, M. Murphey in L. K. Tennant (ur.), *Handbook of research in sport psychology* (str. 901–917). New York: Macmillan.

Vsaka navedba prispevka, katerega naslov ni v angleščini, mora imeti v seznamu referenc v oglatem oklepaju (v enakem tisku kot naslov prispevka) dodan tudi angleški prevod naslova prispevka. Primera navedbe:

> Pogačnik, V. (1995). *Pojmovanje inteligentnosti [Conceptions of intelligence].* Radovljica: Didakta.
> Tušak, M. (1998). Barvne preference, simbolika barv in osebnost [Colour preferences, colour symbolism and personality]. *Psihološka obzorja, 7*(4)*,* 67–79.

Oddajanje prispevkov

Avtorji besedilo in druge dele prispevka pripravijo v elektronski obliki. Datoteke, ki naj bodo poimenovane s priimkom prvega avtorja in dodano specifično oznako (npr. novak-besedilo.doc; novak-tabeleslike.doc), avtorji pošljejo glavni in odgovorni urednici na elektronski naslov cveta.pucko@pef.uni-lj.si.
Ob prvem pošiljanju prispevka avtorji pripravijo dodatno datoteko (npr. novak-kontaktnipodatki.doc) z osnovnimi podatki o prispevku in avtorjih: izpišejo naslov prispevka, ime in priimek avtorjev, strokovne nazive, ime inštitucije, v kateri so zaposleni (v slovenščini in angleščini), in natančen naslov tistega avtorja, s katerim bo uredništvo revije komuniciralo (tudi elektronski naslov, številko telefona in, če je možno, telefaksa ter URL naslov).
Če bo potrebno (npr. v primeru, da prispevek vsebuje veliko simbolov, ki jih računalniki recenzentov ne bi ustrezno interpretirali, ali v primeru, da recenzenti želijo pregledovati natisnjeno obliko prispevka), bo urednica naknadno zaprosila še za natisnjeno obliko prispevka.
Po končanem redakcijskem postopku in strokovnih recenzijah bo avtor prejel recenziji prispevka in kratko mnenje urednice glede sprejetja besedila v objavo. V primeru, da je prispevek sprejet v objavo, avtorji upoštevajo vse prejete pripombe, popravke in sugestije ter pripravijo končno verzijo prispevka. V končni verziji naj bo prva stran besedila takoj za naslovom prispevka dopolnjena še z imenom in priimkom avtorjev, imenom in krajem inštitucije, kontaktnimi podatki in morebitnimi dodatnimi informacijami o financerju študije, o tem, da je bil prispevek predstavljen na kakšnem od kongresov, ali zahvalo. Za angleškim naslovom naj bodo dodani imena in priimki avtorjev ter ime, kraj in država njihovih institucij v angleščini.
Avtorji tudi končno verzijo prispevka oddajo glavni in odgovorni urednici v elektronski obliki. Če je potrebno, natisnejo en izvod prispevka in ga pošljejo na naslov urednice (v tem primeru bodo tipkopis in slike mesec dni po objavi uničeni, če avtorji ne bodo posebej pisno zahtevali vrnitve originalnih gradiv).

Zaključne opombe

Poslana končna verzija rokopisa pomeni tudi potrditev avtorjev, da prispevek v enaki ali podobni obliki ni bil objavljen v kateri drugi domači ali tuji publikaciji in da tudi v bodoče ne bo brez poprejšnjega soglasja izdajatelja Psiholoških obzorij. S spletnih strani http://psy.ff.uni-lj.si/iGuests/Obzorja/Avtorjem/avtorjem.html avtorji natisnejo, izpolnijo in podpišejo Obrazec za odstop avtorskih pravic ter ga po navadni pošti pošljejo urednici. Uredniški odbor, uredniški svet ter izdajatelj ne prevzemata odgovornosti za strokovna mnenja in trditve oziroma zaključke, ki so jih podali avtorji v posameznih prispevkih.

Instructions for Authors

Papers should be written either in Slovenian or English language (occasionally, the Scientific Board might also accept for publication papers in other languages). Scientific and technical papers should be written in economic, intelligible, clear and concise style. An *empirical paper* should report original research, presenting all the standard elements of scientific investigation (introduction, method — including *participants*, *instruments* and *procedure* - results, discussion, references). A *theoretic paper* is expected to examine in detail and critically analyse selected models and/or theories, and empirical data are described only if they are directly related to the theory. A *review paper* is expected to evaluate previously published work and it is typically composed of the following sections: problem definition, summary of previous research, explanation of subject matter inter-relations, contradictions, problems, and suggestions for further research. *Meta-analytic study* is a particular type of article, based on the established meta-analysis methodology, comparing different empirical investigations addressing a common problem.
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2. The problem should be clearly and consistently defined, following logically from the introduction. It should be of sufficient relevance and novelty, whereby the new dilemmas opened should be emphasised.
3. Research hypotheses and variables of interest should be concisely defined; the observation and measurement procedures should be precisely described. A short but accurate description of psychological instruments applied and of the methodology in general (research design, selection of participants) is mandatory.
4. Application of statistical techniques should be described in sufficient detail. The tables and figures may only contain essential information (if necessary, details can be presented separately in appendix).
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