

Center za raziskovanje in spodbujanje nadarjenosti  
na Pedagoški fakulteti Univerze v Ljubljani  
Centre for Research and Promotion of Giftedness  
at the Faculty of Education of the University of Ljubljana

## 2. MEDNARODNA KONFERENCA *2nd INTERNATIONAL CONFERENCE*

PREPOZNAVANJE NADARJENIH  
IN DELO Z NJIMI NA PODROČJU  
VZGOJE IN IZOBRAŽEVANJA  
*IDENTIFYING THE GIFTED AND  
WORK WITH THEM IN EDUCATION*

Zbornik povzetkov  
*Book of Abstracts*

21. in 22. september 2017  
*September 21st and 22nd, 2017*

LJUBLJANA, SLOVENIJA



Univerza v Ljubljani  
Pedagoška fakulteta



Center za raziskovanje in spodbujanje nadarjenosti



European Talent  
Support Network

Center za raziskovanje in spodbujanje nadarjenosti na Pedagoški fakulteti  
Univerze v Ljubljani

Centre for Research and Promotion of Giftedness at the Faculty of Education of  
the University of Ljubljana

## 2. MEDNARODNA KONFERENCA

## 2<sup>nd</sup> INTERNATIONAL CONFERENCE

# Prepoznavanje nadarjenih in delo z njimi na področju vzgoje in izobraževanja

# Identifying the Gifted and Work with Them in Education

Zbornik povzetkov / Book of Abstracts

21. in 22. september 2017 / September 21<sup>st</sup> and 22<sup>nd</sup>, 2017

Pedagoška fakulteta Univerze v Ljubljani /

Faculty of Education of the University of Ljubljana

Ljubljana, Slovenija

Zbornik povzetkov 2. mednarodne strokovno-raziskovalne konference

Prepoznavanje nadarjenih in delo z njimi na področju vzgoje in izobraževanja

**Organizator:**

Center za raziskovanje in spodbujanje nadarjenosti na Pedagoški fakulteti Univerze v Ljubljani

**Programski odbor:**

prof. dr. Mojca Čepič, izr. prof. dr. Vesna Ferk Savec, prof. mag. Črtomir Frelih, izr. prof. dr. Mojca Juriševič, doc. dr. Boštjan Kuzman, izr. prof. dr. Karmen Pižorn, izr. prof. dr. Jurij Selan, prof. dr. Barbara Siherl Kafol, doc. dr. Darija Skubic, izr. prof. dr. Gregor Torkar, doc. dr. Maja Umek, doc. Alenka Vidrih

---

*Uredila:* Mojca Juriševič

*Strokovni pregled:* Mojca Čepič, Vesna Ferk Savec, Mojca Juriševič, Boštjan Kuzman, Karmen Pižorn, Darija Skubic, Gregor Torkar, Maja Umek

*Jezikovni pregled:* Darija Skubic

*Izdala in založila:* Pedagoška fakulteta Univerze v Ljubljani

*Za izdajatelja:* Janez Vogrinc, dekan

*Oblikovanje naslovnice:* Jurij Selan

*Slika na naslovnici:* Črtomir Frelih, Šopek, 2017

*Priprava in oblikovanje:* Urška Žerak

*Dosegljivo na:*

[http://www.pef.uni-lj.si/fileadmin/Datoteke/CRSN/konferanca\\_2017/Zbornik\\_povzetkov.pdf](http://www.pef.uni-lj.si/fileadmin/Datoteke/CRSN/konferanca_2017/Zbornik_povzetkov.pdf)

Kataložni zapis o publikaciji (CIP) pripravili v Narodni in univerzitetni knjižnici v Ljubljani

[COBISS.SI-ID=292875008](#)

ISBN 978-961-253-220-8 (pdf)



Univerza v Ljubljani  
Pedagoška fakulteta



## KAZALO

<b>UVODNI NAGOVORI / INTRODUCTORY GREETINGS .....</b>	<b>7</b>
<b>PLENARNA PREDAVANJA / PLENARY LECTURES.....</b>	<b>13</b>
Učno okolje za nadarjene: didaktični pristopi in strategije .....	14
CyberMentor: spletni mentorski program za nadarjena dekleta na področjih naravoslovja, tehnike in tehnologije, inženirstva in matematike .....	17
<i>Heidrun Stoeger</i>	
Dober začetek: kaj to pomeni za mlajše nadarjene učence? .....	20
<i>Margaret Sutherland</i>	
Študija primera univerzitetnega programa za nadarjene učence: CTY Irska .....	22
<i>Colm O'Reilly</i>	
Izobraževanje nadarjenih in struktura ustvarjalnega vedenja .....	25
<i>Željko Rački</i>	
<b>SEKCIJE / SECTIONS .....</b>	<b>28</b>
Nadarjeni otroci v vrtcu – kako bivati in delati z njimi? .....	30
<i>Marta Brln</i>	
Our experiences in working with potentially gifted preschool children in the kindergarten „Mediterranean flower“ .....	31
<i>Mirjana Baković, Helena Mirić, Jelena Birsa, Ranka Mustić, Nives Urlić, Sandra Spralja and Zeljana Vivodinac</i>	
Evalvacija programa NTC (Nurture of talented children) učenja v vrtcu.....	32
<i>Leonora Drgan</i>	
Early identification and creatively-productive giftedness: approaches and methods.....	34
<i>Jasna Cvetković - Lay</i>	
Spodbujanje razvoja pisalnih spretnosti zmožnejših otrok prvega razreda – študija primera.....	35
<i>Katarina Grom</i>	
Prepoznavanje in delo z nadarjenimi učenci v prvem triletju osnovne šole .....	37
<i>Robert Ogulin</i>	
Je individualizacija dela z nadarjenim mladostnikom resnično pravi in edini možni način dela? (Osebno/refleksivno razmišljanje učitelja) .....	40
<i>Ksenija Bračič Bračko</i>	
Delo z nadarjenimi dijaki pri predmetnem področju zgodovine .....	42
<i>Natalija Šekoranja Špiner</i>	
Nadarjen, nendarjen – hočem več fizike! .....	44
<i>Tanja Blažič</i>	
Delavnica z biološkimi eksperimenti za nadarjene dijake .....	45

*Irena Rutar*

**Kako z robotiko spodbuditi inovativnost in željo po raziskovanju? .....** 47

*Matjaž Furlan in Lea Kosmač*

**What are the best predictors of success in STEM among youth? .....** 49

*Valentina Mladinov, Petar Čuček, Sara Findrik, Korado Korlević*

**When peer is the best appeal: Impacts of the Youth Platform Summit activities of the European Talent Support Network .....** 50

*Petra Anna Fügedi*

**Izziv prepoznavanja nadarjenosti – prezrte nadarjenosti .....** 52

*Renata Kolšek*

**Odnos učiteljev do učencev glede na (ne)prepoznano nadarjenost .....** 54

*Ksenija Domiter Protner*

**Nadarjeni učenci s primanjkljaji na posameznih področja učenja .....** 55

*Suzana Padežanin Lavuger*

**Samoevalvacija dela z nadarjenimi .....** 56

*Mojca Štor in Tinkara Verbuč Rosenstein*

**Oblike dela z nadarjenimi učenci in njihova evalvacija na OŠ Žiri .....** 58

*Petra Cankar*

**All rise: raising identification efficacy by raising awareness to interviewer bias .....** 59

*Rita Nadas*

**Učiti se, da bi vedeli in znali .....** 60

*Ana Tušek*

**Programi za nadarjene na OŠ Franceta Prešerna Črenšovci .....** 63

*Marija Horvat, Metka Husar Ščernjavič*

**Centri izvrstnosti v Varaždinski županiji .....** 64

*Miroslav Huđek, Snježana Pejnović*

**Primeri dela z nadarjenimi pri pouku TIT.....** 66

*Primož Trček*

**Raziskovalna dejavnost kot ena od možnih oblik dela z nadarjenimi učenci .....** 68

*Anita Fartek*

**Načrtovanje in izvajanje obogatitvenih dejavnosti za nadarjene učence .....** 70

*Vesna Jelen Godunc*

**Soba pobega (escape room) na temo fraktalov .....** 72

*Polona Fritz Tomšič*

**Sparks - Program for gifted children.....** 75

*Tomislav Goldin and Ksenija Benaković*

<b>Medvrstniška pomoč nadarjenih in razvijanje njihovih potencialov skozi projekt prostovoljstvo</b>	<b>76</b>
<i>Smiljana Valcl</i>	
<b>Z alternativnim programom do socialno uspešnega mladostnika .....</b>	<b>77</b>
<i>Vesna Starman</i>	
<b>Glasba, naša si radost ... Izkušnje in pogledi na glasbeno olimpijado .....</b>	<b>78</b>
<i>Branka Rotar Pance</i>	
<b>Profesionalni razvoj učitelja za delo z nadarjenimi učenci .....</b>	<b>79</b>
<i>Polonca Pangrčič</i>	
<b>Večjezičnost in nadarjenost .....</b>	<b>81</b>
<i>Kristina Tomc</i>	
<b>Od ideje do časopisa Nastajanje šolskega časopisa spodbuja ustvarjalnost .....</b>	<b>82</b>
<i>Sabina Leben, Majda Šubic, Urška Zihirl</i>	
<b>Ustvarjamо z literarnim junakom .....</b>	<b>84</b>
<i>Patricija Kravanja</i>	
<b>Delo z nadarjenimi učenci v drugi polovici osnovne šole na področju slovenščine .....</b>	<b>86</b>
<i>Maja Brezovar</i>	
<b>Skok v znanje.....</b>	<b>88</b>
<i>Petra Cimerman, Barbara Pristovnik</i>	
<b>Kako delati z nadarjenimi učenci v osnovni šoli? .....</b>	<b>90</b>
<i>Saša Mezek</i>	
<b>PLAKATI / POSTERS .....</b>	<b>91</b>
<b>O petelinčku, ki se je učil kikirikati .....</b>	<b>92</b>
<i>Katarina Tischer Gregorič</i>	
<b>Evolucija .....</b>	<b>94</b>
<i>Laura Ozebek</i>	
<b>Program za nadarjene dijake v XV. gimnaziji v Zagrebu.....</b>	<b>95</b>
<i>Ines Dukić, Sanja Antoliš, Mihaela Marceljak Ilić, Bernardica Mlinarić, Vesna Smadilo Škornjak, Eva Špalj</i>	
<b>Spodbujanje nadarjenih na področju ustvarjalnosti in naravoslovja in tehnike .....</b>	<b>96</b>
<i>Jasmina Velikanje</i>	
<b>Projects and Programmes of Center for Gifted Child Development (An Overview from 1995 to 2015) .....</b>	<b>97</b>
<i>Jasna Cvetković - Lay</i>	
<b>Mavrica ustvarjalnosti .....</b>	<b>98</b>
<i>Tatjana Dominić Radivojević, Adelina Pahor, Mateja Barbarič, Nevenka Šergon Omahen</i>	
<b>28 years of Višnjan educational programs – past, present and future .....</b>	<b>100</b>

*Petar Čuček and Korado Korlević*

<b>OKROGLI MIZI / ROUND TABLES .....</b>	<b>101</b>
<b>Raziskovanje z nadarjenimi.....</b>	<b>102</b>
<i>Mojca Čepič</i>	
<b>Nadarjeni o izobraževanju nadarjenih.....</b>	<b>104</b>
<i>Gregor Torkar</i>	
<b>PROJEKT »24 NADur« / PROJECT »24NADur« .....</b>	<b>108</b>
<b>Poročilo o mednarodnem tekmovanju nadarjenih srednješolcev iz Točk za nadarjene Centra za raziskovanje in spodbujanje nadarjenosti .....</b>	<b>109</b>
<i>Gregor Torkar</i>	
<b>PROGRAM / PROGRAMME.....</b>	<b>113</b>
<b>Predstavniki točk za nadarjene in evropskih centrov za nadarjene na konferenci / Representatives of Talent points and European Talent Centres at the conference .....</b>	<b>115</b>
<b>ZAHVALI .....</b>	<b>118</b>

# UVODNI NAGOVORI / INTRODUCTORY GREETINGS

---



Spoštovane kolegice, spoštovani kolegi,  
dobrodošli na Pedagoški fakulteti Univerze v Ljubljani.

V vrtcih, osnovnih in srednjih šolah ste pred kratkim začeli z novim šolskim letom, na fakultetah pa se intenzivno pripravljamo na začetek novega študijskega leta. Prihajajoče študijsko leto je za našo fakulteto še posebej pomembno, saj praznujemo 70-letnico svojega delovanja. To pomeni, da že 70 let širimo znanje in z izobraževanjem prihodnjih pedagoških delavcev, ki širijo znanje na številne generacije otrok, dajemo znanju besedo in podobo.

V času priprav na novo študijsko leto najbrž vsi pedagoški delavci, ne glede na to, na kateri ravni izobraževalnega sistema smo zaposleni, pogosto razmišljamo o tem, kakšne otroke, učence, dijake oz. študente bomo v prihajajočem letu imeli – kako bomo svoje delo prilagodili njihovim zmožnostim, interesom, kako jih bomo motivirali za učenje oz. študij in se ukvarjamо tudi z vprašanjem, ali bomo znali prepoznati njihove zmožnosti in ustvariti učno okolje, ki jim bo omogočilo, da optimalno razvijejo svoje potencialne.

Da je organizacija pedagoškega procesa izredno zahtevno delo, najbolje veste vi, ki se vsak dan ukvarjate s tem, kako organizirati delo v oddelku, ko imate v njem nekaj učencev, ki so nadarjeni in to na različnih področjih, pa nekaj učencev, ki imajo odločbo o usmeritvi in še kakšnega učenca priseljenca, katerega materni jezik ni slovenščina. Individualizacija pedagoškega dela zahteva pedagoške delavce, ki so, ne le izvrstno izobraženi na didaktičnem področju, ki torej poznajo različne didaktične pristope in strategije, ampak ki tudi znajo prepoznati potrebe posameznika in so motivirani za to, da mu prilagodijo način dela.

Ja, pedagoški poklic je zahteven poklic. Morda je celo bolje reči, da ni le poklic, ki ga opravljaš 8 ur na dan, potem pa ga do naslednjega dne odmisliš, ampak je za mnoge pedagoške delavce to način življenja. Ko tudi v svojem prostem času razmišljajo o tem, kaj bi bilo možno še narediti, da bi bili dosežki otrok, učencev oz. študentov še boljši. Žal pa imajo mnogi pedagoški delavci v teh svojih razmišljanjih in prizadevanjih pogosto občutek, da so osamljeni. Pogosto ne čutijo prave podpore svojih sodelavk oz. sodelavcev, vodstva, širše družbe, kaj šele tistih, ki so na ravni države odgovorni za celoten vzgojno-izobraževalni sistem.

A nekako se zdi, kot da smo vsaj na določenih področjih, kot je npr. področje dela z nadarjenimi, ugotovili, da je večja moč v povezovanju kot v osamljenosti. Tudi v povezovanju različnih držav.

V kratki zgodovini delovanja CRSN-ja, ki tudi organizira današnjo 2. mednarodno strokovno-raziskovalno konferenco, so aktivnosti tega centra postale ena najbolj prepoznavnih aktivnosti naše fakultete širom po svetu. Povezovanju posameznikov in ustanov, ki vas zanima delo z nadarjenimi ter izmenjava izkušenj, dobrih praks, strokovnih znanj in raziskovalnih idej s področja prepoznavanja nadarjenih in dela z njimi, je namenjena tokratna konferenca.

Prepričan sem, da bomo skupaj ustvarili še boljše pogoje za delo z nadarjenimi, zato se zahvaljujem vsem, ki ste organizirali današnjo konferenco, še posebej predstojnici Centra za raziskovanje in spodbujanje nadarjenosti, izr. prof. dr. Mojci Juriševič, in vsem, ki ste prišli na Pedagoško fakulteto in ste pripravljeni deliti svoje znanje in izkušnje.

Vsem želim uspešno konferenco in prijetno druženje.

izr. prof. dr. Janez Vogrinc,  
dekan Pedagoške fakultete Univerze v Ljubljani



Ladies and Gentleman, dear guest!

In gifted and talented education networks mean special provisions equally both for the gifted and talented students themselves and for those who provide the different forms of talent support from creating a talent friendly society to mastering the most effective know-how in classrooms. The shared philosophy behind it is firstly the belief in the value of human capacities; secondly the belief that the numerous actors of a society involved in education are together responsible for optimizing these capacities and thirdly that this optimization brings satisfaction and happiness on the level of the individuals as well as on that of societies. The European Talent Support Network is one of those initiatives which draw attention to these numerous actors and to the fact that being organized in a complex network and being visible can help strengthening the side by side existing efforts in talent support.

Just yesterday we had a so called EGIFT meeting where one of our colleagues, Margaret Sutherland told us that during our work together you could feel the sense of trust, very simply because we know each other well and thus trust became the strength of our mutual project.

Building trust is a very hard it takes time and tremendous invested efforts. We have to overcome misunderstandings and we have to believe in the capacity of understanding each other at least to some extent. And this is also a shared belief behind network creating.

One of the very first ideas of organizing regular networking events for professionals and for administrators in the field of gifted education in the Central European region was initiated by the Austrian Ministry of Education 13 years ago.

In 2007 Slovenia was the responsible country for organising the 4th regular Central European networking meeting. I also remember that this was the first time I spoke about – among lots of other issues - Talent Points, quite an unsettled idea at the time. a that time still quite unsettle idea of Talent Points. At that time we had 5 Talent Points in Hungary (just to compare now we cc. 1500).

5 years later the last Central European meeting in 2012 one of the tasks was to try to define the criteria of the possible future European Talent Centers and Talent Points. Our discussion on that topic was one of those numerous efforts ongoing from 2012 - 2015 when we tried exchanging ideas, knowledge, beliefs which finally led us to the establishment of the European Talent Support Network. Naturally the fact that Peter Csermely, a network scientist became the President of ECHA helped immensely.

In 2014 at the ECHA Conference held in Ljubljana the so-called Qualification Committee was elected. After six months of consultations, the Qualification Committee announced the first “Call to Be a European Talent Centre” on the ECHA website in February 2015. The Committee selected the first 14 European Talent Centres in the summer 2015 and the Slovenian Centre was among the first 14 centres.

Thanks to the work of the Qualification Committee and the first Talent Centres in 2016 the Network was enriched by around 280 Talent Points from 38 countries and at the moment we have 20 Talent Centres.

All European Talent Centres do excellent professional work in several talent support fields, but they are quite different in many respects. The set of activities of individual European Talent Points may also be different: some tend to focus more on teacher training, others on working directly with young talents. This diversity is crucial to the strength of the emerging European Talent Support Network.

Within the Network, the European Talent Centres assume more responsibility for coordination and information supply at regional, national or all-European level. Thus the main tasks of the Centres include, in addition to their own quality work, network-building and the supply of relevant professional information to the Network members and creating opportunities for networking.

We can say that the European Talent Centre in Ljubljana in the Faculty of Education of the Ljubljana University does a great job in that sense, too. This conference, and your presence here is one of the best proof of their work. Just in two years this centre led by Ass Prof Mojca Jurisevic was able to create one of the biggest network among all the countries involved in the European Talent Support Network. The Ljubljana Centre is in connection with more than 30 Talent Points in 5 countries and has organised already 2 conferences giving networking possibilities to their contacts.

Let me just grab the opportunity to say a special thank for this incredible work to Mojca Jurisevic.

Also let me greet this conference on behalf of Professor Albert Ziegler, the President of the European Talent Support Network and on behalf of Professor Peter Csermely, the President of ECHA.

And lastly, I am here in 2 different roles so according to those roles I wish you a great conference as the coordinator of the European Talent Support Network but I am also here as an active member of a small Croatian Talent Point called SIAC which was founded by a group of international artist in Splitska 4 years ago let me have the opportunity to give you the greetings of that Talent Point as well.

Csilla Fuszek

Director of the Talent Centre Budapest & Member of the ETSN Council



Spoštovani izr. prof. dr. Janez Vogrinc, dekan UL PEF, spoštovana gospa Csilla Fuszek, direktorica Evropskega centra za nadarjene iz Budimpešte in članica Sveta evropske mreže za nadarjene, spoštovani gostje, udeleženke in udeleženci konference, kolegice in kolegi, študentke in študenti, prav lep pozdrav vsem v imenu CRSN-ja.

Letošnja konferenca je nadaljevanje CRSN-jevih strokovnih druženj v zadnjih letih. Njena posebnost je, da je še posebej namenjena medsebojnemu spoznavanju in strokovni izmenjavi med pedagoškimi strokovnjaki in raziskovalci, med Točkami in Centri za nadarjene znotraj Evropske podporne mreže za nadarjene (ETSN), obenem pa odprta za vse, ki se na kakršenkoli način ukvarjajo z vzgojo in izobraževanjem visoko sposobnih in talentiranih posameznikov.

Program konference je pester: vsebuje pet plenarnih predavanj, pet sekcij z individualnimi referati, devet plakatov ter dve okrogle mizi; prva je namenjena razpravi o raziskovanju z nadarjenimi, druga pa glasu nadarjenih, da bodo mladi lahko povedali, kako razmišljajo o svojem izobraževanju ter česa si v tem okviru še želijo in kaj potrebujejo.

Novost, ki jo prinaša letošnja konferenca, je tekmovanje za nadarjene dijake, ki smo ga poimenovali 24NADur, saj bo trajalo neprekinjeno štiriindvajset ur. 24NADur je namenjeno dijakom z gimnazij, ki so naše Točke; osem ekip dijakov se bo v njem pomerilo v reševanju zanimivega, a kompleksnega problema, povezanega s trajnostnim razvojem, ter svoje ustvarjalne rešitve predstavilo jutri. Vabljeni k spremeljanju.

V imenu CRSN-ja vam želim prijetno medsebojno spoznavanje ter strokovno izmenjavo ter nove povezave. Naj letošnja konferenca zaživi v duhu: POSLUŠAJ – POVEJ – VPRAŠAJ – KOMENTIRAJ. Jezik naj pri tem ne bo ovira, temveč ključno orodje za sporazumevanje in razumevanje med več kot 200 udeležencami letošnjega srečanja.

izr. prof. dr. Mojca Juriševič,  
predstojnica CRSN in članica Sveta ETSN

Dear Assoc. prof. dr. Janez Vogrinc, Dean of the UL PEF, Honoured Mrs. Csilla Fuszek, Director of the European Talent Center for talents from Budapest and a member of the European Talent Support Network Council, distinguished guests, participants of the conference, colleagues, and students:  
A warm welcome on behalf of CRSN.

This year's conference is a continuation of CRSN's professional gatherings in recent years. Its specialty is that it is focused especially to mutual understanding and professional exchange between education experts and researchers, between Talent Points and Talent Centres for gifted within the European talent support network (ETSN), but at the same time it is open to all others who deal with the education and training of high-skilled and talented individuals.

The conference has a diverse program: it contains five plenary lectures, five sections with individual papers, nine posters, two round tables, one on the topic of research with gifted students and the other as a voice of gifted themselves on their education and their wishes and further needs. The novelty of this year conference is a competition for gifted students, which we entitled 24NADur. Actually, it will last exactly 24 hours. It is organised for upper secondary schools called gymnasiums, who are CRSN's Talent Points. Specifically, eight teams of gifted students will compete in solving an interesting and complex problem related to sustainable development, and present their creative solutions tomorrow. You are welcome to follow.

On behalf of CRSN, I wish you a pleasant conference full of interaction, professional exchange, and new friendships. Let this year's conference come to life in the spirit of: HEAR – EXPLAIN – ASK – COMMENT. Language should not be a barrier, but a key tool for communication and understanding among more than 200 participants of this year conference.

Assoc. prof. Mojca Juriševič, Ph.D.  
Head of the CRSN & Member of the ETSN Council

# **PLENARNA PREDAVANJA / PLENARY LECTURES**

---

## Učno okolje za nadarjene: didaktični pristopi in strategije

Fani Nolimal

*Zavod Republike Slovenije za šolstvo*

Ključne besede: učno okolje, nadarjeni, didaktični pristopi, notranja oz. koncentrična diferenciacija, diferenciacijski ukrepi

Učno okolje določa dinamiko in interakcije med učencem, učiteljem, učno vsebino in učnimi viri ter tehnologijami (Dumont in Istance, 2010), kar se odraža v različnih didaktičnih pristopih (strategijah) in učnih aktivnostih. Katero učno okolje, didaktični pristopi in učne aktivnosti omogočajo učinkovito učenje in razvoj nadarjenih? Glede na raznolike značilnosti nadarjenih je odgovor v sproščenem, fleksibilnem, podpornem in dovolj zahtevnem, a ne preobremenjujočem učnem okolju, ki pri nadarjenih spodbuja razvoj odgovornosti in avtonomije, podpira različne potrebe posameznih učencev in poudarja njihova močna področja ter gradi vzajemno odgovornost za razredno klimo. Z didaktično-metodičnega vidika je to učno okolje, ki je strukturirano na način, da omogoča projektno, sodelovalno, raziskovalno in samostojno učenje; zagotavlja na učenca osredotočen in s sodobno tehnologijo podprt učni proces; je personalizirano – občutljivo za individualne razlike in individualno povratno informacijo o učenju; je inkluzivno in zagotavlja samostojno učenje v majhni socialni učni skupini (Dumont in Istance, 2010; Tomlinson, 1999).

Skladno s sodobnimi trendi vzgoje in izobraževanja potencial nadarjenih razvijamo predvsem v naravnih, heterogenih učnih skupinah in učnih okoljih z ustrezno notranjo (Strmčnik, 1993, 2001) oz. koncentrično diferenciacijo (Visser, 1993; O'Brien in Guiney, 2001). Ta poleg temeljnega znanja in spremnosti za vse oz. večino učencev, omogoča tudi doseganje razširjenega in prilagojenega znanja ter spremnosti za nadarjene učence. Skladno s tem izvajamo diferenciran pouk v okviru individualnih izobraževalnih programov, kjer uporabljamo diferenciacijske ukrepe oz. modifikacije posameznih didaktičnih elementov kot tudi strategij za organizacijo in vodenje diferenciranega pouka.

## The Learning Environment for Gifted Students: Didactical Approaches and Strategies

Fani Nolimal

*National Educational Institute*

Keywords: learning environment, gifted students, didactical approaches, internal/concentric differentiation, differentiation measures

The learning environment determines the dynamics and interactions between pupils, teachers, learning content and learning resources and technologies (Dumont and Istance, 2010), which is reflected in various didactic approaches (strategies) and learning activities. Which learning environment, didactic approaches and learning activities enable efficient learning and development of gifted students? Given the diverse characteristics of gifted ones, the answer is in a relaxed,

flexible, supportive and sufficiently demanding but not overloading learning environment. Environment that promotes the development of responsibility and autonomy among gifted students, supports the different needs of individual learners, emphasizing students' strengths, and builds mutual responsibility for the classroom climate. From a didactic-methodical point of view, the best learning environment is structured in a way that enables project, collaborative, enquiry and independent learning, learner-centred didactical approaches supported with a modern technology. It should be personalized – sensitive to individual differences and based on individual feedback on learning. Moreover, it should provide independently learning in the small social learning group and be inclusive (Dumont and Istance, 2010; Tomlinson, 1999).

In accordance with the modern trends in education, the potential of gifted students is developed primarily in natural, heterogeneous learning groups and learning environments with appropriate internal (Strmčnik, 1993, 2001) or concentric differentiation (Visser, 1993; O'Brien & Guiney, 2001). All the students begin with the basics and the gifted ones can obtain broader and adaptive knowledge according to their abilities. With the method introduced, above all the students gain the most profit.

In accordance with this, we perform differentiated lessons in the framework of individual educational programs, in which we use differentiation measures and modifications of individual didactic elements, as well as strategies for organizing and managing differentiated lessons.

dr. Fani Nolimal,  
Zavod Republike Slovenije za šolstvo



Dr. Fani Nolimal je učiteljica razrednega pouka, profesorica in doktorica pedagogike, zaposlena kot vodja Oddelka za osnovno šolo na Zavodu RS za šolstvo. Doktorirala je leta 2005 s področja timskega poučevanja na Oddelku za pedagogiko in andragogiko na Filozofski fakulteti v Ljubljani.

Ima bogate izkušnje s poučevanjem v osnovni šoli in opravljanjem dela pedagoške svetovalke. Izvedla je več nacionalnih in mednarodnih analiz ter vodila nekatere pomembne nacionalne razvojne projekte, npr. Fleksibilni predmetnik in Opolnomočenje učencev z izboljšanjem bralne pismenosti in dostopa do znanja.

Objavljenih ima nad 90 strokovnih in znanstvenih del s področja vodenja in organizacije dela šol ter splošne in specialne didaktike (kombinirani pouk, učna diferenciacija, tiskovno poučevanje, bralna pismenost, vzgojno-izobraževalno delo z nadarjenimi učenci). S svojimi strokovnimi prispevki je sodelovala na številnih simpozijih, konferencah, posvetih, seminarjih in delavnicah doma in na tujem.

## **CyberMentor: spletni mentorski program za nadarjena dekleta na področjih naravoslovja, tehnike in tehnologije, inženirstva in matematike**

Heidrun Stoeger

*University of Regensburg and South German Talent Centre*

Ključne besede: mentorstvo, naravoslovni predmeti, nadarjena dekleta

Učenke se v šolah veliko manj pogosto kot učenci odločajo za predmete s področjem STEM (naravoslovje, tehnika in tehnologija, inženirstvo in matematika) in posledično je verjetnost, da bodo po vpisu na fakulteto diplomirale s tega področja, manjša – ne glede na njihovo nadarjenost ali učni uspeh, tudi kadar je enakovreden uspehu njihovih moških vrstnikov ali ga celo prekaša. Poleg tega se zgodnje zanimanje za predmete STEM zmanjša, ko dekleta postanejo starejša. Šolskim izobraževalnim ukrepom pri poskusih izboljšanja te situacije pogosto spodleti. V Nemčiji posledično vedno več programov poskuša najti pravo rešitev. CyberMentor je izvenšolski program, ustvarjen z namenom, da nadarjena dekleta navduši za STEM in jim omogoči razvijanje njihove nadarjenosti na teh področjih. Vsako leto v programu CyberMentor sodeluje približno 800 deklet iz visokokakovostnih srednjih šol. Vsaki udeleženki je dodeljena osebna mentorica, s katero ima možnost sodelovati vsaj 12 mesecev. Vse mentorice so ženske, ki imajo diplomo s področja STEM in trenutno delajo v eni od strok STEM. Mentorice in dijakinje komunicirajo o študiju in karieri na področjih STEM in sodelujejo na zanimivih projektih STEM. Sodelajoče v programu prav tako lahko komunicirajo med seboj. Komunikacija in projektne aktivnosti potekajo na spletni platformi po elektronski pošti, na forumu in na spletni klepetalnici, ki so na voljo zgolj članom.

V predavanju bom najprej na kratko predstavila program in njegov postopni razvoj v preteklem desetletju z vidika spremljajočih empiričnih raziskav. V prizadevanjih za ocenjevanje in izboljšanje učinkovitosti programa smo izvedli vzdolžne primerjave med udeleženkami programa CyberMentor in tremi kontrolnimi skupinami: a) kontrolno skupino deklet s čakalnega seznama, ki so se prijavile na program, a v njem še niso sodelovale; b) kontrolno skupino deklet s povprečnimi interesi STEM in c) kontrolno skupino fantov s povprečnimi interesi STEM. Predstavitev raziskovalnih rezultatov bo sledila diskusija o uporabi predstavljenih spoznanj v praksi.

## **CyberMentor: An Online Mentoring Program for Talented Girls in STEM**

Heidrun Stoeger

*University of Regensburg and South German Talent Centre*

Keywords: mentorship, STEM, talented girls

Female students are less likely to choose STEM subjects in school and less likely to major in STEM when they go to college—regardless of their talents, and even when their scholastic performance equals or surpasses that of their male peers. Furthermore, early interest in STEM typically decreases as girls get older. In-school educational interventions often fail to improve this situation. An increasing number of programs are attempting to remediate this problem in Germany. CyberMentor is an extracurricular program designed to get talented girls excited about STEM and to facilitate their talent development in STEM. Roughly 800 girls in high-achiever-track secondary education participate in CyberMentor every year. Each mentee is matched with a personal female mentor and has the chance to work with her for at least 12 months. All mentors are women who have a degree in STEM and are currently working in a STEM profession. Mentor and mentee communicate about STEM majors and careers and collaborate on exciting and challenging projects in STEM. Program participants also communicate with other program participants beyond their immediate mentoring dyad. Communication and project activities take place on a members-only online platform via email, forums, and online chat.

I will first briefly describe the program and how it has been continually developed over the past decade according to the results of our ongoing accompanying research. In an effort to gauge and improve the program's effectiveness, we carried out longitudinal comparisons among participants and three control groups: (a) a waiting-list control group consisting of girls with the same interests and who had registered for the program, but not yet participated; (b) a control group of girls with average interests; and (c) a control group of boys with average interests. After describing some of my research findings, there will be an opportunity to discuss how these findings can be used in practice.

Prof. Heidrun Stoeger, Ph.D.  
*University of Regensburg and South German Talent Centre*



Heidrun Stoeger completed her Ph.D. in psychology, on "Social Performance Goals in Scholastic Contexts," at the University of Munich, in Germany, in 2001. She earned her post-doctoral university researcher accreditation (Habilitation) in the fields of psychology and empirical education research at the same institution with work on "Giftedness Research and Gifted Education."

After professorships at the universities in Ulm and Koblenz, in Germany, and at the University of British Columbia, she took over the Chair Professorship of School Research, School Development, and Evaluation at the University of Regensburg, in Germany and now she is Full Professor for Education at Regensburg University, Germany.

She holds the chair for School Research, School Development, and Evaluation. She has published books, chapters and articles in the fields of talent development, educational psychology and education. She was editor-in-chief of High Ability Studies (2007–2014), and is a member of the editorial board of the German-language gifted-education journal Journal für Begabtenförderung. She is Vice President of the International Research Association for Talent Development and Excellence (IRATDE).

Her main research interests in the field of talent development are underachievement, teacher training, the Actiotope Model of Giftedness, and learning and motivational training programs.

## **Dober začetek: kaj to pomeni za mlajše nadarjene učence?**

Margaret Sutherland

*University of Glasgow*

**Ključne besede:** mlajši nadarjeni učenci, zgodnje izobraževanje, razvoj

Nova mednarodna študija o zgodnjem učenju (ang. International Early Learning Study – IELS) se usmerja na štiri področja in je tesno povezana z diskurzom o pripravljenosti na šolo. Moč je trditi, da bo ta študija koristila nadarjenim učencem, saj so pogosto zmožni veliko stvari početi pred svojimi vrstniki. V predavanju bo zagovarjano stališče, da osredotočanje zgolj na sklop abstraktnih standardov pravzaprav zmanjšuje kakovost učne izkušnje in omejuje učenčeve priložnosti za razvoj radovednosti. V predavanju bodo predstavljeni tudi različni načini, s katerimi lahko najbolje učno podpremo mlajše nadarjene učence. Na podlagi načel zgodnjega izobraževanja bo pojasnjeno, zakaj je treba pri učni podpori mlajših nadarjenih učencev poleg njihovega znanja in veščin upoštevati tudi njihove občutke in naravnost. Zgodnje izobraževanje nadarjenim mlajšim učencem namreč lahko ponudi odlične učne priložnosti, vendar to ni mogoče, če med izobraževanjem stremimo k standardizaciji in zoževanju programa zgodnjega izobraževanja z namenom, da bi učenci na preverjanjih znanja, kot sta Mednarodna študija o zgodnjem učenju (ang. IELS) ter Program mednarodne primerjave dosežkov učencev (ang. PISA), dosegli dobre rezultate.

## **Starting Strong: what does this mean for young gifted learners?**

Margaret Sutherland

*University of Glasgow*

**Keywords:** young gifted learners, early education, development

The newly developed International Early Learning Study (IELS) will test four domains and is inextricably linked to the “readiness for school” discourse. It could be argued that this will be beneficial for gifted young learners – they are often able to do things in advance of their age peers. However, this presentation will argue that focussing on an abstract set of standards will in fact diminish the learning experiences and opportunities for curiosity. This presentation will consider how we can best support young gifted learners. Drawing on principles from early education it will argue that if we are to support young gifted learners appropriately then we must consider feelings and dispositions as well as knowledge and skills and the cognitive domain. Early education offers great opportunities for gifted young learners but not if it pursues standardisation and the narrowing of early education in the pursuit of improved performance in IELS and PISA tests.

Margaret Sutherland, Ph.D.

University of Glasgow



Margaret Sutherland, Ph.D. lectures in additional support for learning at the University of Glasgow, Scotland. She is the Director of the Scottish Network for Able Pupils and Deputy Director of the Centre for Research and Development in Adult and Lifelong Learning. She has more than 30 years teaching experience in schools and higher education.

She has written in the field of gifted education and is the author of a number of academic papers, chapters and books on the subject. Her book, *Gifted and Talented in the Early Years* has been translated into German and Slovene. She is on the editorial board of the Korean Journal of Educational Policy.

She speaks at conferences and has worked across the UK and with staff and students in Tanzania; Malawi; Korea; Virginia, USA; Slovenia; The Netherlands; Poland and Denmark.

She is an elected member of the general committee of the European Council for High Ability (ECHA) and a member of the World Council for Gifted and Talented Children (WCGTC).

## Študija primera univerzitetnega programa za nadarjene učence: CTY Irska

Colm O'Reilly

*Centre for Talented Youth Dublin, Talent Centre*

Ključne besede: center za nadarjene mladostnike, univerzitetni program, Irska

CTY Ireland (v prevodu: Center za nadarjene mladostnike Irske) je največji univerzitetni program za nadarjene učence v Evropi. Nahaja se na Univerzi Dublin in skrbi za več kot 5.000 učencev na leto tako, da organizira oz. vodi intenzivne izobraževalne programe za izjemno učno sposobne učence, stare od 6 do 16 let. Učenci imajo priložnost obiskati univerzo in se med vikendi ali poletnimi počitnicami udeležiti seminarjev po vzoru univerzitetnih predmetov. Irska nima zakonodaje, ki bi podpirala nadarjene učence, kar lahko privede do tega, da so mnogi izmed njih znotraj šolskega sistema spregledani. To predavanje bo na podlagi primerov pokazalo, kako je uporaba univerzitetnih prostorov in sredstev učinkovita strategija, s katero so lahko nadarjenim učencem predstavi nove učne izzive ter ponudi nove priložnosti za srečanja tudi z drugimi učenci, ki imajo podobne zmožnosti. Poleg organiziranja zanimivih dejavnosti za nadarjene učence CTY Ireland sodeluje tudi pri številnih drugih pobudah. Te vključujejo program za prikrajšane študente ter program zgodnjega vpisa na univerzo. CTY Ireland je sodeloval v številnih raziskovalnih študijah in je na tem področju objavil različna poročila in knjige. Nedavno je CTY Ireland pridobil uspešen projekt Erasmus Plus za oblikovanje spletnega programa za učitelje nadarjenih učencev, ki poučujejo nadarjene učence v šoli. V tem predavanju bomo govorili o vsem našetetem ter preučili možnosti za kakršnakoli nadaljnja sodelovanja.

## Case Study of a University Based Programme for Gifted Students: CTY Ireland

Colm O'Reilly

*Centre for Talented Youth Dublin, Talent Centre*

Keywords: center for talented youth, university based programme, Ireland

CTY Ireland is the largest university based programme for gifted students in Europe. Located at Dublin City University CTY Ireland caters for over 5,000 students per annum and runs fast paced courses for high ability students aged 6 to 16. Students get the chance to come to a university and study college like subjects at weekends or during the summer. Ireland does not have any specific legislation for serving gifted students and this can lead to many being neglected in the school system. This talk will provide an example of how using a university is an effective strategy for challenging these students academically, and socially giving them opportunities to meet students of similar ability. As well as providing stimulating classes for gifted students CTY Ireland is also involved in a number of other initiatives. These include a programme for disadvantaged students and an Early

University Entrance programme. CTY Ireland has also been involved in many research studies and has published reports and books in this area. Recently CTY Ireland led a successful Erasmus Plus bid to design an online programme for teachers of gifted students in regular classrooms. All of these projects will be discussed and potential for any future cooperation will be explored during this talk.

Colm O'Reilly, Ph.D.

*Centre for Talented Youth Dublin, Talent Centre*



Colm O'Reilly, Ph.D. is the Director of the Irish Centre for Talented Youth (CTYI) at Dublin City University. CTYI provides fast paced classes for academically talented students aged 6 – 16 years from all over Ireland and overseas. Currently the Centre caters for over 5000 students per annum and it is the only recognised teaching centre for gifted children in the Republic of Ireland. CTYI run over 120 academic courses annually for gifted students.

Colm has worked in the area of gifted and talented education for the last 16 years and has published articles and presented papers at numerous conferences around the world. He has experience in teacher training for gifted students around Ireland and is responsible for the implementation of many classes and initiatives for gifted children and teachers in Ireland.

Colm is a member of the Academic Advisory Board at the Center for Gifted Education at the College of William and Mary in Virginia and the Center for Talented Youth at Johns Hopkins University in Baltimore.

# Izobraževanje nadarjenih in struktura ustvarjalnega vedenja

Željko Rački

*Sveučilište Josipa Jurja Strossmayera u Osijeku, Talent Point*

Ključne besede: izobraževanje nadarjenih, ustvarjalno vedenje, struktura

Namen tega plenarnega predavanja je raziskati povezave med izobraževanjem nadarjenih in strukturo ustvarjalnega vedenja, in sicer na osnovi predstavitev empiričnih rezultatov iz dveh raziskav, ki jih je izvedel predavatelj. V kontekstu izobraževanja se prvi sklop ugotovitev o ustvarjalnosti osredotoča na učitelje, drugi pa na učence. Ustvarjalnost je v stroki opredeljena kot opazno, očitno, družbeno sprejemljivo vedenje, ki se v določenem družbenem kontekstu soglasno opisuje kot ustvarjalno, nadalje kot rezultat interakcije med sposobnosti, znanjem, lastnostmi, predanostjo nalogam in družbenimi vplivi ter ne nazadnje kot proces, na koncu katerega ima učenec priložnost ustvariti opazen izvirni izdelek. Ustvarjalnost je eksplicitno opredeljena kot cilj izobraževanja. Poleg pomembne vloge v izobraževanju na splošno je ustvarjalnost osrednjega pomena tudi v teorijah nadarjenosti, saj je njihov osnovni konstrukt ter pri izobraževanju nadarjenih, kjer je visoko cenjena kot napovednik in rezultat. Cilj plenarnega predavanja je združiti obe področji znanstvenega raziskovanja ter odgovoriti na naslednja tri vprašanja: a) ali je ustvarjalnost strukturirana, b) je ustvarjalnost dostopna izobraževanju, in če da, c) kako se ustvarjalnost nanaša na izobraževanje nadarjenih? Razprava bo temeljila na spoznanjih iz psihologije ustvarjalnosti, s posebnim poudarkom na vlogi, ki jo ima izobraževalno okolje z upoštevanjem strukture ustvarjalnega vedenja pri kultiviranju učenčeve ustvarjalnosti.

## Gifted Education and the Structure of Creative Behavior

Željko Rački

*Sveučilište Josipa Jurja Strossmayera u Osijeku, Talent Point*

Keywords: gifted education, creative behaviour, structure

The aim of this plenary lecture is to explore the relationships between gifted education and the structure of creative behavior by presenting results from the two lines of author's scientific psychological inquiry. In the context of education the first line of study findings on creativity addresses educators and the second the students. Creativity studied as observable, manifest, socially acceptable behavior consensually described as creative in a given social context, the result of the interaction of abilities, knowledge, traits, task commitment, and social influences, and the process at the end of which a student can potentially produce an observable original product, proves to have complex relationships with education in general, and a highly important one with the field of gifted education. Creativity is explicitly considered an educational objective. Beyond general education, creativity is central to giftedness theories as an underlying construct, and to the gifted education as a highly valued predictor and outcome. The plenary lecture aims to unify these two lines of scientific inquiry by discussing these three questions: a) is there a structure to creativity, b) is creativity

accessible to education, and how, and c) if so, how creativity relates to gifted education. The discussion is embedded within the psychology of creativity with a special emphasis placed on the role that supportive educational context, in full acknowledgment of the structure of creative behaviors, plays in nurturing the creativity in students.

Željko Rački, Ph.D.

*Sveučilište Josipa Jurja Strossmayera u Osijeku, Talent Point*



Željko Rački, Ph.D., ECHA Specialist in Gifted Education, is a licensed educational psychologist with fifteen years of work experience in the educational system. His study interests include educational psychology, the psychology of creativity, and psychology of giftedness. In 2016 he got an ATEE Award – for Teacher Education Article "Promoting Teacher Education", which was under patronage of Routledge.

As a psychologist, an educator, and a mentor, he is a member of the Croatian Psychological Chamber, the Croatian Psychological Society, and the European Council for High Ability (ECHA).

# SEKCIJE / SECTIONS

---

**Tema 1: NADARJENI OTROCI**

**Topic 1: GIFTED CHILDREN**

Koordinatorica: doc. dr. Darija Skubic

Chair: Assist. prof. Darija Skubic, Ph.D.

## Nadarjeni otroci v vrtcu – kako bivati in delati z njimi?

Marta Brln

*Vrtci Brezovica, Brezovica*

Ključne besede: nadarjeni otroci, vrtec, kurikulum

Pri prepoznavanju nadarjenih v predšolski dobi se vzgojitelji srečujemo z mnogo težavami. Zakonodaja nadarjenih v vrtcu ne omenja v nobenem od zakonov, niti v nacionalnem programu, Kurikulumu za vrtce. Vzgojitelji smo premalo informirani in usposobljeni za prepoznavanje in delo z nadarjenimi. Pri našem delu se s pomočjo holističnega pristopa trudimo prepoznati otrokove talente in mu omogočiti čim boljši razvoj.

## Gifted children in kindergarten – how to live and work with them?

Marta Brln

*Vrtci Brezovica, Brezovica*

Keywords: gifted children, kindergarten, curriculum

In identifying gifted children in kindergarten preschool teachers encounter many problems. Preschool gifted children are not mentioned in legislation nor in curriculum, national preschool document. Preschool teachers do not have enough information and competences to identify or work with gifted children, so they try to recognize children's talents through holistic approach and enable progress as good as possible.

# **Our experiences in working with potentially gifted preschool children in the kindergarten „Mediterranean flower“**

Mirjana Bakotić, Helena Mirić, Jelena Birsa, Ranka Mustić, Nives Urlić, Sandra Spralja and Zeljana Vivodinac

*Kindergarten "Mediterranean Flower", Split*



European Talent  
Support Network

**Keywords:** giftedness, education, raising awareness, identification, individualization

Having in mind the importance of early recognition and identification of gifted children and encouraging the development of gifted and talented preschool children, the developmental process of work with giftedness in our institution has been accomplished through the following stages:

- Educational seminars for preschool teachers and a team of experts
- Raising awareness of teachers for recognizing the needs of gifted children
- Application of a multidimensional model of identification
- Team work on planning differential programs
- Implementing differentiated and enriched programs within workshops for gifted children and regular programs
- Team tracking and evaluation of potentially gifted children during the implementation of an enriched program

The criteria for enrolling a child in the workshops for potentially gifted children are determined by application of a multidimensional model of identification which includes evaluations and recommendations of preschool teachers, parents, pedagogue and a psychologist. The development stage and particularities of each child are evaluated through the observation of child's interests, common behaviors of gifted children, qualitative analysis of creative and different works of the child, as well as application of standardized psychology aptitude tests and/ or development tests.

Basic principles in work with children are emphasized with an individual approach and fulfillment of specific needs of every child through different sorts of activities that enhance active learning, higher levels of thinking processes and creative expression.

# **Evalvacija programa NTC (Nurture of talented children) učenja v vrtcu**

Leonora Drgan

*Vrtec Morje Lucija, Portorož*



Ključne besede: predšolski otrok, vrtec in vzgojiteljica, nadarjen otrok, spodbudno okolje, program NTC-učenja

Otrokov razvoj in učenje je dinamičen proces, ki ga na ravni fizičnega in socialnega razvoja interaktivno soodločata dednost in okolje. Z učenjem ne gre ne prehitevati ne zamujati. Najbolje je »izkoristiti« tiste prave trenutke za učenje, če želimo, da bo čim bolj učinkovito in bo vodilo h kakovostnemu znanju. Pomembno je, da odrasli čim bolje (s)poznamo značilnosti in posebnosti otrokovega zgodnjega učenja in da na osnovi teh spoznanj spodbujamo njegov miselni razvoj, da bi razvil svoje biološke danosti oziroma potenciale. Program NTC-učenja je eden izmed dostopnih programov za spodbujanje učenja (NTC = Nurture of Talented Children). Z empirično raziskavo smo evalvirali uvajanje in izvajanje programa NTC-učenja v vrtce ter preučili in ugotovili učinke programa NTC-učenja v pedagoški praksi. V skladu s pričakovanji je naša raziskava pokazala, da ima program NTC-učenja pozitivne učinke in da se učinek izvajanja in uvajanja programa izraža pri otrocih in starših. Tako otroci znanje, pridobljeno v vrtcu, nadgrajujejo z znanjem od doma in se tako vključujejo v naravni krogotok otrokovega učenja ter sodelovanja z vrtcem.

## **Evaluation of the deployment of the NTC (Nurture of talented children) learning**

Leonora Drgan

*Kindergarten - Vrtec Morje Lucija, Portorož*



Keywords: pre-school child, kindergarten and preschool teacher, gifted child, supportive environment, program NTC learning

Child development and learning is a dynamic process that is interactive defined on physical and social development by heredity and environment. Learning is not to be overtaken or delayed. If we want the most effective learning, which will lead to quality knowledge, we need to “exploit” those right moments for learning. It is important that adults (get to) know as much characteristics and peculiarities of the child early learning. Based on these findings we encourage his mental development with the aim to develop their own biological resources and potentials. The program NTC learning is one of the accessible programs which encourages learning (NTC = Nurture of Talented Children).

The results of our study have shown that the effect of the implementation and deployment of the NTC learning reflects with both, children and parents. Children build the knowledge acquired in the

kindergarten with knowledge obtained at home and thus they involve in the natural cycle of the child's learning and cooperation with kindergarten.

# Early identification and creatively-productive giftedness: approaches and methods

Jasna Cvetković - Lay

*Center for Gifted Child Development »Bistrić«, Zagreb*



**Keywords:** early identification, alternative assessment, creatively-productive giftedness, teacher's assessment

Short overview of the theoretical considerations of some contradictory points in identification and gifted education, such as what we measure and what is important - the potential or achievement, performance or product and the associated relationship between creativity and intelligence, is given in this presentation. Outmoded approach to gifted identification and alternative, non-traditional methods and techniques (such as product assessment) are confronted. The importance of early identification and ongoing assessment viewed from a developmental prospective, as well as creatively productive behaviour is emphasized. The necessity of variety subjective and objective techniques in identification of specific gifts especially in the creative domain is stressed. Attention is drawn to new trends aimed at discovering the highest level of domain-specific abilities among those who are extremely talented in domain and the role of accurate teacher's assessment in the process of early identification.

# **Spodbujanje razvoja pisalnih spretnosti zmožnejših otrok prvega razreda – študija primera**

Katarina Grom

*Osnovna šola Vižmarje-Brod, Ljubljana*

Ključne besede: pismenost, začetno pisanje, zmožnejši pisci besedil, prvi razred osnovne šole

Prispevek uvodoma opredeli pismenost, ki jo različni avtorji definirajo glede na svoje strokovno videnje, skupno izhodišče definicij pa nakazuje pomen šolskega in vsakdanjega družbenega življenja. V nadaljevanju so opredeljena neviroekacijska spoznanja, ki vplivajo na pismenost, temu pa sledi opis teoretskih okvirov nadarjenosti. Čeprav nadarjenost obravnavamo šele v četrtem razredu osnovne šole, pa v luči višjih pričakovanj učitelja in njegovih prizadovanj za dvig bralne pismenosti v okviru kakovostnega poučevanja v prvem vzgojno-izobraževalnem obdobju ne gre prezreti otrok z višjimi zmožnostmi na področju branja in pisanja, ki jim je potrebno nuditi priložnosti, da razvijajo svoje potenciale. Kvalitativna raziskava študije primera je osredotočena na stimulativno in spodbudno učno okolje z visokimi pričakovanji učitelja, ki nudi zmožnejšemu učencu priložnosti za usvajanje velikih in malih tiskanih črk v prvem razredu osnovne šole, kar imenujemo integrativna metoda opismenjevanja. Primer, ki predstavlja zmožnejšo učenko, je osvetljen z vidika učiteljevega poučevanja, otrokovega odziva na metodo opismenjevanja in pogleda staršev na napredek otroka. Namen prispevka je odgovoriti na vprašanje, ali je šestletni otrok v prvem razredu zmožen usvojiti velike in male tiskane črke in v kolikšni meri je po končanem procesu usvajanja črk zmožen pridobljeno znanje uporabiti v samostojnih zapisih. V zaključnem delu raziskava pojasnjuje pomen pisanja otrok v zgodnejšem obdobju opismenjevanja in vpliv tega na otrokov bralni napredek.

## **Encouraging the Development of Writing Skills of Gifted Children First Class of Primary School - A Case Study**

Katarina Grom

*Osnovna šola Vižmarje-Brod, Ljubljana*

Keywords: literacy, initial writing, more capable writers of text, first class of primary school.

The present article specifies literacy, which was identified according to their professional views, common idea of definitions identifies significance of school and everyday social life. In the continuation neuron-educational findings that influence literacy are defined, followed by description of theoretical frameworks of talents. Though the talent is considered in the fourth class of primary school, in the light higher expectations of a teacher and his efforts to elevate literacy in the framework of quality education in the first educational period, children with higher capabilities in the area of writing and reading should not be overlooked and should be given an opportunity to develop own potentials. Qualitative investigation of case study is focused to stimulative learning environment with high expectations from the teacher who offers an opportunity to more capable

pupils to adopt capital and lower case letters in the first class, which is referred as integral literacy. An example of more capable pupil has been investigated from the perspective of a teacher, child's response to the literacy method and parent's view on the child's progress. The objective of the present paper is to answer the question if the six years old child in the first class is capable adopting capital and lower case letters and to what extent is capable of utilizing the adopted knowledge in independent writing. In the conclusion the present research clarifies importance of writing in early literacy and its influence on the child's' reading development.

## **Prepoznavanje in delo z nadarjenimi učenci v prvem triletju osnovne šole**

Robert Ogulin

*Osnovna šola Vavta vas, Straža*

Ključne besede: nadarjeni otroci, inteligentnost, ustvarjalnost, prizadevnost

Nadarjeni in talentirani otroci imajo sposobnosti, včasih izjemne, s katerimi bi lahko nekaj dali družbi. Dolžnost učitelja je, da neguje in razvija njihove sposobnosti. Nadpovprečno sposobni otroci so največje naravno bogastvo sveta, ki ga ne smemo zapraviti.

Sodeloval sem pri razvijanju devetletke. Študij sem končal ravno takrat in se zaposlil na začetku uvedbe devetletne osnovne šole. Pišem o značilnostih nadarjenih otrok. V dvajsetletnem delu z učenci sem razvijal in še vedno razvijam njihove potenciale. Pri delu mi je v veliko pomoč znanje, pridobljeno na fakulteti, ter lastna praksa. Izpostavljam in pišem o treh dejavnikih, ki vplivajo na razvoj nadarjenosti – inteligentnost, ustvarjalnost in prizadevnost. Razvijam ustvarjalno mišljenje in domišljijo učencev ter skupaj z njimi rešujem probleme. Pišem o primerih dobre prakse in predstavljam učenčeve izdelke.

## **Recognising and working with gifted pupils in the first triennial of primary school**

Robert Ogulin

*Osnovna šola Vavta vas, Straža*

Keywords: gifted children; intelligence; creativity; diligence

Gifted and talented children have abilities, sometimes exceptional, that could enable them to give something back to the society. Every teacher's duty is to nurse and develop these abilities. Children with above-average abilities are one of the largest natural assets of the world that we must not squander.

I cooperated at the developing of the nine-year primary school. I graduated and got my first job at the same time as the nine-year primary school was introduced. I concentrated on gifted children's qualities. Throughout my twenty-year career of working with pupils, I have constantly been developing their potentials. I base my teaching on the knowledge that I got at the faculty as well as on my personal experience. I put a lot of emphasis on the three factors that, in my opinion, influence the development of a child's talent the most - intelligence, creativity and diligence. I encourage pupils' creative thinking, develop their imagination and teach them how to solve problems. I introduced examples of good practice from my classroom and some of the materials made by my pupils.



**Tema 2: SREDNJA ŠOLA**

**Topic 2: SECONDARY SCHOOL**

**Koordinator: doc. dr. Boštjan Kuzman**

**Chair: Assist. prof. Boštjan Kuzman, Ph.D.**

## Je individualizacija dela z nadarjenim mladostnikom resnično pravi in edini možni način dela? (Osebno/refleksivno razmišljanje učitelja)

Ksenija Bračič Bračko

*Prva gimnazija Maribor, Maribor*



European Talent  
Support Network

Ključne besede: individualizirani program, sodelovalno učenje, socialne veštine

Nadarjeni so otroci in mladostniki, ki na predšolski stopnji, v osnovni ali srednji šoli pokažejo visoke dosežke na intelektualnem, ustvarjalnem, specifično akademskem, vodstvenem ali umetniškem področju in ob rednem šolskem programu potrebujejo še dodatne prilagojene programe in aktivnosti. Iz te definicije izhaja, da nadarjeni niso homogena skupina, ki bi ji delo prilagajali po »kuharskem receptu«, zato se za nadarjene otroke in mladostnike pripravljajo individualizirani programi. Koncept dela tako temelji na individualizaciji. Toda ali je individualizacija dela z nadarjenim mladostnikom resnično pravi in edini možni način dela? Izkušnje, pridobljene v letih dela z nadarjenimi, kažejo, da je na mojem področju (informatika) dobrodošlo delo v skupini, ki ne vključuje le nadarjenih dijakov. Delo v skupini je organizirano kot sodelovalno učenje, kjer pri učenju in iskanju rešitev dijaki sodelujejo med seboj. Nadarjeni dijaki pri tem pogosto prevzamejo vodilno vlogo ozziroma vlogo tutorja, ki nudi pomoč ostalim članom skupine. Še posebej je to pomembno, ko ima nadarjeni dijak slabe učne dosežke in se tudi slabše socialno prilagaja okolini. Pogosto ne zmore poiskati dovolj izkušenj in energije za vključitev v razredno skupnost. Če pa lahko nudi pomoč sošolcem na področju, ki ga zanima in na katerem je dober, pa zmore razviti tudi svoje socialne veštine.

## Is individualisation of work with a gifted adolescent indeed the one and only possible way? (Personal thoughts/reflection of a teacher)

Ksenija Bračič Bračko

*Prva gimnazija Maribor, Maribor*



European Talent  
Support Network

Keywords: individualised programme, collaborative learning, social skills

As gifted are defined those children and adolescents who, at preschool stage, in primary school, or in secondary school, show high achievements in different fields, e.g. intellectual, creative, specific academic, leadership or artistic, and who, in addition to the regular school programme, need tailored programmes and activities. From this definition stems a fact that gifted students are not a homogenous group for which work could be adjusted according to a "recipe". For this reason, we are preparing individualised programmes, thus the concept of work is based on individualisation. Nonetheless, is in this case individualisation of work indeed the one and only possible method?

Several year's experiences of working with gifted students show that the field of informatics welcomes teamwork that is not limited to the gifted only. Team work is organized as collaborative learning, where students work together while studying or looking for solutions. Frequently gifted students assume the role of a group leader or a tutor who helps other members of the group. This is especially important when a gifted student has lower academic performance as well as difficulties in social adaptation to the environment. Often they do not have enough experience and energy to integrate into the class community. However, if they are able to offer help to a classmate who struggles in their field of interest and expertise, they are able to develop their social skills as well.

## Delo z nadarjenimi dijaki pri predmetnem področju zgodovine

Nataša Šekoranja Špiler

Gimnazija Brežice, Brežice



Ključne besede: nadarjeni dijaki, zgodovina, inovativne aktivnosti

Nadarjeni dijaki so izjemno heterogena skupina. Vsak nadarjen posameznik je poseben po svoje. Učenci se najprej razlikujejo glede na talentiranost, imajo različne potrebe, sposobnosti, čustvena dojemanja, notranjo in zunanj motivacijo idr. Naloga posameznega učitelja je, da bi pri svojem predmetnem področju skušal odkriti, prepozнатi dijake ter njihova močna področja in jim ponuditi nove priložnosti in nove izzive, ki niso neposredno povezani s predpisanim učnim načrtom, zato bi moral učitelj delo precej individualizirati, kar pomeni, da mora za takšnega dijaka postaviti nove višje učne, procesne in odnosne cilje ter ponuditi nove inovativne aktivnosti, učne strategije, nove metode in tehnike dela. Poudarila bi, da mora učitelj pri takšnem delu dijaku stati ob strani, ga usmerjati, po potrebi dodatno motivirati. Namen predstavitve je orisati konkretnie primere dobre prakse pri delu z nadarjenimi dijaki v okviru predmetnega področja zgodovine. Prikazani so primeri priprav na tekmovanja iz znanja, vključenost dijakov v aktivno delo na ekskurzijah, terensko zgodovinsko delo, timsko delo in medpredmetne povezave, zgodovinske raziskovalne naloge ter sodelovanje nadarjenih v Unescovem projektu. Na koncu pa so podani še nekateri primeri dela z nadarjenimi, ki jih predavateljica načrtuje v naslednjem šolskem letu.

## Working with talented students in the field of history

Nataša Šekoranja Špiler

Gimnazija Brežice, Brežice



Key words: talented students, history, inovative activities

Talented students form an extremely heterogeneous group. Each individual is special in his/her own way. Their talents differ, they also have different needs, abilities, emotional perception, internal and external motivation, etc. It is the task of the teacher to try to recognize such students and their strengths and to provide them with new opportunities and challenges, which are not directly connected to the school curriculum. The teacher, therefore, has to adjust his/her work to an individual student, which means setting new, higher learning and process goals as well as goals concerning each individual's emotional and social growth. The teacher has to introduce new, innovative activities, learning strategies, working methods and techniques. I would like to stress that the teacher has to support the student, lead and motivate him/her, if needed.

The purpose of this presentation is to show some good examples of working with talented students in the field of history, such as preparation for the academic competitions, students' active work on excursions, fieldwork, teamwork and collaboration with other school subjects, research projects and

students' participation in the UNESCO project. Finally, I will present some examples of working with talented students planned by the lecturer for the following school year.

## Nadarjen, nenadarjen – hočem več fizike!

Tanja Blažič

*Šolski center Nova Gorica, Elektrotehniška in računalniška šola, Nova Gorica*

Ključne besede: nadarjen dijak, diferenciacija, eksperiment, tablica, močna področja

Pravica vsakega dijaka je, da mu šolski sistem omogoči optimalni razvoj v skladu z njegovimi potenciali in zanimanjem. V razredu vsak dan srečujem dijake, ki niso prepoznani kot nadarjeni, kažejo pa velik interes za dodatno delo in sodelovanje pri pouku fizike. Tem dijakom sem s pomočjo profesorjev, ki so sodelovali v šolskem razvojnem projektu Delo z nadarjenimi dijaki, omogočila, da nadgradijo in razširijo svoje znanje. Diferenciacija je potekala pri učnih urah, kjer smo na začetku postavili hipotezo, ki so dijaki preverjali z izvajanjem eksperimentov in uporabo tablic. V izvenšolskem času smo organizirali strokovne ekskurzije v institucije, kjer so znanje in izkušnje nabirali s pomočjo zunanjih sodelavcev. Dijaki so tak način usvajanja novih znanj ocenili kot zanimiv in koristen. Z zgoraj opisanimi metodami sem dijakom omogočila, da so krepili svoja močna področja in optimalno izkoristili svoje potenciale.

## Talented, non-talented - I want more physics!

Tanja Blažič

*Šolski center Nova Gorica, Elektrotehniška in računalniška šola, Nova Gorica*

Keywords: talented pupil, differentiation, experiment, tablet, potentials

Every pupil has the right for the school system to enable him with an optimal development which is in line with his potential and interest. Every day in class I meet students who are not recognized as talented but show tremendous interest in additional activities in physics class. With the help of professors that have been a part of a school development project Working with talented pupils, I gave an opportunity to previously mentioned pupils to upgrade and expand their knowledge. We performed the differentiation during class with testing of hypothesis that we set at the beginning with the use of experiments and tablets. Furthermore, outside of class we organized excursions to institutions, where pupils were able to gain new knowledge and experience with the help of outside personnel. Pupils assessed this way of acquisition of new knowledge as interesting and useful. With the use of above mentioned methods, I have given pupils the opportunity for strengthening the areas where they excel and for using their potentials in the most optimal way.

# Delavnica z biološkimi eksperimenti za nadarjene dijake

Irena Rutar

*Šolski center Nova Gorica, Gimnazija in zdravstvena šola, Nova Gorica*

Ključne besede: biologija, nadarjeni, dijaki, učenje z raziskovanje, eksperiment

Na tehniški gimnaziji v Novi Gorici je bila organizirana 5-urna delavnica z biološkimi eksperimenti za nadarjene dijake. Razdeljeni so bili v pet skupin po 3 do 4 dijake. Izvedli so enega od naslednjih eksperimentov: metabolism žuželk, delovanje encimov (vpliv temperature), delovanje encimov (vpliv količine vodikovega peroksida), dihanje vodnih organizmov ali dihanje semen in kvara. Uvodoma so dijaki dobili osnovna pisna navodila za izvedbo eksperimenta s seznamom potrebščin, z raziskovalnim vprašanjem in s kratkim opisom naloge. Naloga dijakov je bila, da čim bolj samostojno pripravijo in izvedejo eksperiment ter ga v nadaljevanju nadgradijo z lastno idejo za raziskovanje. Dobljene podatke so tabelično in grafično predstavili v pisnih poročilih, ki so bila ob koncu delavnice predstavljena v obliki kratkih predavanj s projekcijo rezultatov. Dijaki so v pisni evalvaciji delavnice izpostavili, da jim je bil potek delavnice všeč in bi si ga žeeli pri rednem pouku. Kot posebej pozitivno so izpostavili skupinsko delo in samostojnost pri izvajanju eksperimentov ter možnost strokovne pomoči raziskovalca, ki je prisostvoval delavnici. Všeč jim je bilo, da so lahko raziskavo »prilagodili po svoje« (samostojno načrtovanje hipotez in izvajanje raziskave). V odgovorih so izpostavili tudi delo z merilnimi napravami (merjenje z uporabo računalniškega sistema Vernier). Izpostavljen je bilo tudi, da je potrebna pri izvajanju meritev potrpežljivost. Nekaterim določene vaje niso bile všeč – izpostavljeni sta bili vaji, kjer so uporabljali jetra. Sklenemo lahko, da je izvedena delavnica nadarjenim omogočala praktično spoznavanje s temeljnimi znanstveno-raziskovalnimi znanji in postopki ter pridobivanje novega biološkega znanja.

## Workshop on biology experiments for gifted students

Irena Rutar

*Šolski center Nova Gorica, Gimnazija in zdravstvena šola, Nova Gorica*

Keywords: biology, talented students, learning by research, experiment

At Technical General Secondary School in Nova Gorica a five-lesson workshop on biology experiments for gifted students was held. The students were divided in five groups of three or four. They could choose among one of the following experiments: insect metabolism, enzyme activity (affected by temperature), enzyme activity (affected by large amounts of hydrogen peroxide), aquatic respiration or cellular respiration in seeds and yeast. In the introduction the students were provided with written instructions on how to conduct the experiment with a list of facilities needed for it, a research question and a short description of the task. Their task was to prepare the

experiment, to successfully carry it out and later upgrade it with their own research strategies. The so obtained results were collected in tabular and graphic written reports which were, at the end of the workshop, presented in the form of short lectures and results projection. In the evaluation form, completed at the end of the workshop, most students agreed on enjoying the workshop and would be interested in working similarly during the regular lessons as well. They positively exposed the team work in particular, as well as the autonomy they had when working and the opportunity of being helped by a professional researcher who attended the workshop. They liked the fact that they could 'adjust' the research to their own way. (autonomous hypothesis planning and carrying out the research). In the questionnaire they also exposed the work with measuring devices (measuring with the computer system Vernier). They emphasised the patience necessary at performing measurements. Some of them disliked some exercises – as example they mentioned the two exercises researching liver.

We can conclude that the workshop carried out enabled the gifted students to gain practical knowledge through basic scientific research techniques and procedures for new biology knowledge.

## Kako z robotiko spodbuditi inovativnost in željo po raziskovanju?

Matjaž Furlan in Lea Kosmač

*Mladinski center Nova Gorica (e-Hiša, novogoriška hiša poskusov)*



Ključne besede: robotika; izkustveno učenje; naravoslovje; tehnologija

V e-Hiši, novogoriški hiši poskusov, ki deluje pod okriljem Mladinskega centra Nova Gorica, že vrsto let s povezovanjem znanja, izkušenj in idej izvajamo in pripravljamo dejavnosti, s katerimi si prizadevamo izboljšati priložnosti in ponudbo aktivnosti za kakovostnejše preživljanje časa nadarjenih. Pri dejavnostih smo osredotočeni predvsem na pripravo delavnic in programov, pri katerih lahko nadarjeni učenci razširjajo svoja učna znanja naravoslovja, z izkustvenim učenjem ob naravoslovnih poskusih in na delavnicah pa bogatijo svoje znanje in dobroj navdih za samostojno učenje in raziskovanje. Mlade nadarjene navdušujemo s tečaji robotike, ki jim ponujajo nepozabno izkustvo spajanja znanosti, tehnologije, uporabnosti in ustvarjalnosti, pri čemer se roditi navdušenje za raziskovanje in učenje reševanja problemov. Spodbujamo inovativnost, sodelovanje, radovednost in ustvarjalnost. Vse to so veštine, ki jih posameznik potrebuje tako na poklicni poti kot v življenju. Mladi na privlačen, zanimiv in interaktiven način spoznavajo STEM (Science, Tehnology, Engineering, and Math) ter sodelujejo tudi na mednarodnem multidisciplinarnem raziskovalnem programu FLL, ki omogoča edinstveno izkušnjo sistemskega doživljanja celostnega inovacijskega procesa.

## How robotics encourages innovation and the desire to explore?

Matjaž Furlan in Lea Kosmač

*Mladinski center Nova Gorica (e-Hiša, novogoriška hiša poskusov)*



Keywords: robotics, experience learning, science, technology

e-Hiša, the Nova Gorica house of experiments, which operates under the management of the Youth Center of Nova Gorica, has several years experience of implementing knowledge and ideas into activities which contribute to a better quality of life for talented children. Our activities are focused primarily on the preparation of workshops and programs through which children can further develop their knowledge of science. With the help of experience learning and experimentation they also get to expand their knowledge and nurture independent learning and exploration. With attractive LEGO robotics workshops we want to inspire talented children to explore and learn problem solving and find ways to overcome obstacles. We encourage innovation, learning cooperation, curiosity and creativity. These are all tools that children will require in their everyday lives and careers. With the help of an efficient and attractive concept students learn STEM (Science, Technology, Engineering, and Math), which is unlike the regular classes. They can also participate in the international multi-disciplinary research program FLL (First Lego League competition) that we mentor. Through learning

how to do research, build and experiment children live the entire process of creating ideas, solving problems, and overcoming obstacles, while gaining confidence in their abilities to positively use technology.

# What are the best predictors of success in STEM among youth?

Valentina Mladinov, Petar Čuček, Sara Findrik, Korado Korlević

*Parsek j. o. o., Višnjan; Science and education center Višnjan, Višnjan, Elementary school Rivarela, Novigrad, Višnjan Observatory, Višnjan*



**Keywords:** Gifted education, VEP (Višnjan educational programs), process evaluation, predictors of STEM success

Višnjan educational programs (VEP) are residential, extracurricular programs for academically gifted and highly motivated youth, aged 9-19. During the admission process, students are evaluated on the basis of their motivation, assertiveness, interest, previous work and recommendation letters from their teachers. Because of limited capacity, we are faced with the challenge to invite participants who will benefit most from their participation, enabling them to transform their potentials to competencies and create real scientific research in STEM areas.

The main goal of this research is to define predictors for the quality of student's scientific results. Predictors taken into account are variables from pools of demographic parameters, cognitive abilities, personality traits, motivation and learning strategies.

The quality of student's scientific results was estimated by both student's self-assessment and objective assessment by mentors.

The sample consisted of 140 students, VEP participants in educational period 2017, aged 9-19. In order to follow the predictors, a longitudinal study should be conducted.

**When peer is the best appeal:  
Impacts of the Youth Platform Summit activities of the European  
Talent Support Network**

Petra Anna Fügedi

*MATEHETSZ, European Talent Centre – Budapest, Budapest*

**Keywords:** European Talent Support Network, Youth Platform, talent care, self-concept, peer relations

**Background:**

The 2nd Youth Summit of the European Talent Support Network organised in Budapest, with 64 participants representing 20 nationalities from the age of 14-26, gave the possibility to gifted young individuals to meet like-minded peers from different countries. An impact assessment investigated the reason for coming to the Summit, the change in the participants' expectations, the importance and the impact of such programs on talent development, with the future aim to make youth meetings as effective as possible. According to research, long-term benefits of participating in a short, summer gifted program include an increase in self-confidence, motivation and autonomous learning (Moon et al., 1994,) and increase in self-esteem and ability to get along with peers (Thomas, 1989).

**Method:**

Questionnaire before and after the Summit.

**Conclusion:**

Peer groups are essential for the psychological and intellectual development of young talented individuals.

Understanding how programs affect social self-concept of gifted students may provide evidence of the necessity of out-of-school provisions.

**Tema 3: PEDAGOŠKI IN PSIHOLOŠKI VIDIKI**

**Topic 3: EDUCATIONAL & PSYCHOLOGICAL  
ISSUES**

Koordinatorica: izr. prof. dr. Mojca Juriševič

Chair: Assoc. prof. Mojca Juriševič, Ph.D.

## Izziv prepoznavanja nadarjenosti – prezrte nadarjenosti

Renata Kolšek

*OŠ Primoža Trubarja Laško; PŠ Šentrupert, Laško*

Ključne besede: nadarjen učenec, prezrta nadarjenost, vpliv okolja, učiteljeva občutljivost

Prepoznavanje nadarjenih učencev pomeni za učitelja velik izzik, odgovornost in hkrati privilegij.

Vsi se zavedamo izjemnega pomena zgodnjega odkrivanja nadarjenosti, ki nadarjenemu omogoči, da mu nudimo spodbudno okolje in dejavnosti, s katerimi razvija svoj potencial. Strokovnjaki so razvili različne definicije o nadarjenosti, vsi pa opredeljujejo nadarjene kot otroke z nadpovprečno razvitim sposobnostmi. Žal kljub vsem teoretičnim in praktičnim izsledkom ni zanesljive metode za prepoznavanje nadarjenosti, saj je vsak otrok unikat – skupek genskega zapisa in vplivov iz okolja, ki ga obdajajo.

V prispevku želim izpostaviti, da so lahko nadarjeni tudi tisti učenci, ki jim tega na "prvi pogled" ne bi pripisali, ter da je nadarjenost lahko tudi zakrita ali prezrta oziroma zaradi ovir prihaja do blokade nadarjenosti. Poudariti želim pomen učiteljeve občutljivosti pri prepoznavanju nadarjenosti in sposobnost za prestop iz poznanih, ponujenih okvirov obravnave nadarjenosti. Pri tem so učitelju lahko v veliko pomoč raznoliki, sveži in sodobni pristopi pri šolskem delu.

Učitelj pri prepoznavanju nadarjenosti nosi veliko mero odgovornosti, saj lahko s svojim prefinjenim čutom tudi učencu s prezrto nadarjenostjo pomaga pri preboju iz prvotnega primanjkljaja v potencial in ga popelje na povsem novo pot.

## The challenge of identifying the talent - neglected talents

Renata Kolšek

*Primož Trubar Primary School of Laško, Šentrupert subsidiary school, Laško*

Keywords: a talented child, neglected talent, influences from the surrounding, teacher's sense

Identifying the gifted children may be regarded as a huge challenge, responsibility and privilege at the same time to every single primary school teacher.

Early identification of a talent is of a significant importance to all of us as well as to a talented person since, based on the fact of being talented; he/she is then supported by an encouraging surrounding and activities, which yet make a great contribution to development of such potential. The variety of definitions on talent has been produced by experts, while they all regard talented children as the children of above-average abilities developed. Despite numerous theoretical and practical proofs, no reliable talent-identifying method has been put on disposal for the fact of each child being a unique person – a set of a genetic trait and environmental influences.

My article is pointing out the aptitude of those children by who the “first sight” overview would hardly trace any evidences about being talented, since their talent might be ignored or neglected, or from some non-defined obstructions possibly blocked. At this point, it is the teacher's sense of identifying a talent and abilities that counts most, and shall enable a decline away from general and proposed frames of treating the talents, supported by a diversity of the latest and contemporary approaches to pedagogic work at school.

A great sense of teacher's responsibility shall be incorporated in identifying the talent, since it being most sophisticated, may help a student of neglected talent make a transition from the former lack of potential to a completely newly guided course of life.

# Odnos učiteljev do učencev glede na (ne)prepoznano nadarjenost

Ksenija Domiter Protner

*Prva gimnazija Maribor, Maribor*



Ključne besede: (ne)prepoznana nadarjenosti, stigma, učenci, odnos, učitelji

Veliko število prepoznavanih nadarjenih v slovenskih šolah (več kot četrtina v osnovnih šolah) lahko posledično povzroča težave tudi tistim učencem, ki niso bili prepoznani kot nadarjeni. V šolah se tako srečujemo z dvema skupinama učencev, ki sta lahko stigmatizirani kot drugačni. Nimamo pa pripravljenih in vzpostavljenih ustreznih mehanizmov, ki bi to preprečevali. Ob problemu obremenjenosti in usposobljenosti učiteljev ta problematika zahteva posebno pozornost. Prispevek prikazuje ključne ugotovitve raziskave o razlikah v odnosu učiteljev do učencev, ki so bili prepoznani kot nadarjeni, in tistih, ki niso bili.

## The relationship of teachers to pupils, depending on the (un)recognized giftedness

Ksenija Domiter Protner

*Prva gimnazija Maribor, Maribor*



Keywords:(un)recognized giftedness, pupils, stigma, relationship, teachers

A large number of identified gifted in the Slovenian schools (more than a quarter in the elementary schools) can, in turn, causes problems to those pupils who were not identified as gifted. So the schools are faced with two groups of pupils, both of which may be stigmatized as different. We don't have the relevant mechanisms, which this would prevent. Taking the problem of congestion, and the competence of teachers, this issue requires special attention. The article presents the key findings from the research on the differences in the relationship of teachers to pupils who have been identified as gifted and those who were not.

## Nadarjeni učenci s primanjkljaji na posameznih področja učenja

Suzana Padežanin Lavuger

*Svetovalni center za otroke, mladostnike in starše, Maribor*

Ključne besede: nadarjeni otroci, primanjkljaji na posameznih področjih učenja, dvojno izjemni

V prispevku so predstavljena nekatera teoretična izhodišča o primanjkljajih na posameznih področjih učenja in nadarjenih otrocih v osnovni šoli. Izraz primanjkljaji na posameznih področjih učenja (PPPU) označuje zelo raznoliko skupino primanjkljajev, zato se bomo v prispevku osredotočili na primanjkljaje na področju bralne pismenosti in matematične pismenosti.

V praksi ugotavljamo, da je veliko otrok s PPPU identificiranih tudi za nadarjene učence. Pot do identifikacije pa je običajno drugačna kot pri ostalih učencih. Na Svetovalni center Maribor se praviloma obrnejo starši po napotilu šole zaradi otrokovih učnih težav in učne manjuspešnosti. V svetovalnem in diagnostičnem procesu specialnega pedagoga in psihologa ugotovimo, da ima otrok specifične učne težave, obenem pa tudi sodi v skupino otrok, ki so izjemno nadarjeni. Otrokom, ki so prepoznani na enem področju ali več področjih izjemnosti in so hkrati učenci s posebnimi potrebami, kamor sodijo tudi PPPU, rečemo dvojno izjemni. Predstavljene bodo značilnosti nadarjenih učencev v osnovni šoli, ki imajo PPPU. Izkrašnje nakazujejo, da otroci s to obliko dvojne izjemnosti potrebujejo veliko čustvene podpore. Potrebno je tudi delo s starši.

## Gifted children with specific learning disabilities

Suzana Padežanin Lavuger

*Svetovalni center za otroke, mladostnike in starše, Maribor*

Keywords: gifted children, specific learning disabilities, twice exceptional children

Some specific learning disabilities theoretical backgrounds at gifted children in primary school will be presented in this article. Specific learning disabilities (SpLD) determine very bright group of disabilities. Therefore, we will be focused on disabilities in field of reading and math functionality.

Our experiences show, that high number of children with SpLD are also recognized as gifted students. But the identification path usually differs from other children's. Generally, on school professional's recommendation, children's parents come to Consulting centre Maribor as result of their children's learning problems and lower learning success. During consultancies and diagnostic process of psychologist and special educational teacher, children with SpLD are identified, but often we can also identify them as extraordinary gifted children. Those children are called twice exceptional children. In the article, we will present common features of gifted children with SpLD in primary school. Experiences show, that twice exceptional children need great emotional support. Therefore, working with parents is also necessary. Therefore, working with parents is crucial for child's development and learning process.

## **Samoevalvacija dela z nadarjenimi**

Mojca Štor in mag. Tinkara Verbuč Rosenstein

*Osnovna šola Mozirje, Mozirje*

Ključne besede: nadarjeni učenci, samoevalvacija, spletna anketa

Na OŠ Mozirje smo si kot eno od prednostnih nalog zadali delo z nadarjenimi učenci. V šolskem letu 2016/17 smo izvedli samoevalvacijo, ki je imela dva namena: pregled izvedenih dejavnosti na področju dela z nadarjenimi učenci in pridobitev informacij o mnenju o izvajjanju koncepta nadarjeni učenci, njihovi starši in učitelji.

Odločili smo se, da mnenja učencev, staršev in učiteljev zberemo z anonimnim spletnim vprašalnikom. Iz odgovorov učencev lahko sklepamo, da jim je status nadarjenega učenca pomemben. Za delo v šoli učence najbolj motivirajo ocene, pohvala in možnost pridobitve štipendije. Starši menijo, da na šoli dobro poskrbimo za nadarjene učence in da so otroci občasno s šolskim delom preobremenjeni, precej staršev pa ocenjuje, da otroci niso preobremenjeni z delom za šolo. Učitelji ocenjujejo, da je skrb za nadarjene učence tako na področju odkrivanja nadarjenih kot tudi dela z njim dobra. Menijo, da je delo z nadarjenimi učenci časovno in vsebinsko zahtevno, več kot polovici pa predstavljajo nadarjeni dodaten strokovni in osebnostni izziv.

## **Self-evaluation of the work programme for the gifted pupils**

Mojca Štor in mag. Tinkara Verbuč Rosenstein

*Osnovna šola Mozirje, Mozirje*

Keywords: self-evaluation, gifted pupils, on line questionnaire

At Primary School Mozirje one of the priority tasks for the teachers was how to work with the gifted pupils.

In the school year 2016 /17 a self-evaluation was made which had two purposes:

- to examine the executed activities for the gifted pupils
- to get feedback from pupils, their parents as well as teachers.

Their opinions were obtained on line by an anonymous questionnaire.

It can be deducted from pupils' answers that the status of a gifted pupil is important to them. They are mostly motivated for school work by grades, teacher's approval and a possibility to obtain a scholarship.

Parents think that gifted pupils are well taken care of. Some parents think that pupils are occasionally given too much school work, but on the other hand many parents think this is not the case.

Teachers think that identification of the gifted pupils and work programme for them is good. They find the work with the gifted pupils demanding regarding timing and contents, but more than half of them consider working with gifted pupils as a professional and personal challenge.

# Oblike dela z nadarjenimi učenci in njihova evalvacija na OŠ Žiri

Petra Cankar

*Osnovna šola Žiri, Žiri*

Ključne besede: nadarjeni učenci, prilagoditve, sodelovanje, dejavnosti, evalvacija

V prispevku bom na kratko predstavila osnovne načine dela z nadarjenimi učenci na Osnovni šoli Žiri. Delo z nadarjenimi poteka v treh oblikah – prilagoditve pri pouku, skupne urice in dodatne dejavnosti. Za konkretno prilagoditve in področja dela se dogovorimo vsako leto ob začetku šolskega leta skupaj s posameznim učencem in njegovimi starši, vključno z načrtom tekmovanj in ostalih aktivnosti. V prispevku se bom bolj podrobno osredotočila na skupne urice in dodatne dejavnosti za nadarjene, ki jih vodim oz. organiziram sama kot koordinatorica za delo z nadarjenimi učenci na naši šoli. Poleg predstavitev posameznih oblik dela se bom osredotočila na analizo ankete, ki sem jo opravila med identificiranimi nadarjenimi učenci in njihovimi starši. Pri analizi sem se usmerila predvsem na evalvacijo različnih dejavnosti za nadarjene učence, iskanje predlogov za izboljšavo dela ter tudi njihov lasten odnos do nadarjenosti.

## Activities for gifted children and its evaluation in Primary school Žiri

Petra Cankar

*Osnovna šola Žiri, Žiri*

Keywords: gifted children, adaptations, cooperation, activities, evaluation

Presentation will briefly introduce basic methods of work with gifted children in Primary School Žiri. Work is performed through three different forms – adaptations during lessons, lessons specific for gifted children and additional activities. We agree on specific adaptations and areas of interest every year at the beginning of the term together with every child and his parents, including plan of competitions and additional activities. Presentation will give more emphasis on specific lessons and additional activities for gifted children, since I (the author) am coordinator for work with gifted children in our school. Besides presenting those activities I will focus on analysis of the questionnaire given to gifted children and their parents in which I mostly gather data on evaluation of different activities for gifted children, suggestions for improvement and also their attitude to giftedness.

## All rise: raising identification efficacy by raising awareness to interviewer bias

Rita Nadas

*Milestone Institute, Budapest*

Keywords: talent programme, identification, interview, bias, admissions.

Milestone Institute is a European Talent Point of advanced education with the aim of inspiring gifted students in their quest for academic excellence. Its community of over 300 high-school students spreads across our four-year academic programme, with entry points open into each year. Identification includes a range of methods, among them personal interviews conducted by a pair of tutors, examining various aspects of the students' match with the programme. Interviewers' recommendations are then either approved or changed by an Admission Board. Recently, a number of changes have been implemented to the interview process in order to raise identification efficacy, among them raising interviewers' awareness to bias. Following improvements, the ratio of changes in recommendations by the Board has dropped from 11.7% in 2016 to 6.7% in 2017.

## **Učiti se, da bi vedeli in znali**

mag. Ana Tušek

*Osnovna šola Poljane, Poljane nad Škofjo Loko*

**Ključne besede:** nadarjeni učenci, učne strategije, učenje učenja

Nadarjeni učenci predstavljajo skupino navidezno podobnih učencev, ki jih učitelji pogosto skušamo spraviti v isti okvir, vendar pa skupina nikakor ni homogena. Prav vsak med njimi je človek zase; številni imajo kljub lepim ocenam in splošni uspešnosti težave z organizacijo svojih dejavnosti in samega učenja, drugi pa za snov, ki je del učnega načrta, niso zainteresirani, pač pa jih zanimajo druge vsebine, kar se lahko kaže v široki splošni razgledanosti ob hkratnih povprečnih ali celo podpovprečnih ocenah. V vsakem primeru naloga učitelja ni enostavna: učence mora znati motivirati za delo ter jih naučiti uspešno učiti se, tako da bo njihovo znanje trajno in uporabno. Priložnosti za oboje je sicer že pri urah rednega pouka veliko, še več pa jih omogočajo ure, namenjene individualnemu delu z nadarjenimi učenci in pripravam na tekmovanja, ter razne obogatitvene šolske dejavnosti. V članku so predstavljene predvsem dejavnosti, ki sem jih z učenci izvajala v preteklem letu v okviru Unescove šole ter priprav za tekmovanje Prvaki znanja, katerih namen je bilo trajnostno naravnano učenje in ustvarjanje sodelovalnega okolja. Nadarjenim učencem omogočajo napredek na področju splošne razgledanosti, medosebnih odnosov in javnega nastopanja ter jim pomagajo pri odkrivanju lastnih učinkovitih učnih stilov.

## **Learning to know and to do**

mag. Ana Tušek

*Osnovna šola Poljane, Poljane nad Škofjo Loko*

**Key words:** gifted students, learning strategies, learning how to learn

Gifted students are a group of seemingly similar children that teachers often try to fit into the same frame. The group, however, is by no means homogeneous, and each of them is a person with their own characteristics. Despite good marks and overall performance many of them have problems with organizing their activities and school work. On the other hand, some students do not show any interest for topics from the curriculum but are interested in other themes instead which often reflects in their broad general knowledge and average or even marks below average at the same time. In any case, the role of a teacher is not an easy one: they have to motivate students for schoolwork and teach them how to learn things successfully so that their knowledge will be sustainable and useful. There are many opportunities for both during regular school classes and even more during extra classes, intended for individual work with talented children, competition preparations and other additional activities. The article presents the activities, conducted with pupils in the past year within the program of UNESCO School and preparations for competition Prvaki znanja. Their main aims are sustainable learning and creating a collaborative environment. They also

enable gifted pupils to improve their skills of general thinking, interpersonal relationships and public speaking, and help them discover their own effective learning styles.

## **Tema 4: OSNOVNA ŠOLA**

## **Topic 4: PRIMARY SCHOOL**

**Koordinatorica: izr. prof. dr. Vesna Ferk Savec**  
**Chair: Assoc. prof. Vesna Ferk Savec, Ph.D.**

## Programi za nadarjene na OŠ Franceta Prešerna Črenšovci

mag. Marija Horvat, mag. Metka Husar Ščernjavič

OŠ Franceta Prešerna Črenšovci, Črenšovci



Ključne besede: nadarjeni, programi, festival, razvoj, talent točka

Na OŠ Franceta Prešerna Črenšovci delu z nadarjenimi učenci posvečamo veliko pozornosti že vrsto let. Vsako leto pripravimo zanimiv program, kjer poleg identificiranih nadarjenih učencev vključimo tudi ostale učence, ki jih obravnavano področje dela zanima. Tako smo v šol. letu 2016/17 poleg rednega dela v razredu za učence pripravili pester obogatitveni program, v katerega smo vključili delo na področju osebnostnega in socialnega razvoja nadarjenih, vključevali in razvijali smo prostovoljstvo, organizirali Festival odličnega učenja v tednu možganov, ponudili smo ogled večernih kulturnih prireditev, športnih predstav, delavnic na srednjih šolah ... Organizirali smo že 9. mednarodni Festival talentov, kjer mlade talente na mednarodni ravni povabimo k predstavitvi. Festival je namenjen predstavitvi posameznih talentiranih učencev ali skupin z osnovne in srednje šole iz domovine in tujine. Učenci se lahko predstavijo z različnimi umetniškimi dejavnostmi, s športom, s kulturnimi in z drugimi področji, kjer dosegajo uspehe oziroma izkazujejo svoje talente.

## Programs for talented pupils at Primary School of France Prešeren Črenšovci

mag. Marija Horvat, mag. Metka Husar Ščernjavič

OŠ Franceta Prešerna Črenšovci, Črenšovci



Keywords: talented pupils, programs, festival, development, talent point

At France Prešeren Primary School Črenšovci we have been paying a lot of attention to the work with gifted students for many years. Every year we prepare an interesting program, which in addition to the identified gifted students includes also other students who are interested in the present field of work. So in school year 2016/2017 we have prepared an interesting enrichment program for pupils in addition to regular classroom syllabus, in which we have included work in the field of personal and social development of talented, we have included and developed volunteering, organized a great festival of learning in the brain week, we have offered a tour of the evening cultural events, sports performances, workshops in secondary schools ... we have organized the 9th international Festival talent, where young talents on the international level are invited to present themselves. The festival is dedicated to the talented individual pupils or groups of primary and secondary schools from home and abroad. Students can present themselves with a variety of artistic activities, sports, cultural and other areas, where they achieve success and show their talents.

## Centri izvrstnosti v Varaždinski županiji

dr. Miroslav Huđek, Snježana Pejnović

*Varaždinska županija, Varaždin, Osnovna škola Novi Marof, Novi Marof*



Ključne besede: centri odličnosti, programi, obogatitev

Varaždinska županija je ena izmed 20 županij na Hrvaškem. Strategija razvoja Varaždinske županije med ostalim vključuje tudi razvoj znanja. Ker se zavedamo, da tega strateškega cilja ne moremo doseči brez tistih najboljših, smo začeli izvajati projekt Centrov izvrstnosti.

Gre za enoten projekt v Republiki Hrvaški, s katerim smo začeli leta 2007 ter ga vsako leto še naprej razvijamo. V projekt so vključeni posebej nadarjeni in uspešni učenci, ki si želijo dobiti nova znanja zunaj svojih matičnih šol.

Za delo v centrih je potrebna dobra logistična organizacija, izvaja pa se na način, da učenci vsako soboto prihajajo v sedež županije v Varaždinu in med veliko konkurenco ter s pomočjo vrhunskih mentorjev opravljajo naloge po programu za izvrstne in najboljše. Do sedaj so bili ustanovljeni centri izvrstnosti na področju matematike, fizike, informatike, podjetništva, hrvaškega jezika, komunikacij, biologije, kemije in novih tehnologij, v katere je vse skupaj vključeno 900 učencev in 120 mentorjev.

## Centers of Excellence of the Varazdin County

Miroslav Huđek, Ph.D., Snježana Pejnović

*Varaždinska županija, Varaždin, Osnovna škola Novi Marof, Novi Marof*



Keywords: Centers of Excellence; programs: enrichment

Varaždin County, as one of the twenty counties in Croatia, has put its focus on becoming a county of knowledge. Since the realization of that strategic goal required finding and including the best students and mentors, the county decided to start the project of developing different Centers of Excellence.

The project, which started in 2007, is unique in the Republic of Croatia, and has been developing ever since. Students who participate in the project excel in their schools, stand out with their talent and success, and are ready to learn new skills and knowledge in their field of interest.

Every Saturday, students arrive in Varazdin, where they get a chance to work on different enrichment programs with highly qualified mentors, in a competitive environment, with good logistic organization.

So far, the areas that the Centers of Excellence cover are mathematics, physics, information sciences (ICT), entrepreneurship, the Croatian language, biology, chemistry, new technologies and communication skills. Every year 900 students work there with 120 mentors.



## Primeri dela z nadarjenimi pri pouku TIT

Primož Trček

*Osnovna šola Ivana Cankarja, Vrhnika*

Ključne besede: avtentične naloge, inženirske naloge, 3D modeliranje, nadarjeni

Aktivne metode dela, pri katerih avtentične naloge omogočajo uporabo znanja pri reševanju problema razvoja učenčeve zamisli, so naloge, v katere učenci vložijo vse svoje znanje, zamisli in jim za dokončanje teh ni težko poiskati manjkajočih podatkov ter jih organizirati v celoto, ki jim pomaga dokončati izdelek.

Primeri:

1. Učenje izometrične projekcije z uporabo programske opreme Google SketchUp. Spoznavanje orodji programa popestrimo z modeliranjem realnih predmetov, kot npr. pralni stroj, digitalni aparat, mobilni telefon in podobno. Nadarjeni začnejo pri teh predmetih dodajati svoje detajle in iskati podatke, kako bi naredili predmet izviren (avtentičen) in razmišljati tudi o dimenzijah predmetov.
2. Modeliranje obeska za ključe, v katerega vpišejo svoja imena, nadarjene spodbudi k razmišljanju o možnosti uporabe tega obeska še za druge namene, kot npr. švicarski nož.
3. Pri nalogi modeliranje podstavka za mobitel nadarjeni razmišljajo o dimenzioniranju izdelka, o stabilnosti podstavka, kako bodo napajali mobitel in kam bodo dali slušalke.
4. Individualne projektne naloge, ki imajo osnove inženirske naloge, pri kateri učencem podamo omejitve, kot npr. vrste in količine materialov, število sestavnih delov in delovne operacije, ki jih imajo možnost uporabiti, so naloge, ki spodbujajo učenčovo domišljijo.
5. Nadarjeni začnejo konstruirati izvirne predmete, ki imajo osebno noto. Učenci naredijo idejno skico in model, iz katerega prepoznačajo težave pri izdelavi. Iščejo rešitve, ki jim bodo omogočile izdelavo, in popravijo svoj izdelek tako, da ga lahko izdelajo.

## Examples of working with the gifted at the lessons of Design and Technology

Primož Trček

*Osnovna šola Ivana Cankarja, Vrhnika*

Keywords: authentic exercises; engineering exercises; 3Dmodeling; gifted

Active work methods, which enable students to use their knowledge when solving a problem, and to develop their ideas, are represented by the tasks where students can make use of all their knowledge and ideas. Students are keen on finding the missing data and organizing it into a whole, which helps them finish their product.

Examples:

Isometric projection learning by using Google SketchUp software.

To make the process of familiarization with the tools more amusing, we model real-life objects, such as a washing machine, a digital camera, a mobile phone, etc.

When the gifted students work with those objects, they start adding details and look for information that would help them make their objects unique (authentic). They also start to think about the dimensions,

When they model a keyring into which they carve their names, they are stimulated to think about other possibilities of its use, like for example, a Swiss army knife.

During the task of modelling a mobile-phone stand they think about the dimensions, about the stand's stability and also about how they are going to charge the phone or where they will place the headphones.

The individual projects that are based on an engineering task stimulate students' imagination. That is achieved through limitations imposed on a specific task, such as the type and the quantity of materials used, the number of basic parts and working operations.

The gifted students begin constructing original objects with a personal touch. They start with a draft, which helps them see potential issues. They seek solutions that will enable them to create the product and they fix it in such a way that they can then build it.

# Raziskovalna dejavnost kot ena od možnih oblik dela z nadarjenimi učenci

Anita Fartek

*Osnovna šola Sveti Jurij, Rogašovci*

Ključne besede: delo z nadarjenimi učenci, raziskovalna dejavnost, mentorska oblika dela

Koncept dela z nadarjenimi učenci v devetletni OŠ (1999) med oblikami dela in dejavnostmi za nadarjene učence določa tudi raziskovalne naloge oz. raziskovalno dejavnost. S pomočjo raziskovalne dejavnosti uresničujemo temeljna načela dela z nadarjenimi učenci, predvsem širitev in poglabljanje temeljnega znanja, spodbujanje ustvarjalnosti in uporabo višjih spoznavnih procesov ter razvijanje mentorskih odnosov. Na naši šoli nadarjenim učencem omogočamo raziskovalno dejavnost tako v rednem vzgojno-izobraževalnem procesu kot tudi v sklopu raziskovalnega krožka. V raziskovalnem krožku učenci pridobijo osnovno znanje o raziskovanju, raziskovalnem procesu in raziskovalnih nalogah ter se preizkusijo v samostojnem raziskovanju konkretnega problema, ki si ga izberejo sami. Učenci izbirajo zanimive in aktualne teme, ki se jim zdijo pomembne in zaradi česar so bolj motivirani pri delu. Na podlagi desetletnih izkušenj, ki jih imam kot mentorica raziskovalnih nalog, ugotavljam, da se nadarjeni učenci radi odločajo za raziskovalni krožek, saj imajo veselje do raziskovanja in radi spoznavajo nove stvari, kar jim koristi v njihovem nadalnjem izobraževanju.

## Research activity as one of possible ways to work with gifted pupils

Anita Fartek

*Primary School Sveti Jurij, Rogašovci*

Keywords: work with gifted pupils, research activity, mentor work form

The concept of working with gifted pupils in the nine-year elementary school (1999) determines also the research papers as one of the work forms and activities for talented students. With the help of research activities, we realize the basic principles of working with talented students, in particular the expansion and deepening of basic knowledge, the promotion of creativity and the use of higher cognitive processes, as well as the promotion of mentoring relationships.

In our school, we provide research activity for the gifted pupils in addition to the regular educational process and at the research club. At the research club, pupils acquire basic knowledge about the field of research, research process in research tasks and test themselves in their own research of a specific problem that they choose for themselves. Pupils usually choose interesting and current topics that are important to them and motivate them at work.

On the basis of my ten-year experience as a mentor of research papers, I see that gifted pupils like to attend the research club, because they have the joy of exploring in order to learn new things. At the

research club they gain a lot of new knowledge and experience the field of research. They make great benefits for their further education.

# Načrtovanje in izvajanje obogatitvenih dejavnosti za nadarjene učence

Vesna Jelen Godunc

*Osnovna šola Miklavž na Dravskem polju, Miklavž na Dravskem polju*

Ključne besede: nadarjeni, obogatitveni program, tabor za nadarjene, socialne spretnosti, samostojnost

Delo z nadarjenimi učenci v Sloveniji temelji na skrbi šole, da bi vsak učenec v okviru vzgojno-izobraževalnega procesa optimalno razvil svoje potenciale. Nadarjeni učenci pa nikakor niso homogena skupina otrok. Izhajajo iz različnih družbenih, socialnih in kulturnih okolij. Med njimi pa so tudi razlike na intelektualnem, emocionalnem in osebnostnem področju.

Na OŠ Miklavž na Dravskem polju že vrsto let pripravljamo obogatitvene programe za nadarjene učence v obliki taborov za nadarjene učence. Prepričani smo, da posebni vzgojno-izobraževalni programi za nadarjene pripomorejo k višji motiviranosti in odgovornosti nadarjenih učencev za šolsko delo in učenje. Tabor je načrtovan kot priložnost za učenje različnih socialnih spretnosti, za krepitev zaupanja v lastne sposobnosti, za pridobivanje pozitivnih doživetij in izkušenj. Cilj tabora je, da nadarjeni učenci dobijo nove intelektualne izzive v sproščenem in sodelovalnem vzdušju, priložnost za neformalno vključevanje, pripadanje in sprejemanje v skupino, hkrati pa se učijo odgovornosti, samostojnosti in upoštevanja pravil sobivanja.

## Organization of different activities for gifted children

Vesna Jelen Godunc

*Primary school Miklavž na Dravskem polju, Miklavž na Dravskem Polju*

Keywords: gifted children, enrichment programme, camp for gifted children, social skills, independence

Work with gifted students in Slovenia is based on the concern that each student should develop their potential optimally within the educational process. Gifted children are by no means a homogeneous group of children. They arise from different social and cultural backgrounds. There are also differences in intellectual, emotional and personal field among them.

At Miklavž na Dravskem polju Primary School, we have organized and prepared enrichment program for gifted students in the form of camps. Special attention is given to gifted pupils arising from socially less stimulating environment, since we think that they do not often achieve the expected results. The camp is designed as an opportunity to learn various social skills, to build confidence in their own ability, to generate positive experiences and expertise. The aim of the camp is for the students to get the opportunity for informal inclusion and acceptance into the group while they learn about responsibility, independence and compliance with the rules of coexistence.



## Soba pobega (escape room) na temo fraktalov

Polona Fritz Tomšič

*Osnovna šola Elvire Vatovec Prade, Koper*

Ključne besede: fraktali, nadarjeni učenci, matematični izvivi

Sobe pobega (Escape room) so nastale po navdihu videoigric "Escape The Room". V njih je igralec zaklenjen v sobi, iz katere mora pobegniti. Pri tem mora uporabiti sposobnost povezovanja, logičnega sklepanja in raziskovanja.

V pravi Sobi pobega je cilj enak. V določenem času mora skupina igralcev pobegniti iz sobe. Pobeg jim omogoča pravilna rešitev matematičnih ugank, rebusov, križank, dešifriranje šifer, reševanje izvivov, odkrivanje skritih predmetov in namigov. Pomembna je tudi natančnost opazovanja in sodelovanje vseh članov ekipe.

V prispevku je opisana Soba pobega z matematičnimi izvivi, ki je bila izvedena na taboru za nadarjene učence 8. in 9. razreda. Učenci so reševali naloge na temo fraktalov. Na tak način so spoznali Mengerjevo spužvo, Cantorjev prah in Cochovo krivuljo. Seznanili so se z življnjem in delom poljskega matematika Waclawa Sierpinskega, po katerem se imenujejo trije znani fraktali: trikotnik Sierpinskega, preproga Sierpinskega in krivulja Sierpinskega.

## Escape room on fractals

Polona Fritz Tomšič

*Osnovna šola Elvire Vatovec Prade, Koper*

Keywords: fractals, gifted pupils, mathematical challenge

Escape rooms are inspired by video game "Escape The Room", where the player is locked in a room from which it has to escape. The player should use the ability to research, integrate and use logical reasoning to succeed.

Real Escape rooms with mathematical challenges follow the same goal. In a limited time, a group of players must escape from the room by finding correct solutions to mathematical puzzles, rebuses and crossword puzzles; by decrypting codes, solving various mathematical challenges and discover hidden objects and hints. Observation accuracy and participation of all team members is also very important.

This paper describes the Escape room based on solving mathematical challenges, which has been carried out at the camp for gifted pupils in 8th and 9th grade (secondary school). In this case pupils had to solve various tasks on fractals which helped them learn about Menger's sponge, Cantor's powder and Cochov's curve. They also learned about the life and work of the Polish mathematician

Waclaw Sierpinski, whose name is used for three well-known fractals: Sierpinski Triangle, Sierpinski Carpet and Sierpinski Curve.

**Tema 5: OSNOVNA ŠOLA**  
**Topic 5: PRIMARY SCHOOL**

Koordinatorica: doc. dr. Maja Umek  
Chair: Assist. prof. Maja Umek, Ph.D.

## Sparks - Program for gifted children

Tomislav Goldin and Ksenija Benaković

*NGO, Wind at the back and European Talent Point*



Keywords: gifted children, STEM field, creativity, emotional intelligence

Sparks programme for gifted children was created ten years ago. It has been approved by Ministry of Education and Education. Programme is carried out through workshops in NGO „Wind at the back“, organized for children from 4 to 14 years that have been estimated as potentially gifted. We provide gifted children with the activities that satisfy their needs and interests (specially STEM field), develop their potential, encourage creativity, (self)presentation skills and develop emotional intelligence, and learning skills. The presentation will give a short summary of some activities we use to support divergent and creative thinking, lateral and logical reasoning, teamwork, emotional and social competences. We will demonstrate how we use associative cards, “creative movement” and some other techniques to support creativity. We will show a few worksheets we created to satisfy the children's needs to solve math, verbal and spatial brain teasers and riddles. It will be seen how our children work with Edward de Bono's “thinking tools” and “six thinking hats”. We will present how we are using experiments to develop scientific thinking and children projects to develop presentation skills and team work. At the end it will be shown the way we work on emotional and social skills. Our new project is enganging older participants to lead experiments to younger ones.

# **Medvrstniška pomoč nadarjenih in razvijanje njihovih potencialov skozi projekt prostovoljstvo**

mag. Smiljana Valcl

*Osnovna šola Sladki Vrh, Sladki Vrh*

Ključne besede: nadarjenost, učni material, osebnostna rast, razvijanje samopodobe, projekt prostovoljstvo

Vključevanje nadarjenih učencev v različne aktivnosti s pomočjo izvajanja različnih dejavnosti in delavnic je izjemnega pomena za njihovo osebnostno rast in samopodobo. Potenciale in znanje ter moč njihove nadarjenosti lahko uporabimo pri delu z ostalimi, učno šibkejšimi učenci, ki potrebujejo pomoč (učna, socialna itn.) ali pri delu z odraslimi (medgeneracijsko druženje). Na naši šoli je ena izmed oblik dela z nadarjenimi vključevanje učencev v projekt Prostovoljstvo. V njem nekateri učenci nudijo učno pomoč tistim sovrstnikom, ki imajo težave pri branju in opismenjevanju, drugi pa sodelujejo pri delu z odraslimi, predvsem z uporabniki medgeneracijskega centra. Nadarjeni učenci se vključujejo tudi v izkustvene delavnice English Club, ki jih vodijo prostovoljci iz Amerike. V teh delavnicah se urijo v sposobnosti uporabe in znanja angleškega jezika.

## **Peer to peer assistance of talented students and the development of their potential through volunteer project**

mag. Smiljana Valcl

*Osnovna šola Sladki Vrh, Sladki Vrh*

Key words: gift, learning material, personal growth, building up a self-image, volunteer project

Getting gifted students involved into different activities through implementing them into school curriculum has exceptional meaning to their personal growth and self-image. Their potentials and skills as well as their gift can be easily used with the work with the ones who are weaker at learning and need extra help (learning, social, etc.) or with the work with the elder (intergenerational socialising). At our school, voluntariness, is one of the activities, where gifted students are actively involved. As a part of that some students offer help to students with reading and writing problems while the others take part in the work with grownups especially with the ones who are a part of Intergenerational centre. The gifted students take also part in workshops such as English club, which is led by the volunteers from the States. Such activity offers them a possibility to communicate with the native speakers and so improve their fluency in foreign language.

# Z alternativnim programom do socialno uspešnega mladostnika

mag. Vesna Starman

*OŠ Šmarje pri Kopru, Šmarje pri Kopru*

Ključne besede: nadarjeni učenec, adolescenza, komunikacijske sposobnosti, socialne veščine, vrstniška skupina, prosti čas

V prispevku bom predstavila alternativni program vzgoja za medije, ki že nekaj let deluje na naši šoli; osredotočila se bom na pomen, razlago in praktično izvajanje. Ključna vloga tega programa se je izkazala v socialni opremljenosti in ustvarjalnem razmišljjanju, ki sta pomembni prvini pri doseganju bolj kakovostnega življenja in vsestranske konkurenčnosti.

Del prispevka bo tudi prikaz izdelka letošnje skupine. Izdelek ima veliko vrednost, da so učenci samoiniciativno in samostojno peljali delo od začetka do konca. To pa ne pomeni, da je bila vloga mentorja nična.

## The alternative program to successful social adolescents

mag. Vesna Starman

*OŠ Šmarje pri Kopru, Šmarje pri Kopru*

Keywords: gifted pupil, adolescence, communication skills, social skills, peer group, free time

In this article I will present an alternative education program for media; I will focus on the meaning, explanation and practical implementation. The key role of this program has proven to social facilities and creative thinking, which are important elements in achieving a higher quality of life and comprehensive competitiveness.

With two students who were discovered as gifted and were an important link in this program, I conducted a structured interview, from which I highlighted points that are an important part of the evaluation of the program. It shows what the program contributed to and where they see the role of mentor.

## Glasba, naša si radost ... Izkušnje in pogledi na glasbeno olimpijado

Branka Rotar Pance

*Univerza v Ljubljani, Akademija za glasbo, Ljubljana*



Ključne besede: glasbeno nadarjeni učenci, glasbena olimpijada, tekmovanje

Glasba, naša si radost ... Začetna misel himne glasbene olimpijade izraža glavni motiv, ki vodi osnovnošolce in njihove učitelje glasbene umetnosti k prijavi na vsakoletno tekmovanje na ljubljanski Akademiji za glasbo. V ustanovi, katere osrednje poslanstvo je izobraževanje glasbenih umetnikov in bodočih glasbenih pedagogov, se v povezavi z Zvezo glasbene mladine Slovenije posvečamo tudi delu z glasbeno nadarjenimi in za glasbo zainteresiranimi učenci. V prispevku predstavljamo izkušnje in spoznanja, pridobljena pri izvedbi šestih Slovenskih glasbenih olimpijad, ter sodelovanje na mednarodnih glasbenih olimpijadah. Struktura tekmovanja je kompleksna in vključuje vsa področja, opredeljena v učnem načrtu za glasbeno umetnost v osnovni šoli. Velik poudarek je namenjen ustvarjanju lastnih skladb, ki so na glasbeni olimpijadi javno izvedene. Tekmovanje pomeni odlično možnost, da se na naši Točki za nadarjene srečajo sovrstniki, ki jim ukvarjanje z glasbo in njen raziskovanje pomeni vrednoto.

## Music is our joy ... Experiences and Views on Music Olympiad

Branka Rotar Pance

*University of Ljubljana, Academy of Music, Ljubljana*



Keywords: musically gifted children, Music Olympiad, competition

Music is our joy... The initial phrase of the Music Olympiad anthem expresses the main motive that leads primary school students and their music educators to participate at the annual competition at the Academy of Music in Ljubljana. The main mission of our institution is educating musical artists and future music teachers but we are also working with musically gifted children in cooperation with the Jeunesses Musicales Slovenia (Zveza glasbene mladine Slovenije). The paper presents the experiences and knowledge we gained from organising six Slovene Music Olympiads and participating at the International Music Olympiads. The structure of the competition is complex and includes all the areas covered in the curriculum in general music education. Great emphasis is placed on creating original musical pieces which are then publicly performed at the Music Olympiad. The meetings at our Talent Point are an excellent opportunity for gifted peers to meet and share their valuable musical experiences and knowledge.

## **Profesionalni razvoj učitelja za delo z nadarjenimi učenci**

Polonca Pangrčič

*OŠ Cerkvenjak - Vitomarci, Cerkvenjak*

Ključne besede: profesionalni razvoj učiteljev, nadaljnje in dodatno izobraževanje učiteljev, izobraževanje nadarjenih

V prispevku bomo opisali, da na profesionalni razvoj učiteljev vplivajo zunanji in notranji dejavniki ter jih opisali. Ker je v praksi zaznati določeno problematiko pri nadalnjem izobraževanju in usposabljanju učiteljev s področja poučevanja nadarjenih učencev, smo naredili pregled ponudbe takih programov in jih povezali z izsledki raziskave, ki smo jo opravili med učitelji slovenskih osnovnih šol. Postavili smo raziskovalno vprašanje, ali se med učitelji z različno stopnjo pridobljene izobrazbe pojavljajo razlike v samooceni lastne usposobljenosti za delo z nadarjenimi učenci. Odgovor smo iskali s pomočjo hi-kvadrat analize vprašalnikov, ki smo jih dobili od učiteljev. Poleg drugih ugotovitev, ki jih bomo predstavili v prispevku, smo ugotovili, da imajo največjo potrebo po dodatnem izobraževanju s področja poučevanja nadarjenih tisti učitelji, ki imajo najvišjo pridobljeno stopnjo formalne izobrazbe.

## **Professional development of teachers for work with gifted students**

Polonca Pangrčič

*OŠ Cerkvenjak - Vitomarci, Cerkvenjak*

Keywords: teachers's professional development; teachers's further training; gifted education

In this paper we will describe that teachers are affected by external and internal factors on the level of professional development. In practice are detected certain problems of the further education and training of teachers in the field of teaching gifted students. Further in paper, we made an overview of these programs and link them with the results of the research, which was conducted among teachers in Slovenian primary schools. We set up a research question which is: are teachers with different levels of obtained education different in their own self-assessment skills for work with gifted students? The answer was acquired by using the chi-square analysis of the questionnaires were received from teachers. Among other findings which will be presented in this paper, we found that the teachers who have obtained the highest level of formal education, has the greatest need for additional education in the field of gifted and talented education.

## **Tema 6: OSNOVNA ŠOLA**

## **Topic 6: PRIMARY SCHOOL**

**Koordinatorica: izr. prof. dr. Karmen Pižorn**

**Chair: Assoc. prof. Karmen Pižorn, Ph.D.**

## **Večjezičnost in nadarjenost**

Kristina Tomc

*Škofja Loka*

Ključne besede: večjezičnost, nadarjenost, mešanje jezikov, jezikovni razvoj, prednosti večjezičnosti

Zadnja tri leta sem spremajala jezikovni razvoj večjezičnih otrok v Bruslju, starih od treh do dvanajstih let. Večina od njih poleg slovenščine redno uporablja še dva jezika. Za otroke sem pripravila več gledaliških in pravljičnih uric z ustvarjalnimi delavnicami, z nekaterimi pa smo imeli tudi individualne učne ure slovenskega jezika in književnosti. V prispevku bom predstavila svoje izkušnje in opažanja pri delu z otroki in intenzivno sodelovanje z njihovimi starši.

Dejstvo je, da je večjezičnost za večino otrok zelo naporna in mnogim povzroča dosti težav, kot je npr. mešanje besed in jezikovnih zakonitosti različnih jezikov, napačna izgovarjava določenih glasov, jecljanje, zavračanje enega od jezikov ... Za nadarjene otroke pa je večjezičnost dobrodošel izviv, ki zelo obogati njihovo znanje in dojemanje sveta, pridobljene sposobnosti in veščine pa jim koristijo tudi na drugih področjih.

## **Multilingualism and Giftedness**

Kristina Tomc

*Škofja Loka*

Keywords: multilingualism, giftedness, language mixing, language development, advantages of multilingualism

In the last three years, I have been following the language development of three- to twelve-year-old multilingual children in Brussels. Most of them regularly speak two languages in addition to Slovenian. The children have attended several of my puppet shows and fairytale hours with creative workshops. Some children were also offered individual lessons of the Slovenian language and literature. This paper presents my experience and observations acquired through my work with the children and the intense cooperation with their parents.

For most children, multilingualism is difficult and leads to various problems, such as language mixing, mispronunciation of some sounds, stuttering, avoiding the use of a certain language, etc. However, for the gifted, multilingualism is a welcome challenge, since it broadens their knowledge and understanding of the world around them, while at the same time helping them develop competencies and skills that can also be used in other fields.

## **Od ideje do časopisa Nastajanje šolskega časopisa spodbuja ustvarjalnost**

Sabina Leben, Majda Šubic, Urška Zihrl

*OŠ Ivana Groharja Škofja Loka, Škofja Loka*

Ključne besede: šolski časopis, nadarjeni učenci, grafična podoba šolskega časopisa

Od šolskega leta 2012/13 do šolskega leta 2016/17 smo z nadarjenimi, vedoželjnimi in aktivnimi učenci ustvarjali šolski časopis Macesni. Vsako leto smo mentorji skupaj z učenci izbrali rdečo nit šolskega časopisa. Ob rdeči niti smo pripravili razpis, s katerim smo povabili k sodelovanju še druge učence šole. V nadaljevanju smo z različnimi metodami dela zbirali ideje za prispevke, ki so jih učenci predlagali z družboslovnih in naravoslovnih področij, na primer nasveti in bonton za ustrezno oblačenje ob različnih priložnostih, stili oblačenja, časovni trak pomembnih dogodkov, križanke, rebusi, uganke, primeri izdelkov NTC-učenja, tematski likovni izdelki v različnih tehnikah ... Učenci so se preizkusili v oblikovanju in pisanju različnih literarnih in poustvarjalnih besedil, s pripravo in izvedbo intervjuev ter anket. Velik poudarek smo dali tudi likovni podobi časopisa. Mladi novinarji smo se povezali z učenci, nadarjenimi za računalništvo, ki so pod mentorstvom učiteljice oblikovno uredili časopis. Prispevke smo zbrali v Office 365, učenci so z omogočeno skupno rabo prispevke oblikovali v končno podobo časopisa. Učenci so dobili s področja grafičnega oblikovanja likovno nalogu, s katero so iskali idejne rešitve in predloge za končno likovno podobo naslovnice časopisa. Rešitve učencev za naslovenco so pregledali novinarji in izbrali najboljšo. Vsako leto je imel časopis novo podobo od časopisne oblike do zbornika, tako da so se učenci naučili veliko različnih pristopov urejanja besedil in sestavljanja vseh prispevkov v smiselnem in privlačno končno podobo.

## **From idea to newspaper Designing school newspaper encourage creativity**

Sabina Leben, Majda Šubic, Urška Zihrl

*OŠ Ivana Groharja Škofja Loka, Škofja Loka*

Keywords: school newspaper, gifted pupils, school newspaper graphical image

Gifted, curious and active pupils have created a school newspaper Macesni since the school year 2012/2013 to the school year 2016/2017. Every year we chose one theme for the school newspaper. We invited other pupils to take part with different articles and texts. We used different working methods to collect ideas for posts from social and natural science areas, suggested by the pupils, for example tips and dress code for different occasions, important events timeline, crosswords, picture puzzles, enigmas, NTC learning examples, art products of various techniques. Pupils wrote various literary texts, prepared and interviewed some interesting people and carried out the surveys. We placed great emphasis also on the visual elements of the newspaper. Young journalists teamed up with pupils gifted in ICT (information computer technology), who edited the visual design of the

newspaper under the supervision of their mentor. We collected posts in Office 365, pupils finished final image of school newspaper using shared Microsoft cloud. Pupils got task to design headline graphically using different solutions and templates. Journalists examined their results and selected the best one. Every year the newspaper had a new image, from a newspaper format to a journal, so that the pupils learned many different approaches to editing and composing all the articles in a sensible and attractive final look.

## **Ustvarjamo z literarnim junakom**

Patricia Kravanja

OŠ Antona Ukmarja Koper, Koper



Ključne besede: ustvarjalnost, kritičnost, samoiniciativnost

Živimo v času, ko se naša družba neizmerno hitro spreminja in postaja visoko tehnološka. Najbolj vneti sledilci tehnoloških novosti so seveda mladi. Med njimi je veliko zelo sposobnih, nadarjenih posameznikov, ki jih okosteneli šolski sistem s preživetimi učnimi oblikami naredi apatične, nemotivirane deležnike učnega procesa, zato potrebujejo aktivnosti, ki spodbujajo učenčovo ustvarjalnost, kritičnost, samoiniciativnost, s katerimi krepijo samozavest, in tako postavljam trdne temelje svoji prihodnosti.

Kot učiteljica slovenščine že več let opažam, da se učenci vse manj zavedajo bogatega slovstvenega izročila Slovencev, enega od virov narodove zgodovine. Opravičevati nezanimanje s trditvijo, da učenci potrebujete drugačne vsebine, je zmotno. Učenci v poplavi medijskih vsebin, računalniških igrič in trivialne literature potrebujete tudi zavedanje o jeziku in narodovi kulturi, identiteti. Temeljno vprašanje je, kako jim približati določeno snov in jih zanjo navdušiti.

V preteklem šolskem letu smo na šoli začeli z inovacijskim projektom Ustvarjamo z literarnim junakom. Učenci so lani spoznali ljudski lik lepe Vide, letos pa je bil naš literarni junak Levstikov Martin Krpan. Dejavnosti so potekale celo leto pri pouku, izbirnih predmetih, interesnih dejavnostih in na dnevih s posebno vsebino. V množici aktivnih otrok smo prepoznali skupino nadarjenih učencev, ki bodo prihodnje leto skušali sodelovalno načrtovati delo in bodo tako sooblikovali inovacijski projekt.

### **Creating with the literate character**

Patricia Kravanja

OŠ Antona Ukmarja Koper, Koper



Key words: creativity, critical thinking, self-initiative

Nowadays, the society is changing immensely fast becoming a super high-tech one. The young generations are its ardent followers. Among these youngsters there are many very talented and gifted individuals who are becoming demotivated and inactive participants of the obsolete education system with its out-of-date methods and style. Therefore, engaging projects aim to stimulate students' creativity, critical thinking, self-initiative, with intent to straighten self-esteem and sets the bases of their own future.

As a language teacher I have noticed students have become less and less aware of the importance of the Slovene literature heritage and its historical impact on the nation's history.

The concept the students need new and modern topics is rather an excuse for less interest students have and it is erroneous. Young people are overwhelmed with digital media, computer games and trivial literature but indeed in need of language awareness, national culture and identity. The main question is how to approach with the topic and motivate the students.

Last school year we started a project "Creating with the Literate Character". Student learned about the folks character beautiful Vida, this year a character from epic work by Levstik Martin Krpan. It was a cross-curricular, multi-level and vertical-teaming project. Among many we have recognised a group of talented students, who will experience team-work planning and will be engaged in co-working on an innovative project.

# **Delo z nadarjenimi učenci v drugi polovici osnovne šole na področju slovenščine**

Maja Brezovar

*Osnovna šola Žiri, Žiri*

Ključne besede: nadarjeni učenci, slovenščina, aktivnosti

Nadarjeni učenci v slovenski osnovni šoli ne predstavljajo homogene skupine, saj gre, ob nekaterih dodatnih oblikah dela z nadarjenimi učenci, za skupno šolanje teh z drugimi učenci.

V Osnovni šoli Žiri potekajo različne oblike dela z nadarjenimi. Na začetku šolskega leta (predmetni) učitelji s posamičnih strokovnih področij pripravijo v sodelovanju s svetovalno službo tudi individualiziran načrt za posamičnega učenca, med šolskim letom pa potekajo razne aktivnosti, v okviru katerih se da za nadarjene učence pripraviti različne programe oziroma naloge. Tekmovanja so eden od načinov spodbude in izkazovanja uspešnosti nadarjenega učenca, v referatu pa je bil glavni namen raziskati način spodbujanja močnega področja predvsem pri predmetu slovenščina. Pri opismenjevanju nadarjenih otrok zagotovo ni potrebno ločiti nadarjenega učenca od ostalih, le zahtevnost oz. težavnost nalog namreč zlahka vključimo v običajno šolsko uro, delo. Vrsta umetnostnih in neumetnostnih besedil, ki so osnova za poučevanje slovenščine, je namreč neomejeni vir informacij, ki se jih da pridobiti, vrednotiti, selekcionirati in uporabiti in prav nadarjeni otrok je tisti, ki bi lažje prišel do faze uporabe koristnih informacij. Pri sestavi nalog stremimo k temu, da so oblike dela in aktivnosti za nadarjene učence raznovrstne, zato ustrezajo tako splošno nadarjenim kot tudi tistim, ki so nadarjeni na posebnem področju.

## **Working with gifted pupils in the second half of the primary school in the field of Slovenian language**

Maja Brezovar

*Žiri Primary school, Žiri*

Keywords: gifted pupils, subject of Slovenian language, activities

Teachers in the Žiri Primary school work with gifted pupils in various ways. At the beginning of a school year, teachers with different areas of expertise in cooperation with advisory counsellors prepare an individual plan with a variety of activities, tasks and programs for each individual gifted student. Competitions are one of the ways of demonstrating performance and encouragement of a gifted pupil, but in this article, the main purpose has been to explore ways of encouraging a strong field in particular on the subject of Slovenian language. In literacy of gifted child, it is certainly not necessary to separate the gifted students from others, but it demands complexity or the difficulty of tasks that are easily incorporated into the mainstreaming lessons, work. The type of literary and non-literary (practical) texts, which are the basis for teaching the subject of Slovenian language, is in fact

an unlimited source of information that can be acquired, evaluated and can be used. And the gifted pupil is the one who could easily acquire the skills to use useful information. When preparing the tasks for the gifted students, our aim is to prepare various forms of work and various activities for gifted students; therefore, they meet generally gifted as well as those who are gifted in a specific area.

## **Skok v znanje**

Petra Cimerman, Barbara Pristovnik

*OŠ Sveta Ana, Sveta Ana v Slovenskih goricah*

Ključne besede: akceleracija, nadarjen učenec, sodelovanje s starši, timsko delo, dolgčas

Spremljanje otroka, ki se v šoli dolgočasi in daje občutek, da zna vse, kar mora znati, je prebudilo idejo o preskoku razreda. Ta v zadnjih dvajsetih letih v slovenski osnovni šoli ni bil pogost, na kar je vplival skupek dejavnikov, med njimi slabe izkušnje in številni stereotipi. V naši skupini se je kot temelj sodelovanja za delo z nadarjenimi učenci izkazal pogum, soočiti se z globoko zakoreninjenimi pomisliki, ki bi utegnili zavirati učenčev napredek. Seveda pa je izhodišče za delo zakonodaja, ki hkrati vodi in omejuje, strokovna znanja s področja pedagogike in psihologije ter pripravljenost otroka na preskok.

V našem primeru gre za preskok razreda med letom. V prispevku je poudarjen celosten pristop k akceleraciji – odkrivanje otrokovih potencialov, sodelovanje s starši in sodelovanje strokovne skupine. Predstavljeno je tudi delo pri pouku angleščine, s katero se je učenec zaradi uvajanja tujega jezika v prvo vzgojno-izobraževalno obdobje srečal eno leto pred novimi sošolci, ter začetni koraki zgoščevanja učnega načrta po ugotovitvi, da v znanju še zmeraj občutno prednjači.

## **A leap into knowledge**

Petra Cimerman, Barbara Pristovnik

*OŠ Sveta Ana, Sveta Ana v Slovenskih goricah*

Keywords: acceleration; gifted student; cooperation with parents; team work; boredom

Working with a student who is constantly bored and gives the impression of knowing everything already sparks the idea of class acceleration. This concept has not been put into practice in Slovenian schools too often for the last twenty years due to various experiences and stereotypes. The core of cooperation and work with gifted students in our team proved to be the courage to face doubts which might influence or decelerate the student's progress. Of course the basis for our work are the legislation, the knowledge and skills in the field of pedagogy and psychology, and the student's readiness for acceleration.

This is a case of accelerating to a higher grade mid-year. Our article emphasizes the integral approach to acceleration – detecting the student's potentials, working with parents, and the cooperation inside the team. It also deals with the issue of learning English as a subject that the student learned a year earlier than his new schoolmates due to the changes in the curriculum, and the steps that are being taken after the realization that in English, he is still far ahead of his peers.



## Kako delati z nadarjenimi učenci v osnovni šoli?

Saša Mezek

*OŠ Vide Pregarc, Ljubljana*

Ključne besede: primer prakse, program dela, zanimivost programa

Predstavila vam bom primer prakse dela z nadarjenimi učenci 5.–9. razreda, ki sem ga izvajala v šolskem letu 2016/17 na OŠ Vide Pregarc. Kot učiteljica razrednega pouka se zavedam, kako pomembni sta širina in kakovost pridobljenega znanja, zato je bilo pri oblikovanju programa za nadarjene učence moje vodilo ponuditi učencem raznolike in zanimive dejavnosti na različnih področjih. Pred začetkom šolskega leta sem si zamislila okviren program dejavnosti glede na področja nadarjenosti učencev naše šole. Dogodki so potekali v celotnem šolskem letu. Udeležba je bila prostovoljna. Pri delu sem naletela na različne težave oz. vprašanja. Na koncu šolskega leta sem med učenci izvedla anketni vprašalnik, s katerim sem jih povprašala, kaj so pridobili z obiskovanjem ur za nadarjene učence, katere vsebine so se jim zdele najzanimivejše, kako po njihovem mnenju šola skrbi za nadarjene učence, katere vsebine oz. dejavnosti si želijo še imeti in razlog morebitnega neobiskovanja teh ur za nadarjene učence. Naredila sem kvalitativno analizo odprtih vprašanj.

## How to work with gifted students in primary school?

Saša Mezek

*Vida Pregarc Primary School, Ljubljana*

Keywords: case study, work programme; interesting programme

I will present an example of the practice of working with gifted pupils in grades five to nine, which I carried out in the school year 2016/17 at Vida Pregarc Primary School. As a primary teacher I know how important the width and quality of acquired knowledge are. That is why, when designing a programme for gifted students, I wanted to offer the students diverse and interesting activities in various fields. Before the start of the school year, I envisioned a framework of activities based on areas of talent of the pupils in our school. Events were held throughout the school year. Participation was voluntary. During the implementation of the programme, I encountered various difficulties or questions. At the end of the school year, I conducted a questionnaire among the students. I asked them what they gained by attending classes for gifted children, which contents they deemed most interesting, how they thought the school cared for gifted children, which contents or activities they wanted to continue with, and a reason for possible absence from these classes for gifted children. I conducted a qualitative analysis of open-ended responses.

# PLAKATI / POSTERS

---

## O petelinčku, ki se je učil kikirikati

Katarina Tischer Gregorič

*OŠ Ivana Roba Šempeter pri Gorici, Šempeter pri Gorici*

Ključne besede: glasbena pravljica, estetika glasbe, glasbena spremjava

Učiteljice v 1. razredu vsako šolsko leto skupaj z učenci pripravimo kulturni program za sprejem prvošolcev. Letos smo izbrale pravljico O petelinčku, ki se je učil kikirikati, saj opažamo, da v šolo vsako leto vstopa veliko otrok z govorno-jezikovno motnjo. Z vztrajnostjo in rednimi vajami, kot jih je delal petelinček v pravljici, smo že zelo poudariti, da lahko pridemo do želenega cilja. Pravljico sem glasbeno opremila skupaj z nekaterimi otroki iz obeh prvih razredov. Otroke sem izbrala glede na njihovo glasbeno nadarjenost in ustvarjalnost, ki sem jo zaznala med šolskim letom. Tako sem izmed 52 otrok izbrala 10 takih, kot izviv pa sem izbrala še dva otroka s posebnimi potrebami (hidrocefalus, govorno-jezikovna motnja). V glasbeni učilnici so vsi otroci preizkusili vse inštrumente, ki so jim bili na razpolago (Orffovi inštrumenti), ter se nato odločili, na katerega bodo igrali. Za melodične spremjavne sem jim pripravila barvne predloge, ritmični del so oblikovali sami. Nekaj inštrumentov so tudi sami izdelali (npr. inštrument za regljanje – žabica). Redno smo vadili in po kratkem času otroci niso potrebovali več melodičnih predlog. Še več – predlagali so, kaj bi pri spremjavi še lahko dopolnili. Tudi otroka s posebnimi potrebami sta bila aktivna in sproščena. Učila sta se sicer počasneje, vendar z navdušenjem in komaj sta čakala, kdaj bo vaja. Igrala sta vsak po eno spremjavo na melodičen inštrument ter več ritmičnih spremjav. Nekateri otroci so jima tudi pomagali: odmagnili so se v kotiček in vsakemu posebej kazali, kako igrati. Vztrajali so toliko časa, da sta se igranja spremjavne naučila. Otroci so vse pesmi tudi peli. Menim, da je igranje spremjavne in petje pesmi za tako majhne otroke zahtevna naloga, a nam je uspelo.

## A tale about a small cock, who was learning how to crow

Katarina Tischer Gregorič

*OŠ Ivana Roba Šempeter pri Gorici, Šempeter pri Gorici*

Key words: musical tale, music esthetics, musical accompaniment

Teachers in the first class, prepare the cultural program every school year, together with pupils for acceptance of the first class pupils. This year a tale about a cock that was learning how to crow was chosen , because we notice, that many pupils go to school with speaking and linguistic disorder. With a dose of persistence and exercises done by the cock in its tale, we wanted to stress, that it is possible to achieve an aim.

A tale is musically based together with other pupils from the both first classes. Pupils are chosen according to their music talent and their creativity that was noticed during a school year. In this case, 10 out of 52 pupils were chosen, after that another who suffer from hidrocefalus and speaking-linguistic disorder.

two were chosen as a challenge, In a music class all the pupils tried to play to many instruments available there (Orff instruments) and later they took a decision on which instrument to play. The color templates were made for melodical accompaniment, the rythmical part was created by themselves.

Some of the instruments were made by themselves (e.g. an instrument to reel – a small frog)

We drilled regularly and after a short period of time pupils no longer used a color template; more than this – they even suggested what to supplement the accompaniment. The both pupils with special needs were also relaxed and active. They were learning slower but they hardly waited for an exercise to do. They played each accompaniment separately on an instrument and more rythmical accompaniments.

Some of the pupils helped them ; they moved into a corner, showing to each other separately how to play, as long as they learned how to play an instrument.

The songs were sung, too. I think that playing for accompaniment and singing the songs for such short pupils, is a big challenge, but we succeeded.

# Evolucija

Laura Ozebek

*OŠ Milojke Štrukelj, Nova Gorica*

Ključne besede: samostojnost, odgovornost, medosebni odnosi, komunikacija, timsko delo

Nadarjen otrok ima vlogo vodje tima, ki zagotavlja pozitivne rezultate projekta in usklaja aktivnosti projektnega tima. Skrbi, da vsak član tima v sodelovanju z drugimi prispeva k uresničitvi rezultatov projekta. Spodbuja samostojnost in odgovornost članov tima, uveljavlja mentorski odnos z učenci in učiteljem. Metoda pomaga uresničiti poslanstvo » poučujemo, da se naučimo«. Omogoča soočenje z različnimi omejitvami, kot je čas, ko mora biti delo končano, obseg dela, ki ga ne sme biti preveč in ne premalo, pri čemer je potrebno zagotoviti določen rezultat in se odločiti, katere vire in koliko virov bomo uporabili. Metoda je tudi odlična »vaja« za oblikovanje medosebnih odnosov. Omogoča iskanje skupnega cilja in pričakovanega rezultata, dviguje spoštovanje sovrstnikov, tako najmočnejšega kot najšibkejšega člena tima.

## Evolution

Laura Ozebek

*OŠ Milojke Štrukelj, Nova Gorica*

Keywords: independence, responsibility, interpersonal relationships, communication, teamwork

The role of a gifted pupil:

As the team leader, which guarantees the positive results of the project and coordinates the activities of the project team. It cares that each member of the team, in cooperation with others, contributes to achieving the results of the project. It promotes the autonomy and responsibility of team members, exercises mentoring with pupils and teachers.

The significance of the implemented activity for the learning development of the talented pupil:

The method helps to realize the mission » we teach to learn«. It allows confrontation with various constraints, such as the time when the work has to be completed, the amount of work that must not be too much and not too small, ensure a certain result, decide which and how many resources we will use.

The model is an excellent »exercise« to create interpersonal relationships. It allows finding a common goal and the expected result, raising respect for peers, the strongest as the weakest team member.

## Program za nadarjene dijake v XV. gimnaziji v Zagrebu

Ines Dukić, Sanja Antoliš, Mihaela Marceljak Ilić, Bernardica Mlinarić, Vesna Smadilo Škornjak,  
Eva Špalj

XV. gimnazija, Zagreb



Ključne besede: nadarjeni dijaki, testiranje, izbira projektne naloge

XV. naravoslovno-matematična gimnazija v Zagrebu razvija program za nadarjene dijake vse od leta 2008. Dijaki so izbrani na osnovi testiranja in mnenja predmetnih profesorjev, potem pa so organizirani v majhne projektne skupine, ki štejejo od 2 do 6 učencev in temeljijo na interesih. Skupine so seznanjene z različnimi podpodročji v STEM-u, kjer pogosto pomagajo zunanjí mentorji. Nato sledi izbira naloge in delo na projektni nalogi, ki poteka v drugem in tretjem letniku srednje šole. Naslovi projektov obsegajo različna gradiva, nekateri so splošno akademski, drugi pa se ukvarjajo z aplikacijami.

Poster predstavlja razvoj programa za nadarjene dijake skozi številke in šest projektnih nalog. Naloge so prikazane z raziskovalnimi vprašanji, metodami in dosežki.

## Program for gifted students in XV. gimnazija in Zagreb

Ines Dukić, Sanja Antoliš, Mihaela Marceljak Ilić, Bernardica Mlinarić, Vesna Smadilo Škornjak,  
Eva Špalj

XV. gimnazija, Zagreb



Keywords: gifted students; testing; selection of project topics

XV gymnasium in Zagreb develops a program for gifted students since 2008. Students are selected based on IQ tests and teachers' expertise and organized in small project groups of 2-6 students according to their interests. Groups are introduced to various STEM sub-areas, frequently in cooperation with out-of-school mentors, what is followed by selection of a project topic and work on it during 2nd and 3rd year of secondary education. Topics comprise wide variety of themes; some general academic, the other leading to application.

The poster presents development of the program for gifted students through some statistics and illustrates 6 recent projects with research questions, key ideas, methods and results.

## **Spodbujanje nadarjenih na področju ustvarjalnosti in naravoslovja in tehnike**

Jasmina Velikanje

*Gimnazija Jurija Vege Idrija, Idrija*



**Ključne besede:** razvijanje potencialov, spodbudno učno okolje, naravoslovje, tehnika

Gimnazija Jurija Vege Idrija je naziv Evropska točka za nadarjene prejela aprila 2016. Prizadevamo si ne le prepoznati nadarjene dijake, marveč jih tudi nadalje podpreti pri razvijanju vseh njihovih potencialov. S široko ponudbo različnih aktivnosti in z obogatitvenim programom želimo na šoli ustvarjati spodbudno učno okolje, saj le tako lahko dijaki najdejo in razvijejo svoja močna področja. Poster prikazuje delo z nadarjenimi na področju spodbujanja ustvarjalnosti in na področju dela z nadarjenimi na področju naravoslovja in tehnike. Dijakom ponujamo obogatitvene programe in aktivnosti znotraj in izven kurikula, kar nam omogoča strokovno znanje naših učiteljev, sodelovanje z lokalno skupnostjo in raziskovalnimi centri v lokalnih podjetjih. Poster je kratek povzetek primerov dobre prakse dela z nadarjenimi na omenjenih dveh področjih.

### **Stimulating creativity and natural sciences giftedness**

Jasmina Velikanje

*Gimnazija Jurija Vege Idrija, Idrija*



**Keywords:** developing potentials, stimulating learning environment, natural sciences, technology

Grammar School Idrija has been a European Talent Point since April 2016. Our goal has always been not only to identify gifted students but also to further support development of all their potentials. We want to create a stimulating environment by offering all our students different activities and enrichment programmes so they could find and develop their strengths. The poster demonstrates gifted education in the field of stimulating students' creativity and in the field of supporting and developing students' giftedness in natural and technical sciences. With help of our teachers, local and wider community and research centres in the local companies we are able to offer our students enrichment curricular and extracurricular programmes and activities. The poster is a brief summary of what we believe are good-practice examples in the two fields.

# Projects and Programmes of Center for Gifted Child Development (An Overview from 1995 to 2015)

Jasna Cvetković - Lay

*Center for Gifted Child Development »Bistrić«, Zagreb*



Keywords: project, program, applied activities, handbooks

The poster shows the applied activities and several major projects carried out by our Center as well as related publications:

PROJECTS & Programmes	HANDBOOKS & Brochures
Experimental programme for gifted preschool children	"I want and I can do more" 1995, second edition 2002.
Program of workshops and in-service training in kindergartens and schools	"One's gifted, what will I do with him?" 1998, second edition 2008.
Project "Gifted Child in a Kindergarten"	"One's gifted, what will I do with myself?" 2002, second edition 2010.
Monitoring and guiding gifted youngsters in the natural sciences	"You can do it differently", 2004, co-author with Dr. Vid Pečjak
Project of preventing unacceptable behaviour of gifted children	"How to organize workshops for gifted children" 2005.
Assistant training programme at workshops for gifted children	„Gifted children with special needs“ 2011.
Workshops for double exceptional gifted students and their parents	„Development of enriched materials for the gifted primary school students“ 2015.

## Mavrica ustvarjalnosti

Tatjana Dominić Radivojević, Adelina Pahor, Mateja Barbarič, Nevenka Šergon Omahen

*OŠ Ivana Babiča Jagra Marezige, Marezige*

Ključne besede: prepoznavanje nadarjenosti, kriteriji prepoznavanja nadarjenosti, Individualni standardi, profesionalna rast

Z analizo dela z nadarjenimi učenci ugotavljam, da se z nadarjenimi veliko dela in se jim ponuja veliko dejavnosti, želimo pa si, da bi se nadarjeni bolj proaktivno vključili v načrtovanje in izvedbo dejavnosti ter da bi se delo z nadarjenimi bolj strukturiralo in sistemsko vpeljalo v program šole.

Individualne programe, ki jih bodo oblikovali vsi učitelji, bomo združili v dejavnost "Mavrica ustvarjalnosti". Poudarek dela vseh vključenih je na končnem cilju, ki predstavlja skupen načrt učenca in mentorja s sprotno evalvacijo in samoevalvacijo tako učenca kot učitelja in s končnim izdelkom: oblikovanje in vodenje prireditve, likovne razstave, literarni izdelki, individualni dosežki na višjih taksonomskih ravneh znanja ...

To bomo dosegli z izobraževanjem učiteljev na področjih prepoznavanja nadarjenosti učencev, oblik dela z nadarjenimi in z oblikovanjem kriterijev za prepoznavanje identificiranih in neidentificiranih nadarjenih učencev, z oblikovanjem individualnih programov dela ter z vključitvijo v LDN.

## Rainbow creativity

Tatjana Dominić Radivojević, Adelina Pahor, Mateja Barbarič, Nevenka Šergon Omahen

*OŠ Ivana Babiča Jagra Marezige, Marezige*

Key words: Identifying talented students, criteria for identifying talents, individual standards, professional growth plan

The analysis on talented students programme has shown that there is quite a lot of activities planned and realised in our school. However, we wish to activate talented students in the planning and realising activities jointly with mentors as well as structure the programme in a more systematic way.

Each teacher and student will prepare an individual programme together. The focus will be on the final output which can be a stage performance, exhibition, literary work, better school performance... Along the way both the teacher and student will go through a process of constant evaluation and self – inquiry. All the activities will be united in the programme called The creativity rainbow.

The programme includes educating teachers for identifying talents in students, methods and activities, forming of identifying criteria , forming of individual student programmes and admitting it into annual school plan.



# 28 years of Višnjan educational programs – past, present and future

Petar Čuček and Korado Korlević

*Science and education center Višnjan, Višnjan Observatory*



**Keywords:** gifted/highly motivated education, residential summer camps, highly motivated teaching strategies, Višnjan educational programs

Višnjan educational programs (VEP), the collective name for residential camps and schools aimed to highly motivated youth from 9 – 19 years old is being conducted from 1989. Programs are organized as a non-formal learning environment with main goals of improving student's scientific literacy, methodology, data gathering, analysis and scientific presentation in STEM area. In addition to above-mentioned goals, VEP provides for youth research environment, which, combined with the project based learning of an interdisciplinary subject boosts the motivation by creating an "addiction to discovery". Herein, we are presenting the evolution of VEP from its beginnings with a yearly reach of 30 students (astronomy, technology) to present day situation of yearly reach of 300 students (STEAM, social sciences) along with programs' and students' structure and challenges from the organizational, financial and psychological point of view. In the fast changing and evolving society, our job is to prepare youth for the future, which means the constant evolution of methods and environment.

Višnjan educational programs (VEP), the collective name for residential camps and schools aimed to highly motivated youth from 9 – 19 years old is being conducted from 1989. Programs are organized as a non-formal learning environment with main goals of improving student's scientific literacy, methodology, data gathering, analysis and scientific presentation in STEM area. In addition to above-mentioned goals, VEP provides for youth research environment, which, combined with the project based learning of an interdisciplinary subject boosts the motivation by creating an "addiction to discovery". Herein, we are presenting the evolution of VEP from its beginnings with a yearly reach of 30 students (astronomy, technology) to present day situation of yearly reach of 300 students (STEAM, social sciences) along with programs' and students' structure and challenges from the organizational, financial and psychological point of view. In the fast changing and evolving society, our job is to prepare youth for the future, which means the constant evolution of methods and environment.

## OKROGLI MIZI / ROUND TABLES

## Raziskovanje z nadarjenimi

Sodelujoči: Točke za nadarjene v okviru CRSN

Diskutanti: Mija Kordež (ZOTKS\*), Alenka Mozer (Gimnazija Vič), doc. dr. Jure Bajc,  
dr. Barbara Rovšek, doc. dr. Boštjan Kuzman (vsi UL PEF\*\* in DMFA\*\*\*)<sup>1</sup>

Koordinatorica: prof. dr. Mojca Čepič

V okroglji mizi smo se posvetili obravnavi delikatne naloge, kako spodbujati razvoj nadarjenih. Ena od metod je zagotovo njihovo vključevanje v raziskovalno delo, v projekte oziroma probleme, ki spodbujajo in zahtevajo samostojne razmisleke, načrtovanje, samostojno iskanje novih informacij in njihovo uporabo v novih okoliščinah. Diskutante smo zaprosili, da z nami delijo nekaj svojih izkušenj pri svojem dolgoletnem srečevanju z nadarjenimi. V diskusiji so prispevali naslednji diskutanti: Mija Kordež (ZOTKS), Alenka Mozer (Gimnazija Vič), Jure Bajc in Boštjan Kuzman (UL PEF). Kot izhodišče za diskusijo smo jim zastavili naslednja vprašanja:

- Kako vaše dejavnosti spodbujajo in razvijajo raziskovalne pristope učencev in dijakov, a tudi spremnosti, potrebne za raziskovanje?
- Kako se učenci in dijaki odločajo za pristop k tem dejavnostim?
- Kakšna je vaša vloga v raziskovalnih aktivnostih?
- Ali lahko poveste kaj o nadaljnjih življenjskih poteh "vaših" uspešnih raziskovalcev, če jih morda poznate?

Ker so diskutanti aktivni na različnih področjih, so se razlikovala tudi njihova sporočila. Gospa Mija Kordež se je predvsem posvetila opisu dejavnosti, namenjenih nadarjenim, in tekmovanjem v organizaciji ZOTKS. Alenka Mozer je opisala svoje dolgoletne izkušnje o vodenju nadarjenih pri projektnem delu in na katere ovire pogosto naleti mentor različnih skupin. S primeri je ponazorila tudi, kako iskati tekmovanja, na katerih udeležba delo učencev še posebej nagradi. Jure Bajc, dolgoletni vodja tekmovalcev na Fizikalni olimpijadi, je razložil potek tekmovanja in priprave na olimpijado, ki so v primerjavi s pripravami v drugih državah izjemno skromne. Boštjan Kuzman je opisal izkušnje z matematičnega tabora MARS. Po predstavitvah se je razvila zanimiva debata, na kateri so različne problematike dela z nadarjenimi osvetlili tudi člani Točk za nadarjene v okviru CRSN in številni ostali udeleženci okrogle mize. Trajanje okrogle mize smo močno prekoračili, saj so se odpirala številna vprašanja odpirala.

Okrogle mize kot del strokovnih posvetov pomagajo dodatno osvetliti okoliščine, v katerih delujejo pedagogi, poleg tega pa omogočijo neposredno medsebojno komunikacijo, zato jih je nujno umeščati kot redno dejavnost na posvetih in konferencah.

---

<sup>1</sup> \*ZOTKS – Zveza za tehnično kulturo Slovenije, \*\*UL PEF – Univerza v Ljubljani, Pedagoška fakulteta, \*\*\*DMFA – Društvo matematikov, fizikov in astronomov

## Research with the Gifted

Contributors: CRSN's Talent Points

Discussants: Mija Kordež (ZOTKS\*), Alenka Mozer (Gymnasium Vič), Asist. prof. Jure Bajc, Ph.D.

Barbara Rovšek, Ph.D., Asist. prof. Boštjan Kuzman, Ph.D. (all UL PEF\*\* and DMFA\*\*\*)<sup>2</sup>

Chair: Prof. Mojca Čepič, Ph.D.

The Round Table discussed a difficult task: How to stimulate and support intellectual development of gifted students. One of successful means is certainly inclusion of gifted to research, to projects or to offer them non-trivial problems, which require independent considerations, planning, search for new information, and their implementation in new circumstances. Discussants were asked to share their experience from several years of work with gifted students. The following discussants contributed: Mija Kordež (ZOTKS), Alenka Mozer (Gimnazija Vič), Jure Bajc and Boštjan Kuzman (UL PEF). As a starting point, we asked the following questions:

- How do your activities stimulate and develop students' research and inquiry approaches, as well as their research skills?
- How students decide for involvement to these activities?
- What is your role in these research activities?
- Do you follow your students' career later? If so, would you present few successful examples?

Since discussant came from different institutions and are active in different fields, their messages differed. Ms. Mija Kordež has focused on description of various activities offered to gifted individuals and competitions organized by ZOTKS (Association for technology culture Slovenia).

Alenka Mozer described her experience from several years of mentoring and supervising gifted high school students during the project work. She has explicitly pointed also our obstacles, which may hinder a successful student's and supervisor's at work. Using the examples, she introduced various competitions for gifted students, which are specifically focused on students' projects.

Jure Bajc, who has been leading Slovenian Physics Olympiads teams for several years, first introduced the competition, and described the modes of training offered to Slovenian students. This training is very modest in comparison with preparations of participating teams from other countries.

Boštjan Kuzman presented experience from Camp for math called shortly MARS.

A lively discussion developed after presentations, to which have strongly contributed members of CRSN's talent points and other participants of the Round table discussion. The time allocated for the Round table was too short, as various relevant questions were raised as dominos, one triggering the fall of another, and were discussed.

Round table discussion are a valuable part of professional meetings as they allow for additional clarification of various issues appearing in practice. In addition, they create new ideas, establish connections and foster collaboration; therefore, they should be present as a regular mode of communication in meetings and conferences.

---

<sup>2</sup> \*ZOTKS – Association for Technical Culture Slovenia, \*\*UL PEF – University of Ljubljana, Faculty of Education, \*\*\* Association of Mathematicians, Physicists and Astronomers

## Nadarjeni o izobraževanju nadarjenih

Sodelujoči: Točke za nadarjene v okviru CRSN-ja

Diskutanti: Marco Agozzino (Italija), Lukáš Kyzlík (Češka), Polona Čebular, Sara Oblak, Tim Prezelj (vsi Slovenija)

Koordinator: izr. prof. dr. Gregor Torkar

Cilj okrogle mize z naslovom »Nadarjeni o izobraževanju nadarjenih«, ki je bila organizirana 22. septembra 2017 v okviru konference CRSN-ja, je raziskati, kako nadarjeni posamezniki z nadpovprečnimi sposobnostmi na določenem področju zaznavajo svoje izobraževanje. V pričujočem poročilu bo predstavljena evalvacija okrogle mize z namenom osvetlitve ključnih vrzeli in izzivov na področju izobraževanja nadarjenih. Taber (2007, str. 17) meni, da si moramo pri poučevanju nadarjenih učencev zastaviti naslednje vprašanje: »Ali je trenutni učni načrt resnično dovolj zahteven in usmerjen k razvoju nadarjenih učencev?« K. Rogers (2002) izpostavi, da se nadarjeni učenci učijo veliko hitreje kot drugi učenci in zato od njih ne bi smeli pričakovati, da bodo čakali, da jih bodo njihovi vrstniki dohiteli v znanju. Avtorica navaja tudi podatek, da lahko nadarjeni učenci v Združenih državah Amerike preživijo od treh do šestih let svojega šolanja, ne da bi se naučili česa novega.

Udeleženci okrogle mize, ki so prihajali iz različnih držav, so razpravljali o lastnem zaznavanju izobraževanja nadarjenih, in sicer skozi osebno izkušnjo vključenosti v različne izobraževalne sisteme za nadarjene. Na okrogli mizi so sodelovali: Marco Agozzino (Italija), Polona Čebular (Slovenija), Lukáš Kyzlík (Češka), Sara Oblak (Slovenija) in Tim Prezelj (Slovenija). Z namenom priprave so bila sodelujočim dva tedna pred pričetkom poslana vprašanja ter povabilo, da napišejo kratek povzetek (do 300 besed), v katerem opišejo svoje razmišljjanje:

- Kje so glavne prednosti obstoječega šolskega sistema za nadarjene učence?
- Kje so glavne pomanjkljivosti obstoječega šolskega sistema za nadarjene učence?
- Kje so glavne priložnosti za izboljšanje obstoječega šolskega sistema za nadarjene učence?
- Kje so glavne pasti obstoječega šolskega sistema za nadarjene učence?
- Kako bi vam morali izobraževalni sistemi pomagati pri razvoju vaše nadarjenosti?
- Če bi imeli časovni stroj, kaj bi spremenili pri svojem šolanju, da bi lahko še bolje razvili svojo nadarjenost?
- Kateri je po vašem mnenju najbolj pereč problem, ki bi ga takoj, ko bi to bilo možno, bilo treba razrešiti pri izobraževanju nadarjenih in zakaj?
- Kje vidite prednosti mednarodnega mreženja nadarjenih (ETSN – mladinska platforma)?

Vsek izmed sodelujočih na okrogli mizi je imel uvodno predstavitev, ki je trajala približno 8 minut, nato pa je sledila splošna diskusija. Približno 80 dijakov in učiteljev se je udeležilo okrogle mize. V nadaljevanju je predstavljen kratek povzetek njihovega razmišljjanja.

Na začetku so udeleženci izpostavili, da so trenutni izobraževalni sistemi narejeni za povprečne učence/dijke/študente. Po njihovem mnenju so nadarjeni zaznani kot pametnejši v primerjavi s povprečnimi učenci in ne kot posamezniki, ki razmišljajo drugače. Eden izmed dijakov je to zelo jasno ponazoril: »V svojih najstniških letih sem imel občutek, da me nihče ne razume ter da nihče ne ceni mojih idej, čeprav sem dobil veliko nagrad in priznanj.« Predlagali so več individualizacije v izobraževanju nadarjenih, saj je vsak nadarjen učenec svojevrsten. Dijakinja, ki obiskuje eno izmed gimnazij v Ljubljani, je izrazila svoje zadovoljstvo s trenutno situacijo na šoli, ki jo obiskuje. Poročala je, da nadarjeni dijaki lahko sodelujejo v številnih obšolskih dejavnostih, ki jim pomagajo pri razširjanju obstoječega znanja in spretnosti na področju, ki jih zanima. Izbor aktivnosti, ki se jih lahko udeležijo po rednem pouku, je izjemno raznolik, in sicer od znanosti in jezika do uprizoritvenih

umetnosti in športa. Dejala je, da verjame, da v splošnem šolski programi zagotavljajo dobro podlago, ki nadarjenim omogoča razvoj njihovih talentov.

Sodelujoči so bili zelo kritični glede identifikacije nadarjenih posameznikov v Sloveniji. Nadarjeni učenci v Sloveniji so predlagani za postopek identifikacije na podlagi ocen učiteljev v prvih letih osnovnošolskega izobraževanja. Sodelujoči so to tehniko prepoznavanja nadarjenosti ocenili kot zelo subjektivno in kot popolnoma odvisno od učiteljeve sposobnosti prepoznavanja nadarjenosti. Predlog sodelujoče dijakinje je bil, da bi vse učence testirali pri določeni starosti in tako bi proces identifikacije postal veliko bolj objektiven in zanesljiv. Predlagala je, da bi učence lahko testirali pri dveh ali treh različnih starostih, zato da ne bi posamezni nadarjeni učenci ostali prezrti.

Diskutanti so izpostavili tudi pomen prepoznavanja in podpore na posameznih področjih nadarjenosti tekom samega izobraževanja. Poudarili so, da sta umetnost in humanistika slabo zastopani pri izobraževanju nadarjenih v Sloveniji, zato je eden izmed sodelujočih priporočal bolj prožne splošne kurikule, ki bi učencem omogočili, da tudi v času rednega izobraževanja razvijajo svoje področje nadarjenosti in ne le ob popoldnevih, kar je trenutna prevladujoča praksa.

Nadarjeni mladostnik iz Italije je pripomnil, da trenutni izobraževalni sistem v njegovi državi ne zagotavlja sistematične podpore nadarjenim učencem. Meni, da lahko pomanjkanje specifičnih programov vodi do tega, da nadarjeni zlahka izgubijo interes za učenje šolskih predmetov, ker vsebina teh zanje ne predstavlja zadostnega izziva. Ob tem pa je izpostavil tudi pozitivno plat, in sicer je dejal, da izobraževalni sistem usposobi nadarjene za delo z drugimi, ki jim niso nujno podobni.

Sodelujoči so videli priložnosti za izboljšave trenutnih sistemov izobraževanja v usposabljanju večjega števila učiteljev z namenom prepoznavanja nadarjenih in obveščanja o različnih priložnostih oz. aktivnosti, ki so na voljo za nadarjene učence. Poudarili so potrebo po učinkovitejšem obveščanju o priložnostih za nadarjene učence. Veliko možnosti za izboljšave vidijo tudi pri izboljšanju obstoječih učnih praks, ki so potrebne za vse učence, ne samo za nadarjene. Menijo, da je mednarodno mreženje nadarjenih zelo pomembno za izmenjavo različnih izkušenj (npr. podporni sistemi za nadarjene učence v različnih državah) ter vzpostavitev mednarodnega sodelovanja. Nazadnje so izrazili skrb, da bi sedanji trendi v izobraževanju, ki se osredotočajo predvsem na pridobivanje veščin in znanja, ki je takoj uporabno v industriji (pritiski podjetij), negativno vplivali na prihodnji razvoj izobraževanja nadarjenih.<sup>3</sup>

---

<sup>3</sup> Reference: Rogers, K. B. (2002). Re-forming gifted education. Scottsdale AZ: Great Potential Press.  
Taber, K. S. (2007). Science education for gifted learners? In K. S. Taber (Ed.), *Science Education for Gifted Learners* (pp. 1–14). London, UK: Routledge.

## Gifted about Gifted Education

Contributors: CRSN's Talent Points

Discussants: Marco Agozzino (Italy), Lukáš Kyzlík (Czech Republik), Polona Čebular, Sara Oblak, Tim Prezelj (all Slovenia)

Chair: Assoc. prof. Gregor Torkar, Ph.D.

The aim was to investigate how gifted (talented, high-ability) student with exceptional ability in an area of learning perceives his or her schooling (education). The present report evaluates round table discussion of gifted students to highlight some of the critical gaps and challenges in gifted education. The round table entitled "Gifted about Gifted Education" was organized on 22nd of September 2017 at the Faculty of Education University of Ljubljana (Slovenia) as part of the CRSN Conference entitled "Identifying the Gifted and Work with Them in Education". Taber (2007, p. 17) stated that the fundamental question regarding teaching gifted students should be: "Is the current curriculum provision really challenging and developing gifted students?". Rogers (2002) stated that gifted students learn at much faster pace than other students do and therefore should not be expected to wait for their age peers to catch up. She also wrote that gifted students in US may spend from three to six years of their school lives learning nothing new.

International board of participants of the roundtable discussed their perceptions of gifted education as those being gifted and personally experiencing the gifted education systems. Marco Agozzino (Italy), Polona Čebular (Slovenia), Lukáš Kyzlík (Czech Republic), Sara Oblak (Slovenia) and Tim Prezelj (Slovenia) participated on the board. To help them prepare for the roundtable some prompting questions were sent to them two weeks before. They were asked to write a short synopsis (300 words) of their thoughts:

- Where are the main strengths of the existing school system for gifted students?
- Where are the main weakness of the existing school system for gifted students?
- Where are the main opportunities for improvement of the existing school system for gifted students?
- Where are the main threats of the existing school system for gifted students?
- How should educational systems help you develop your giftedness?
- If you would have a time machine, what would you like to change in your schooling experiences to even better develop your giftedness?
- In your opinion, what is the most neuralgic issue that should change in the education of the gifted a.s.a.p. and why?
- Where do you see the benefits of the international networking of gifted students (ETSN – youth platform)?

Each student on the board had an introductory presentation (approx. 8 minutes each). This was then followed by the general round table discussion (altogether 60 minutes). Approximately 80 students and teachers attended the roundtable. Short summary of their thoughts is presented here.

Students highlighted that current educational systems are designed for average students. In their opinion, gifted students are understood as more clever average students and not like special individuals that think differently. One of the students expressed this very clearly: "In my teenage years, I had a feeling nobody understands me and appreciate my ideas, even though I got many awards and acknowledgements". They recommend more individualization in gifted education. Each gifted student is an individual case; therefore, they recommend more individualization in gifted education. However, one student, attending the secondary school in Ljubljana, expressed her

approval of the current situation in her school; she reported that gifted students are able to participate in many different extracurricular activities that help them extend their knowledge and abilities in the field that interests them. The selection of clubs that they can attend after regular classes ranges from science and languages to performance arts and sports. She believes that, in general, school programmes provide a good platform for gifted students to develop their talents.

Students were very critical about the identification of gifted students in Slovenia. Students are selected by their teachers in the early years of primary school as the appropriate candidates for taking the test. They found this technique for recognizing giftedness highly subjective and completely reliant on teacher's ability to detect giftedness. One student suggested that all students are tested at a certain age and consequently the identification process would become much more objective and reliable. She also added that students could be tested at two or three different ages to make sure that we do not lose some gifted students from the system.

One interesting point stressed was also the ability of gifted education systems to recognize and support certain fields of giftedness. Arts and humanities were stressed as poorly represented in gifted education system in Slovenia. Therefore, one student recommended more flexible general curriculums that would enable students develop their talents during school hours and not only in the afternoons, which is currently the prevailing practice.

Same participating students, particularly a student from Italy, said that the current educational system in his country does not provide any systematic support for gifted students. He thinks "the lack of special programmes can lead the gifted to easily lose interest in the subjects studied at school, because the contents are not challenging enough for them. However, he pointed out a positive side of this, saying that it trains gifted students "to work with others that are not necessarily likeminded".

Participating students saw the opportunities for improvements of the current systems by training more teachers to recognize gifted and inform them about several opportunities that are available for gifted students. They emphasized the need for better visibility of opportunities for gifted students. They also see a lot of room for improving teaching practices that are needed for all students, not just for gifted ones. In their opinion, the international networking of gifted students is very relevant to exchange a wide range of experiences (e.g., support systems for gifted students in different countries) and to create international collaborations. Finally yet importantly, they expressed their fear that current trends in education, to focus mainly on skills and knowledge that is instantly applicable in industries (pressures from companies), could be a downside to future development of gifted education.<sup>4</sup>

---

<sup>4</sup> References: Rogers, K. B. (2002). Re-forming gifted education. Scottsdale AZ: Great Potential Press.  
Taber, K. S. (2007). Science education for gifted learners? In K. S. Taber (Ed.), *Science Education for Gifted Learners* (pp. 1–14). London, UK: Routledge.

# **PROJEKT »24 NADur« /**

# **PROJECT »24NADur«**

---

# Poročilo o mednarodnem tekmovanju nadarjenih srednješolcev iz Točk za nadarjene Centra za raziskovanje in spodbujanje nadarjenosti

Gregor Torkar

V okviru 2. mednarodne strokovno-raziskovalne konference Prepoznavanje nadarjenih in delo z njimi na področju vzgoje in izobraževanja je na Pedagoški fakulteti Univerze v Ljubljani potekalo prvo mednarodno tekmovanje ekip nadarjenih srednješolcev poimenovano 24NADur. Namen poročila je predstaviti pomen ter orisati celoten potek tekmovanja, ne pa evalvirati rezultatov projekta, ker te še vrednotimo.

Namen tekmovanja je bil nadarjene srednješolce spodbuditi k razmišljanju o prihodnosti naše družbe in planeta. Pomembno je, da najbolj nadarjene mladostnike usmerjamo k pomembnim družbenim izzivom, kakšen je tudi trajnostni razvoj. Trajnostni razvoj je razvoj, ki zadovoljuje potrebe sedanjih generacij, ne da bi ogrozil možnosti prihodnjih generacij, da bodo tudi te lahko zadovoljevale svoje potrebe; vključuje medsebojno povezana okoljska, gospodarska in socialna vprašanja (WCED, 1987). Da bo tema tekmovanja povezana s trajnostnim razvojem, so bile srednje šole v mreži Točk za nadarjene obveščene tri mesece pred začetkom konference. V vabilu za tekmovanje smo zapisali, da bo tekmovanje potekalo na osnovi »zastavljenega kompleksnega avtentičnega problema s področja trajnostnega razvoja, ki zahteva sodelovanje in ustvarjalno mišljenje pri reševanju«. Na tekmovanje se je prijavilo osem tričlanskih ekip srednješolcev iz Gimnazije Brežice, Gimnazije Bežigrad, Gimnazije Ledina, Gimnazije Idrija, Prve gimnazije Maribor (vse Slovenija) in Gimnazije Bihać (Bosna in Hercegovina). Vsaka ekipa je imela svojega spremjevalca (mentorja) iz matične šole, ki je lahko prisostvoval pri vseh aktivnostih v programu tekmovanja.

Problem, ki so ga ekipe skušale čim bolje rešiti v 24 urah, je bil predstavljen v prvi uri tekmovanja, prav tako nekaj osnovnih teoretičnih izhodišč o trajnostnem razvoju. Tekmovalna naloga, imenovana

## Tekmovalna naloga – Misija

Planetarni svet te je določil za potnika največje odprave v zgodovini človeštva. Pomagal/-a boš opremiti veliko vesoljsko ladjo za svojo pot nepredstavljenih razsežnosti. Potovanje bo trajalo 6000 let. Ni ti potrebno razmišljati o zunanjosti ali pogonskih zmožnostih vesoljske ladje. Na ladji bo ves čas potovanja dostop do solarne energije. Na vesoljski ladji ne sme biti na enkrat več kot 100 ljudi. Kaj in koga boš vzel/-a s seboj na vesoljsko ladjo? Kako boš organiziral/-a življenje na ladji?

(Brunner in Urenje, 2012)

Misija, je predstavljena v okviru.

Na predstavitvi problema smo tekmovalcem predstavili tudi indikatorje trajnostnega razvoja, ki jih je komisija ocenjevalcev izbrala za kriterije pri ocenjevanju projektov tekmovalnih ekip. Izpostavili so sedem indikatorjev trajnostnega razvoja: (1) vladanje (vodenje); (2) zdravje; (3) izobraževanje; (4) demografija; (5) atmosfera, hidrosfera, biosfera in geosfera; (6) proizvodnja in potrošnja ter (7)

spretnosti ustvarjalnega mišljenja, artikulacije, dela v skupini in razmislek o etičnih vidikih. Izpostavljen je bil tudi pomen dobre javne predstavitve projekta, kjer je bila komisija pozorna na različne vidike javnega nastopanja, kot so jasnost in nazornost, očesni stik, glasnost, upoštevanje časovne omejitve itn.

Splošna komunikacija s tekmovalci (npr. gradiva za študij, dodatna obvestila in oddaja projektov) je potekala v odprtakodni spletni učilnici Moodle. V času tekmovanja je za srednješolce skrbela tudi štiričlanska podpora skupina (asistenti in študenti s Pedagoške fakultete Univerze v Ljubljani) in en član komisije ocenjevalcev. Tekmovalcem so pomagali pri odpravi tehničnih težav, skrbeli za njihovo prehrano, jih spodbujali pri delu ter z njimi tudi prenočili v prostorih fakultete. Po 24 urah priprav je vsaka ekipa predstavila svoje rešitve pred tričlansko mednarodno komisijo ocenjevalcev, ki so jo sestavljali dr. Colm O'Reilly z Dublin City University ter dr. Mojca Čepič in dr. Gregor Torkar z Univerze v Ljubljani. Vrstni red predstavitev je določil žreb.

Tekmovanje smo zaključili s podelitevijo priznanj najboljšim ekipam. Bolj kot nastalih projektov smo bili veseli prizadevnosti nadarjenih srednješolcev za reševanje kompleksnih problemov trajnostnega razvoja; »da gledajo na jutri kot na dan, ki pripada vsem nam – ali pa ne bo pripadal nikomur« (Sector Unesco Education, 2005).<sup>5</sup>

---

<sup>5</sup> Reference: Brunner, W., & Urenje, S. (2012). The Parts and the Whole: A Holistic Approach to Environmental and Sustainability Education. SWEDESD, The Swedish International Centre of Education for Sustainable Development.

Sector Unesco Education. (2005). United Nations Decade of Education for Sustainable Development (2005-2014): International Implementation Scheme. UN Educ Sci Cult Organ UNESCO Paris France.

[WCED] World Commission on Environment and Development, B. C. (1987). Our common future. Report of the world commission on environment and development.

# Report on the International Competition of Gifted Secondary School Students from the Talent Points of the Center for Research and Promotion of Giftedness

Gregor Torkar

In the framework of the 2nd International Professional-Research Conference entitled Identifying the Gifted and Working with them in Education, the first international competition of teams of gifted secondary school students, named 24NADur, was held at the Faculty of Education of the University of Ljubljana. The purpose of this report is to present the meaning of the competition and to outline its course. The report is not intended to evaluate the results of the project, because we are still evaluating them.

The purpose of the competition was to encourage gifted secondary school students to think about the future of our society and the planet. It is important that the most gifted youth are directed towards tackling most important societal challenges such as sustainable development. Sustainable development is a development that meets the needs of the present without comprising the ability of future generations to meet their own needs; this includes interconnected environmental, economic and social issues (WCED, 1987). Secondary schools in the network of Talent Points were informed about the topic of the competition (i. e., linked to sustainable development) three months before the conference. In the invitation to the competition, we wrote that the competition will take place on the basis of "a set of complex, authentic problems in the area of sustainable development, which requires cooperation and creative thinking in solving it." The competition was attended by eight teams of secondary school students from Gymnasium Brežice, Gymnasium Bežigrad, Gymnasium Ledina, Gymnasium Idrija, First Gymnasium Maribor (all Slovenia), and Gymnasium Bihać (Bosnia and Herzegovina). Each team consisted of three students and one mentor from the school, who could attend all activities in the program of the competition.

The problem that teams tried to solve within 24 hours was presented in the first hour of the competition, as well as a basic theoretical introduction to sustainable development. The competition

## **The Mission**

You have been appointed by the Planetarian Council to plan and take part in the greatest adventure in the history of mankind. You shall equip a giant spaceship to make a journey into space and the future. The journey will last for 6000 years. You will have access to a shining sun throughout the journey. No more than 100 persons are allowed onboard the ship at the same time. What will you bring? How are you going to organize life conditions on the spaceship?

(Brunner in Urenje, 2012)

task, called the Mission, is presented in the box.

At the presentation of the problem, competitors were presented with sustainable development indicators, which were selected by the jury members as the criteria for evaluating the projects. Seven

indicators were highlighted: (1) governance; (2) health; (3) education; (4) demography; (5) atmosphere, hydrosphere, biosphere and geosphere; (6) production and consumption; and (7) the skills of creative thinking, articulation, group work and reflection on ethical aspects. In addition, the importance of a good public presentation of the project was highlighted; the jury members paid attention to various aspects of public presentation, such as clarity and visibility, eye contact, voice, compliance with the time limit, etc.

General communication with competitors was conducted through an open-source Moodle online classroom (e.g., study materials, additional notifications and project submission). During the competition, a four-member support group, which consisted of assistants and students from the Faculty, and one jury member helped competitors. They helped them solve technical problems, organized meals, encouraged them at work, and spent night with them at the Faculty premises. After 24 hours each team presented their solutions to three jury members: dr. Colm O'Reilly from Dublin City University, and dr. Mojca Čepič and dr. Gregor Torkar from the University of Ljubljana. The order of the presentations was determined by draw.

The competition was concluded with the award ceremony. More than projects, we were delighted at the determinations of gifted secondary school students to solve complex sustainable development problems; "to view tomorrow as a day that belongs to all of us, or it will not belong to anyone" (Sector Unesco Education, 2005).<sup>6</sup>

---

<sup>6</sup> References: Brunner, W., & Urenje, S. (2012). *The Parts and the Whole: A Holistic Approach to Environmental and Sustainability Education*. SWEDESD, The Swedish International Centre of Education for Sustainable Development.

Sector Unesco Education. (2005). *United Nations Decade of Education for Sustainable Development (2005-2014): International Implementation Scheme*. UN Educ Sci Cult Organ UNESCO Paris Fr.

[WCED] World Commission on Environment and Development, B. C. (1987). *Our common future. Report of the world commission on environment and development*.

## PROGRAM / PROGRAMME

**Četrtek / Thursday, 21. 9. 2017**

8.00–8.45	Zbiranje udeležencev in registracija / Arrival and registration
9.00–9.20 Pred. / Room 212	Otvoritev konference / Opening ceremony Kulturni program / Cultural programme: <ul style="list-style-type: none"> <li>– Ilonka Krivokapič, klavir (mentorica: Damjana Cvetko)</li> <li>– Nika Kores Sraka, harfa (mentorica: Anja Gaberc)</li> <li>– Adrijan Ignjatović, harfa (mentorica: Anja Gaberc)</li> <li>– Miha Bregar, kitara (mentor: Mladen Bucić)</li> </ul> Uvodni pozdravi / Introductory greeting: <ul style="list-style-type: none"> <li>– izr. prof. dr. Janez Vogrinc, dekan UL PEF / Dean of UL PEF</li> <li>– ga. Csilla Fuszek, sekretarka Evropske mreže za podporo nadarjenim (ETSN) / Secretary of the European Network for the Support of Gifted Individuals (ETSN)</li> <li>– izr. prof. dr. Mojca Juriševič, predstojnica CRSN UL PEF / Head of CRSN UL PEF</li> </ul>
9.20–10.05	dr. Fani Nolimal, ZRSŠ (plenarno predavanje / plenary lecture): <b>UČNO OKOLJE ZA NADARJENE: DIDAKTIČNI PRISTOPI IN STRATEGIJE / EDUCATIONAL ENVIRONMENT FOR GIFTED INDIVIDUALS: DIDACTIC APPROACHES AND STRATGIES</b>
10.05–10.30	Odmor in druženje / Coffee break
10.30–12.30	Predstavitve z diskusijo – individualni prispevki v tematskih sekcijah / Thematic sections – individual presentations (koordinatorji / chairs: doc. dr. Boštjan Kuzman, izr. prof. dr. Mojca Juriševič, doc. dr. Darija Skubic)  <i>Začetek dela na tekmovalnem projektu »24NADur« - nadarjeni dijaki iz Točk za nadarjene v okviru CRSN v sodelovanju s študenti UL PEF / Project '24NADur' start - gifted students from Talent Points in cooperation with the students of the Faculty of Education, University of Ljubljana (koordinira / chair: izr. prof. dr. Gregor Torkar)</i>
12.30–13.30	Kosilo v fakultetni restavraciji / Lunch at the Faculty restaurant
13.30–14.15 Pred. / Room 212	dr. Margaret Sutherland, University of Glasgow (plenarno predavanje / plenary lecture): <b>STARTING STRONG: WHAT DOES THIS MEAN FOR YOUNG GIFTED LEARNERS?</b>
14.30–15.15 Pred. / Room 212	prof. dr. Heidrun Stoeger, Universität Regensburg; <i>South German Talent Centre</i> (plenarno predavanje / plenary lecture): <b>ONLINE MENTORING AS AN EXTRACURRICULAR MEASURE TO ENCOURAGE TALENTED GIRLS IN STEM (SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS)</b>
15.15–16.45	Okroglá miza: RAZISKOVANJE Z NADARJENIMI / Round table discussion:

	<b>RESEARCH WITH THE GIFTED</b> Sodelujoči / Contributors: Točke za nadarjene v okviru CRSN / Talent Points; koordinira / chair: prof. dr. Mojca Čepič
17.15–18.00	<i>Sestanek strokovne žirije s tekmovalci 24NADur / Meeting of the scientific jury with the competitors of the 24NADur competition (time for extra questions/suggestions)</i>

**Petek / Friday, 22. 9. 2017**

8.00–8.45	Zbiranje udeležencev in registracija / Arrival and registration
9.00–9.45	dr. Colm O'Reilly, Centre for Talented Youth Ireland; <i>CTY Talent Centre</i> (plenarno predavanje / plenary lecture): CASE STUDY OF A UNIVERSITY BASED PROGRAMME FOR GIFTED STUDENTS: CTY IRELAND
9.45–10.00	Kulturni program / Cultural programme: <ul style="list-style-type: none"> <li>— Vito Bejat Kranjc, violina (mentorica: Sausan Hussein)</li> <li>— Tim Cergolj, klavir (mentorica: Mirjana Kostić)</li> </ul> <i>Ob 10.00 je zadnji rok za oddajo končnih projektov tekmovalnih skupin 24NADur. / At 10:00 is the deadline for submitting the final project of the competing teams in the 24NADur.</i>
10.00–10.45	Predstavitve posterjev ob kavi / Poster section with coffee
10.45–11.00	Odmor in druženje / Coffee break
11.00–12.45	Predstavitve z diskusijo – individualni prispevki v tematskih sekcijah / Thematic sections – individual presentations (koordinatorji / chairs: izr. prof. dr. Vesna Ferk Savec, izr. prof. dr. Karmen Pižorn, doc. dr. Maja Umek)  <i>Predstavitve projektnih izdelkov »24NADur« in ocenjevanje / Presentation '24NADur' projects and assessment</i>
12.45–13.45	Kosilo v fakultetni restavraciji / Lunch at the Faculty restaurant
14.00 – 14.45 Pred. / Room 212	dr. Željko Rački, Sveučilište Josipa Jurja Strossmayera u Osijeku, <i>Talent Point</i> (plenarno predavanje / Plenary lecture): GIFTED EDUCATION AND THE STRUCTURE OF CREATIVE BEHAVIOR
14.45–16.15	Okrogla miza: NADARJENI O IZOBRAŽEVANJU NADARJENIH / Round table discussion: THE GIFTED ON EDUCATING THE GIFTED Sodelujoči / Contributors: Točke za nadarjene v okviru CRSN; koordinira / chair: izr. prof. dr. Gregor Torkar  <i>Razglasitev zmagovalne ekipe na tekmovalnem projektu »24NADur« / Announcement of the "24NADur" project winning team</i>

Predstavniki točk za  
nadarjene in evropskih  
centrov za nadarjene na  
konferenci /  
Representatives of Talent  
points and European Talent  
Centres at the conference

---

	<b>Točke za nadarjene/ Talent points</b>	<b>Predstavniki/ Representatives</b>
1	Gimnazija Bežigrad, Slovenija	Marija Dominko Gabor, Špela Ševerkar
2	Gimnazija Brežice, Slovenija	Ema Maček, Sandi Rašovič, Gordana Rostohar, Mateja Strnad Zorec, Nataša Šekorana Šniler
3	Gimnazija Jurija Vege Idrija	Maja Justin Jerman, Cvetka Tratnik, Jasmina Velikanje
4	Mladinski center Nova Gorica (e-Hiša, novogoriška hiša poskusov)	Lara Brun, Matjaž Furlan, Lea Kosmač
5	Osnovna šola Antona Ukmarja Koper	Gabrijela Dolinšek, Patricija Kravanja
6	Osnovna šola Franceta Prešerna Črenšovci	Marija Horvat, Metka Husar Černjavič
7	Center za psihodiagnostična sredstva, d. o. o.	Dušica Boben, Marjeta Trstenjak
9	UL Akademija za glasbo	Branka Rotar Pance
10	Vrtec Morje Lucija	Slavica Bombek, Leonora Drgan, Jasna Fiegl, Martina Jakus, Nina Medved, Janja Palakovič, Nicoletta Roškar Bičič
11	Osnovna šola Venclja Perka Domžale	Nataša Fabjančič
12	Prva gimnazija Maribor	Ksenija Bračič Bračko, Irena Smole, Herman Pušnik
13	Slovenska znanstvena fundacija	Martina Ulčar
14	Vrtec Rogaška Slatina	Tamara But, Andreja Križan Lipnik, Katja Potočnik, Karmen Šket
15	Dječji vrtić »Cvit Mediterana« Split	Mirjana Bakotić, Jelena Birsa, Nives Urlić
16	Centar za poticanje darovitosti djeteta Bistrić	Jasna Cvetković Lay
17	Udruga »Vjetar u leđa« (NGO)	Ana Nukić, Ksenija Ranogajec Benaković

18	Znanstveno edukacijski centar Višnjan	Petar Čuček
19	Centri izvrstnosti Varaždinske županije	Miroslav Huđek, Snježana Pejnović, Martina Vidović
20	Osnovna škola - Scuola elementare RIVARELA, Novigrad – Cittanova	Sara Findrik
21	Fakultet za odgojne i obrazovne znanosti, Sveučilište Josipa Jurja Strossmayera u Osijeku	Željko Rački
22	XV. Gimnazija Zagreb	Ines Dukić
23	SIAC - Splitska Internal Art Camp	Csilla Fuszek

	<b>Evropski centri za nadarjene/ European Talent Centres</b>	<b>Predstavniki/ Representatives</b>
1	MATEHETSZ /European Talent Centre-Budapest (Hungary)	Petra Anna Fügedi, Rita Nádas
2	European Talent Centre Budapest	Csilla Fuszek
3	Talentcentre of National Institute for Further Education (Czech Republic)	Lukáš Kyzlík
4	Youth Platform of the ETSN	Marco Agozzino
5	Universität Regensburg; South German Talent Centre	Heidrun Stoeger
6	Centre for Talented Youth Ireland; CTY Talent Centre	Colm O'Reilly

Več informacij je dostopnih na spletni strani evropske mreže za podporo nadarjenim (European Talent Support Network): <http://etsn.eu/>.

## ZAHVALI

Zahvaljujemo se Založbi Rokus Klett za podarjene knjige dijakom, ki so sodelovali na tekmovanju "24NADur".

Zahvaljujemo se Javnemu zavodu Turizem Ljubljana za podarjene promocijske materiale o Ljubljani.

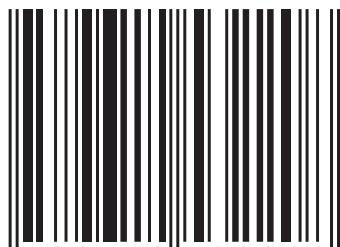


## PROGRAMSKI ODBOR

prof. dr. Mojca Čepič  
prof. mag. Črtomir Frelih  
doc. dr. Boštjan Kuzman  
izr. prof. dr. Jurij Selan  
doc. dr. Darija Skubic  
doc. dr. Maja Umek

izr. prof. dr. Vesna Ferk Savec  
izr. prof. dr. Mojca Juriševič  
izr. prof. dr. Karmen Pižorn  
prof. dr. Barbara Siherl Kafol  
izr. prof. dr. Gregor Torkar  
doc. Alenka Vidrih

ISBN 978-961-253-220-8



9 789612 532208 >