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# CURRICULUM OUTCOMES OF CONTEMPORARY EDUCATION

FACULTY OF TEACHER EDUCATION  
IN THE HUNGARIAN LANGUAGE  
IN SUBOTICA

9<sup>th</sup>  
INTERNATIONAL SCIENTIFIC CONFERENCE

# **Final Programme and Abstracts**

## **CURRICULUM OUTCOMES OF CONTEMPORARY EDUCATION**

**9<sup>th</sup> INTERNATIONAL SCIENTIFIC CONFERENCE**

**UNIVERSITY OF NOVI SAD**

**FACULTY OF TEACHER EDUCATION IN THE HUNGARIAN  
LANGUAGE IN SUBOTICA**

**Date:** September 18–19, 2015

**Venue:** The building of the Faculty of Teacher Education in the  
Hungarian Language in Subotica  
24000 Subotica, Strossmayerova 11

**CURRICULUM OUTCOMES OF CONTEMPORARY EDUCATION**  
9<sup>th</sup> INTERNATIONAL SCIENTIFIC CONFERENCE  
September 18-19, 2015  
Subotica, Serbia

University of Novi Sad  
Faculty of Teacher Education in the Hungarian Language in Subotica

## **Final Programme and Abstracts**

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Josip Lepeš

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Valéria Pintér Krekić

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## **GENERAL INFORMATION**

# **General Information**

## **Date and Place**

The 9<sup>th</sup> International Scientific Conference of the Faculty of Teacher Education in the Hungarian Language in Subotica will take place between September 18–19, 2015 in Subotica, Serbia, in the building of the Faculty called Yellow House (Strossmayerova 11).

## **Languages of the proceedings**

Simultaneous translations into Hungarian, Serbian and English will be provided during the conference.

The official languages of the conference are: Hungarian, Serbian, English and Croatian.

## **Proceedings**

The proceedings are published only in electronic form; each registered participant receives one (1) copy of eBook.

## **Registration Desk (ground floor, Office for Registration)**

The Registration Desk will be open during the Conference:

- Friday, September 18<sup>th</sup>: 11a.m.–7p.m.
- Saturday, September 19<sup>th</sup>: 9a.m.–12a.m.

## **Information Desk (1st floor)**

The Information Desk will be open during the Conference.

- Friday, September 18<sup>th</sup>: 11a.m.–7p.m.
- Saturday, September 19<sup>th</sup>: 9a.m.–12a.m.

## **Presentations**

The conference rooms are supplied with data projectors and interactive boards.

## **Smoking**

Because of the new law restrictions in Serbia, smoking is prohibited in the Faculty building, in the courtyard, as well as in the street next to the Faculty building.

## **COMMITTEES**

# **Committees**

## **The Chairman of the Conference**

Josip Lepeš, Acting Dean of the Faculty of Teacher Education in the Hungarian Language in Subotica, University of Novi Sad, Serbia

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Zsolt Námesztovszki, University of Novi Sad, Faculty of Teacher Education in the Hungarian Language, Subotica, Serbia  
Valéria Pintér Krekić, University of Novi Sad, Faculty of Teacher Education in the Hungarian Language, Subotica, Serbia  
János Vilmos Samu, University of Novi Sad, Faculty of Teacher Education in the Hungarian Language, Subotica, Serbia  
Svetlana Španović, University of Novi Sad, Faculty of Pedagogy, Sombor, Serbia  
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Katalin Varga Hajdicsné, Budapest Centre of Economic Vocational Training, Budapest, Hungary  
Éva Vukov Raffai, University of Novi Sad, Faculty of Teacher Education in the Hungarian Language, Subotica, Serbia

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# **PROGRAMME**

# **CURRICULUM OUTCOMES OF CONTEMPORARY EDUCATION**

## **9<sup>th</sup> International Scientific Conference Programme**

**Venue:** The building of the Faculty of Teacher Education in the Hungarian Language in Subotica

24000 Subotica, Strossmayerova 11

**Date:** September 18–19, 2015

## **FRAMEWORK PROGRAMME**

### **18 September 2015 (Friday)**

11:00 - 12:00: Welcome of participants, registration.

12:00 - 12:15: OFFICIAL OPENING OF THE CONFERENCE

12:15 - 13:00: PLENARY SPEECH:

#### **Vlatko Previšić:**

Humanističke kompetencije kao kurikulumski ishodi suvremenog odgoja i obrazovanja

**Humanistic competencies as outcomes of contemporary education**

13:00 - 13:45: PLENARY SPEECH:

#### **Csapó Benő:**

Diagnosztikus értékelés és differenciált tanítás az iskola kezdő szakaszában

**Diagnostic assessment and differentiated teaching in primary school**

13:45 - 14:05: EXHIBITION OPENING

14:05 - 14:30: Break (refreshment)

14:30 - 15:45: PARALLEL SECTIONS with simultaneous interpretation: 1<sup>st</sup> Section and 2<sup>nd</sup> Section

15:45 - 16:00: Break

16:00 - 17:30: PARALLEL SECTIONS with simultaneous interpretation: 1<sup>st</sup>  
Section and 2<sup>nd</sup> Section

17:30-18:30: Dinner

## **19 September 2015 (Saturday)**

9:00 - 10:00: 3<sup>rd</sup> Section

10:15 - 10:30: Break

10:30 - 11:45: 3<sup>rd</sup> Section

12:15 - 13:00: CONCLUSIONS AND CONFERENCE CLOSING

13:00 - 14:00: Lunch

# **DETAILED PROGRAMME**

## **18 September 2015 (Friday)**

12:00 - 12:15: OFFICIAL OPENING OF THE CONFERENCE

12:15 - 13:00: PLENARY SPEECH:

**Vlatko Previšić**, PhD, Full Professor, Dean – University of Zagreb,  
Faculty of Philosophy, Zagreb, Croatia:

Humanističke kompetencije kao kurikulumski ishodi  
svremenog odgoja i obrazovanja

**Humanistic competencies as outcomes of contemporary  
education**

13:00 - 13:45: PLENARY SPEECH:

**Benő Csapó**, DSc, Full Professor, Head of Institute – University of Szeged, Institute of Education, Szeged, Hungary:

Diagnosztikus értékelés és differenciált tanítás az iskola kezdő szakaszában

**Diagnostic assessment and differentiated teaching in  
primary school**

13:45 - 14:05: EXHIBITION OPENING

2014/2015 Student Art Exhibition

The Faculty of Teacher Education in the Hungarian Language in Subotica student art works exhibition

Exhibition author/mentor: **Melinda Torok**

**1<sup>st</sup> SECTION with simultaneous interpretation: MAIN HALL**  
**Chairing: Marko Jurčić and Bianka Gergel'ová**

14:30 - 14:45	<b>Josip Ivanović, Aleksandar Nad Olajoš:</b> Kurikulumske teorije pro et contra <b>Theory of curriculum pro et contra</b>
14:45 - 15:00	<b>Valéria Varga:</b> Az európai dimenzió didaktikai megközelítése <b>Didactic approach of the European dimension</b>
15:00 - 15:15	<b>Bianka Gergel'ová &amp; Demkanin Peter:</b> A pszichológiai és a szociológiai szempontok jelentőségei a tanuló csoportmunkára való készségének a fejlesztésénél <b>The importance of psychological and sociological aspects in the development of pupils' team-work skills</b>
15:15 - 15:30	<b>Danijela Ilić-Stošović, Snežana Nikolić, Marija Radulović:</b> Став ученика према организацији наставе и оцењивању <b>The attitude of pupils toward organization of teaching and school assessment process</b>
15:30 - 15:45	<b>Marko Jurčić, Irena Klasnić:</b> Istraživački usmjerena nastava <b>Investigation-based teaching</b>
15:45 - 16:00	Break

**2<sup>nd</sup> SECTION: CLASSROOM No. 7**  
**Chairing: Gizella Berze and Elza-Emőke Veress**

14:30 - 14:45	<b>Imre Seebauer:</b> Bolyai János tanító-tanuló rendszerszemléletére épült módszertan alkalmazása a multimédiával támogatott oktatásban <b>Application of Bolyai teacher-student system approach to the methodology built multimedia supported education</b>
14:45 - 15:00	<b>Gizella Berze:</b> A tantervben előlátott téri problémák a 6-10 éveseknek szóló szerbiai matematika tankönyvekben <b>Spatial problems in Serbian mathematics textbooks for 6–10 year-olds based on instructions in the curriculum</b>

15:00 - 15:15	<b>Sára Magyari:</b> A nyelvi nevelés a romániai magyar nyelv és irodalom tantervének függvényében <b>Linguistic education in the curriculum of the Hungarian language and literature of Romania</b>
15:15 - 15:30	<b>Krisztina Bartha:</b> Az anyanyelvi beszédértés kompetenciájának I-IV: osztályos tantervi követelményei Romániában <b>Curriculum Requirements for the Competence of Comprehension (L1) in Primary School</b>
15:30 - 15:45	<b>Elza-Emőke Veress:</b> Neveléstörténet, gyermekkortörténet és régi magyar irodalom: interdiszciplinaritás, szövegvizsgálat és embermodell <b>History of Education, History of Childhood and Old Hungarian Literature: Interdisciplinarity, Texts Analysis and Human Ideals</b>
15:45 - 16:00	Break

<b>1<sup>st</sup> SECTION with simultaneous interpretation: MAIN HALL Chairing: Rózsa Bertók and Marjan Ninčević</b>	
16:00 - 16:15	<b>Marjan Ninčević:</b> Katolički vjeronauk u školskom kurikulumu u Republici Hrvatskoj <b>Catholic religious education in the teaching curriculum in the Republic of Croatia</b>
16:15 - 16:30	<b>Rózsa Bertók, Zsófia Bécsi:</b> Az erkölcsi nevelés lehetőségei <b>The possibilities of moral education</b>
16:30 - 16:45	<b>Katalin Varga Hajdicsné:</b> Az elektronikus írástechnika (management practices) oktatásának kérdései <b>Curriculum and teaching touch typing</b>
16:45 - 17:00	<b>Andrea Fekete Bencéné:</b> Oktatási hálózatok az egyenlő esélyek biztosítására <b>Networks providing equal opportunities</b>

17:00 - 17:15	<b>Marton Sakal, Lazar Raković, Predrag Matković, Pere Tumbas, Veselin Pavličević:</b> Podizanje svesti o rizicima i greškama u elektronskim tabelama putem unapređenih univerzitetskih kurseva <b>Raising spreadsheet risks and errors awareness through improvement of university courses</b>
17:30 - 18:30	Dinner

<b>2<sup>nd</sup> SECTION: CLASSROOM No. 7</b> <b>Chairing: Éva Borsos and Lenke Major</b>	
16:00 - 16:15	<b>Szabolcs Krajnik:</b> Virtuális terek az oktatás jövőjében – Digitális játékosítás <b>Virtual spaces in the future of education – Digital gamification</b>
16:15 - 16:30	<b>Klára Velmovská, Monika Vanyová:</b> A konstruktív megközelítés és a kritikus gondolkodás fejlődése <b>Constructivist approach and development of critical thinking</b>
16:30 - 16:45	<b>Lenke Major, Rita Horák:</b> A környezeti nevelés helye a tantárgyak rendszerében <b>The status of environmental education in the system of subjects</b>
16:45 - 17:00	<b>Éva Borsos:</b> Az általános iskolai biológia terv hatékonysága <b>The effectiveness of a primary school biology program</b>
17:00 - 17:15	<b>Valéria Pintér Krekić:</b> A kibernetikusan orientált stratégia a kezdő matematikaoktatásban <b>The cybernetically-oriented strategy to the mathematics education</b>
17:30 - 18:30	Dinner

**19 September 2015 (Saturday)**

<b>3<sup>rd</sup> SECTION: MAIN HALL</b> <b>Chairing: Jelena Grkić Ginić and Suzana Rukavina</b>	
9:00 - 9:15	<b>Jelena Grkić Ginić:</b> Улога курикулума у професионалном образовању учитеља за реализацију наставе музичке културе у основној школи <b>The role of curriculum in professional development of class teachers for the purposes of realization of music teaching in primary school</b>
9:15 - 9:30	<b>Sladjana Marić:</b> Могућности иновације курикулума енглеског језика у средњој балетској и музичкој школи <b>The possibilities of innovating the English language curriculum in Secondary Ballet and Music School</b>
9:30 - 9:45	<b>Valentina Majdenić &amp; Antea Bojetić:</b> Strip u osnovnoškolskim udžbenicima <b>Comics in primary school textbooks</b>
9:45 - 10:00	<b>Suzana Rukavina:</b> Mogućnosti primjene suradničkog učenja u stručnom usavršavanju osnovnoškolskih i srednjoškolskih nastavnika na mreži <b>Possibilities of applying collaborative learning in online professional development of primary and secondary school teachers</b>
10:00 - 10:15	<b>Dragana Gavrilović-Obradović:</b> Nastava u prirodi – integrисани тематски приступ <b>Teaching in nature – an integrated thematic approach</b>
10:15 - 10:30	<b>Josip Lepes &amp; Szabolcs Halasi:</b> Ključne kompetencije u osnovnom i srednjem obrazovanju s аспекта физичког васпитања <b>Physical education and key-competences in public education</b>
10:30 - 10:45	Break

### **3<sup>rd</sup> SECTION: MAIN HALL**

**Chairing: Otília Velisek-Braskó and Slavica Pavlović**

10:45 - 11:00	<b>Smiljana Zrilić, Violeta Valjan Vukić, Vesna Bedeković:</b> Postignuća studenata učiteljskog studija – očekivani i realizirani ishodi učenja u kontekstu kompetencija za rad u inkluzivnom razredu <b>Achievements of students of teacher education study – expected and realized learning outcomes in the context of competences to work in the inclusive classroom</b>
11:00 - 11:15	<b>Marija Andelković, Vesna Vučinić, Branka Jablan, Branka Eškirović:</b> Образовање деце са оштећењем вида у редовној школи <b>Education of students with visual impairment in regular schools</b>
11:15 - 11:30	<b>Slavica Pavlović:</b> Spolni odgoj – (ne)mogućnosti provedbe u školama <b>Gender education – (im)possibilities of its realization in schools</b>
11:30 - 11:45	<b>Otília Velisek-Braskó:</b> Усклађеност курикулумских исхода образовања наставника са потребама инклузивног образовања <b>Compatibility of the curriculum outcomes of teachers education with the inclusive education</b>
11:45 - 12:00	<b>Katarina Pinjuh:</b> Umijeće „slušanja djeteta” – važna kompetencija suvremenog odgajatelja <b>The art of “listening to the child” – an important competence of the modern educator</b>
12:00 - 12:15	<b>Vesna Schreiner:</b> Прелаз детета из вртића у школу <b>The transition of the child from kindergarten to school</b>
12:15 - 13:00	<b>CONSLUSIONS AND CONFERENCE CLOSING</b>

## **ABSTRACTS**

## **DIAGNOSTIC ASSESSMENT AND DIFFERENTIATED TEACHING IN PRIMARY SCHOOL**

**Benő Csapó**

*University of Szeged, Institute of Education, Szeged, Hungary  
csapo@edpsy.u-szeged.hu*

The Center for Research on Learning and Instruction at the University of Szeged has been developing an online diagnostic assessment system for the first six years of primary school which can continuously monitor pupil's progress. The diagnostic system is based on the eDia online platform what contains the tests (item banks), can be accessed from schools via the Internet, and stores the data of pupils' achievement. It provides item banks for continuous monitoring in the three main domains, reading, mathematics and science, and individual tests for 15 further domains to assess students at certain ages. The assessment results support teachers planning and designing differentiated teaching. Students may receive individual support including online developmental games. The presentation introduces the online diagnostic system and the available functions of the eDia platform, furthermore, it outlines the next phases of research to be carried out for supporting differentiated teaching.

*Keywords: technology-based assessment, diagnostic assessment, differentiated teaching*

## **DIAGNOSZTIKUS ÉRTÉKELÉS ÉS DIFFERENCIÁLT TANÍTÁS AZ ISKOLA KEZDŐ SZAKASZÁBAN**

**Csapó Benő**

*Szegedi Tudományegyetem Neveléstudományi Intézet, Szeged, Magyarország*  
*csapo@edpsy.u-szeged.hu*

A Szegedi Tudományegyetem Oktatáselméleti Kutatócsoportja egy olyan online diagnosztikus rendszert dolgozott ki az általános iskola első hat évfolyamára, amelyik folyamatosan mérni tudja a tanulók fejlődését. A rendszer az eDia online platformra épül, amely tartalmazza a teszteket (feladatbankokat), az iskolákból hozzáférhető az interneten keresztül, és tárolja a tanulók eredményeit. Három fő területen (olvasás, matematika, természettudomány) biztosít lehetőséget a rendszeres felmérésekre, míg további 15 területen lehetővé teszi a méréseket egy-egy életkorban. Az eredmények alapján többféle differenciált fejlesztést lehet megvalósítani. A tanulók kaphatnak játékos feladatokat, amelyeket számítógépen megoldanak, és az igényeknek megfelelő további segítséget kaphatnaktársaiktól és tanáraiktól. Az előadás bemutatja a diagnosztikus rendszer jelenleg használható funkcióit és felvázolja a differenciált tanítás támogatása érdekében tervezett további fejlesztéseket.

*Kulcsszavak: technológia-alapú értékelés, diagnosztikus értékelés, differenciált tanítás*

## **HUMANISTIC COMPETENCES AS A CURRICULAR OUTCOME OF CONTEMPORARY EDUCATION**

**Vlatko Previšić**

*University of Zagreb, Faculty of Philosophy, Zagreb, Croatia  
vprevisi@ffzg.hr*

Curriculum is a crucial topic of contemporary pedagogy since its vital elements are the key competences as well as the outcome of education. The interpretation of curricular outcomes varies as educational-qualificational products or educational-formative achievements. Such theoretical and philosophical differences regarding the outlook on curriculum might have a differing influence on the individual, social and natural development of pupils as well as might affect the methodological inhibitions of teachers.

Competences as disposing of certain tasks, talents, skills and professional recognition can be very different. Today, for instance, it is the entrepreneurial competence that is vastly discussed, which covers the educational process that prepares pupils (people) for work, workplace and production. Humankind, however, is far more complex creature than the 'useful citizen' defined by Dewey. Competence also has to be an ethical category since the humankind cannot be regarded as a product that is created for work, market, modern marketing, pragmatism, utility and entrepreneurship. From a pedagogical aspect, humankind is against the 'tyranny of the present'. Humanism is firstly a value and secondly a pedagogical category has to be developed for intercultural and interpersonal relations.

The answers to such dilemmas are to be researched in contemporary pedagogy within the frame of the humanistic vision of curriculum. Currently, we live in a world-wide crisis of (not) knowing about life and over-emphasized materialistic values. Humankind needs to be directed towards the curricular flow introduced by E. Key, the so-called 'child of the century' as the center of pedagogical issues. J. Paul claimed a postulate to let children to mature and not rush them, thus teachers should guard children (humankind).

*Keywords: curriculum, competence, education, humanistic vision of humankind*

## **HUMANISTIČKE KOMPETENCIJE KAO KURIKULUMSKI ISHODI SUVRIMENOG ODGOJA I OBRAZOVANJA**

**Vlatko Previšić**

*Filozofski fakultet Sveučilišta u Zagrebu, Hrvatska*

*vprevisi@ffzg.hr*

Kurikulum je svakako važna tema suvremene pedagogije. Laička ga javnost čak doživljava kao nešto sasvim novo u teoriji i praksi odgoja. Međutim, za pedagoge kurikulum ima svoju povijest, a još više sadašnjost i budućnost. U njegov pojmovno kategorijalni aparat apsolutno spadaju sadržaji ključnih kompetencija kao ishoda učenja. Pritom se stvara svojevrsna zbrka u odnosu na shvaćanje kurikulumskih ishoda kao obrazovno-kvalifikacijskih produkata, ali ne i odgojno-formativnih postignuća. A to je onda suprotno teoriji i filozofiji kurikuluma koji zagovara brigu za učenikov individualni, socijalni i uopće prirodni razvoj, a pritom učitelja oslobođaju metodičke sputanosti te ga potiče da radi na slobodan, kreativan i pedagoški integrativan način.

Kompetencije, pak, kao posjedovanje neke mjerodavnosti, sposobnosti, nadležnosti i profesionalno-stručne priznatosti, mogu biti vrlo različite. Danas se najviše piše i govori o tzv. poduzetničkim kompetencijama. Onako kako ih neki shvaćaju činilo bi odgoj i obrazovanje procesom pripremanje učenika (ljudi) samo za rad; radno mjesto i proizvodnju. Čovjek je, međutim, daleko složenije biće nego njegovo pragmatičko poimanje Deweyova „upotrebljiva građanina“. Kompetencije kao višestruko dostignuće i sposobljenost u kvalifikacijskim okvirima mora biti i etička kategorija. Jer čovjek ne može biti sveden samo na puku robu, osposobljavanje za rad, tržište, moderni marketing, pragmatizam, utilitarizam i poduzetništvo. U pedagoškom smislu nas zanima humanistička vizija čovjeka i čovječnosti naspram „tiranije tekuće sadašnjosti“. Humanizam, naime, kao vrijednosna, a onda i pedagoška kategorija, počiva na čovjekovoj prirodi koju treba izgrađivati odgajati za interkulturne međuljudske odnose, međusobno uvažavanje i poštivanje ideala čovjekoljublja.

Odgovor na ove nedoumice i dileme suvremene pedagogije treba tražiti u humanističkoj viziji kurikuluma koji neće iz vida izgubiti čovjeka. Mi ipak živimo u svekolikoj krizi (ne)znanja o životu i prenaglašenoj materijalnoj korisnosti. Ono što je današnji čovjek u empirijskom (psihometrijskom) pogledu, nikako nije ono što želimo postići odgojem u humanističkom smislu. Čovjeka treba izvući iz njegove anonimnosti i u kurikulumskom tijeku učiniti ga onim što je još prije stotinu i više godina najavila E. Key „stoljećem djeteta“ kao središtem pedagoške brige, a u odgojnem postupanju J. Paul postavio kao postulat: pustimo djecu da se osamostale i ne navijajmo ih stalno kao stare satove. Zato pedagozi, držimo se čvrsto djeteta (čovjeka)!

*Ključne riječi: kurikulum, kompetencije, odgoj, obrazovanje, humanistička vizija čovjeka*

# **EDUCATION OF STUDENTS WITH VISUAL IMPAIRMENT IN REGULAR SCHOOLS<sup>1</sup>**

**Marija Andđelković**

*University of Belgrade, Faculty of Special Education and Rehabilitation, Serbia*  
*marijaandja14@yahoo.com*

**Vesna Vučinić**

*University of Belgrade, Faculty of Special Education and Rehabilitation, Serbia*  
*vesnavucinic@live.com*

**Branka Jablan**

*University of Belgrade, Faculty of Special Education and Rehabilitation, Serbia*  
*jablanb@vektor.net*

**Branka Eškirović**

*University of Belgrade, Faculty of Special Education and Rehabilitation, Serbia*  
*brankaesk@sbb.rs*

Including children with visual impairment in regular schools should be based on basic principles of inclusive education. It is often assumed that the primary condition of inclusive education is providing appropriate teaching materials and equipment, however, the significance of specialized support services and continuous inclusion of children with visual impairment in extracurricular activities which stimulate the development of different skills and abilities should not be forgotten.

The main role of specialized support services is to help children with visual impairment develop skills which are necessary for inclusion in regular schools, studying, and independent living. In countries with several decades long tradition of including children with visual impairment in regular schools, extended curriculum, i. e. a set of extracurricular activities, represents the means for providing basic skills and knowledge. The knowledge acquired from the extended curriculum enables children with visual impairment to learn general curriculum contents more easily.

The aim of this paper is to present examples of supporting students with visual impairment in regular schools, elements of extracurricular activities (extended curriculum), and the role of teachers and teacher of students with visual impairments (TVI) in inclusive education.

*Keywords:* *extended curriculum, support, teacher of students with visual impairments teacher, regular school*

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## **ОБРАЗОВАЊЕ ДЕЦЕ СА ОШТЕЋЕЊЕМ ВИДА У РЕДОВНОЈ ШКОЛИ<sup>2</sup>**

**Марија Анђелковић**

*Универзитет у Београду, Факултет за спец. едукацију и рехабилитацију  
marijaandja14@yahoo.com*

**Весна Вучинић**

*Универзитет у Београду, Факултет за спец. едукацију и рехабилитацију  
vesnavucinic@live.com*

**Бранка Јаблан**

*Универзитет у Београду, Факултет за спец. едукацију и рехабилитацију  
jablanb@vektor.net*

**Бранка Ешкировић**

*Универзитет у Београду, Факултет за спец. едукацију и рехабилитацију  
brankaesk@sbb.rs*

Укључивање деце са оштећењем вида (ОВ) у редовне школе базира се на основним принципима инклузивног образовања (ИО). Често се полази од тога да је примарни услов ИО обезбеђивање адекватног наставног материјала и опреме, међутим не сме се занемарити значај специјализованих сервиса подршке и континуираног укључивања деце са ОВ у ваннаставне активности чији је циљ подстицање развоја вештина и способности.

Основна улога сервиса подршке је да код деце са ОВ развију способности, неопходне за укључивање у редовне школе, учење и стицање вештина за самосталан живот. У земљама које имају традицију укључивања деце са ОВ у редовне школе проширени курикулум (сет ваннаставних активности) представља средство за обезбеђивање вештина и знања. Знања стечена кроз проширени курикулум омогућавају деци са ОВ лакше усвајање садржаја из општег курикулума.

Циљ овог рада је да прикаже примере подршке ученицима са ОВ у редовној школи, елементе проширеног курикулума и улогу учитеља и тифлолога у ИО-у.

*Кључне речи: проширени курикулум, подршка, тифлолог, учитељ, редовна школа*

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<sup>2</sup> Рад је проистекао из пројекта „Креирање протокола за процену едукативних потенцијала деце са сметњама у развоју као критеријума за израду индивидуалних образовних програма”, број 179025 (2011-2015), чију реализацију финансира Министарство просвете, науке и технолошког развоја Републике Србије.

## **CURRICULUM REQUIREMENTS FOR THE COMPETENCE OF COMPREHENSION (L1) IN PRIMARY SCHOOL**

**Krisztina Bartha**

*Partium Christian University, Oradea, Romania*  
*krisztinabarth@ yahoo.co.uk*

Verbal comprehension is one of the native language speakers key competences, and it appears as a field of development in the Romanian curriculum for Hungarian minorities. Its role is important when the child processes the verbal information and it is the basis procedure for the development of the written text understanding.

My aim is to analyze how the curriculum in primary school in Romania deals with the development of speech comprehension. I assume that the development of this comprehension is well established, but there is little emphasis on the development of speech perception which is a skill of speech comprehension.

I use the method of document analysis and I will point out that it is necessary to pay more attention on each of the comprehension processes (perception and understanding) for the successful development. I will focus also on the question of the opportunities of developing speech comprehension in the case of bilingual environment.

*Keywords:* competence, speech comprehension, development, bilingual environment

## **AZ ANYANYELVI BESZÉDÉRTÉS KOMPETENCIÁJÁNAK I-IV. OSZTÁLYOS TANTERVI KÖVETELMÉNYEI ROMÁNIÁBAN**

**Bartha Krisztina**

*Partium Kereszteny Egyetem, Nagyvárad, Románia  
krisztinabartha@yahoo.co.uk*

A szóbeli szövegértés az anyanyelvi kompetenciák egyike, ezért a romániai tantervezekben megjelenik a fejlesztési követelmények között. A beszédértés szerepe egyrészt az, hogy a gyermek általa hatékonyan dolgozza fel a szóban elhangzott információt, másrészt az írott szövegértés alapját is képezi.

Előadásomban célom, hogy elemezzem a romániai I-IV. osztályos tantervezek szóbeli közlés megértésére vonatkozó részét. Feltételezem, hogy beszédértés fejlesztési követelményei jól kidolgozottak, de az e kompetencia alapját képező beszédészlelés összetevőire túl kevés hangsúly esik, ami akadályozza a komplexebb folyamatok megfelelő működését.

Kutatásomban a dokumentumelemzés módszerét alkalmazom, amelynek segítségével rávilágítok arra, hogy az alsó tagozaton a beszédértés két részfolyamatának (beszédészlelés és -megértés) fejlesztésére ugyanolyan mértékű hangsúlyt kell fektetni. Külön figyelmet szentelek a kétnyelvű környezetben élő gyermekek beszédfeldolgozásának fejlesztési lehetőségeire.

*Kulcsszavak: kompetencia, beszédértés, fejlesztés, kétnyelvű környezet*

## **NETWORKS PROVIDING EQUAL OPPORTUNITIES**

**Andrea Fekete Bencéné**

*University of Kaposvár, Faculty of Pedagogy, Kaposvár, Hungary*

*fekete.andrea@ke.hu*

In the 21<sup>st</sup> century, in the process of lifelong learning a global network over the borders is gaining more and more importance. This phenomenon creates new strategies and increases flexibility towards change. In the field of education the understanding of network steps beyond the traditional concept of a system matching schools and educational institutions. Our age is the time of complex network systems. Among the modern societal subsystems one of the most important ones is the educational subsystem, which needs to react rapidly and flexibly to all socio-economic challenges; which is enhanced by quick and fluid information exchange between the members of the system. Local learning networks can be divided to two significant groups: a social and cultural network together with economic factors, which are built on complex relationships; and the network of other members (innovators, relationship brokers, lobbyists, inventors), strongly bound to the first networks. The well-functioning learning networks of educational institutions provide equal opportunities. During the research the educational and research relationship-system, the practical educational network and the system supporting equal opportunities of Kaposvár University are going to be revealed.

*Keywords: networks, equal opportunities, education, talent support*

## **OKTATÁSI HÁLÓZATOK AZ EGYENLŐ ESÉLYEK BIZTOSÍTÁSÁRA**

**Bencéné Fekete Andrea**

*Kaposvári Egyetem Pedagógiai Kar, Kaposvár, Magyarország  
fekete.andrea@ke.hu*

A 21. században, az élethosszi tartó tanulás folyamatában egyre nagyobb jelentőséggel bír az oktatás rendszerében a határonkon átívelő világháló, mely új stratégiát hoz létre és növeli a változással szembeni rugalmasságot. Az oktatás területén a hálózat új értelmezése már túllép a csupán az iskolákat, oktatási intézményeket összekötő hagyományos kapcsolatrendszeren. Korunk a komplex hálózati rendszerek évszázada. A modern társadalmi alrendszerek közül az egyik legfontosabb az oktatási alrendszer, melynek az aktuális gazdasági kihívásokra gyorsan kell reagálnia flexibilitásával, a rendszert alkotó faktorok közötti korszerű, gyors információáramlással. A lokális tanulási hálózatok két jelentős csoportja különböztethető meg: a komplex kapcsolatokra épülő társadalmi, kulturális kapcsolati hálózat, valamint a gazdasági faktorok, vagy a hozzájuk szorosan kapcsolódó egyéb szereplők hálózata. A köznevelési intézményekben a jól működő lokális tanulási hálózatok tudják biztosítani az esélyegyenlőséget. A kutatás során feltáráusra került az oktatási hálózatok rendszerében a Kaposvári Egyetem Pedagógiai Karának oktatási és kutatási kapcsolatrendszeré, a gyakorlati képzési hálója, valamit az esélyegyenlőséget biztosító hálózatrendszeré.

*Kulcsszavak: hálózatok, egyenlő esélyek, oktatás, tehetséggondozás*

## **THE POSSIBILITIES OF MORAL EDUCATION**

**Rózsa Bertók**

*University of Pécs, Faculty of Philosophy, Pécs, Hungary*

*rozsa.bertok@gmail.com*

**Zsófia Bécsi**

*Babits Mihály High School, Pécs, Hungary*

The paper includes two themes: firstly, it analyses the background and the motivation of selecting themes for high school graduation. Including parental influence, schools affects and the friends influences. The article presents the trends of the last decade and uses comparative analysis for the changes of these trends. In the second part of the study we analysed some films, which were so influential for our university students – by their own admission too – in the process of strengthening of their character and the developing of their critical sense. The selection of these films is good in itself to show the students' attitudes and the level of their moral sense. Other aspects also manifested in the freedom of choosing films like the elements of legibility, the attraction to the beautiful imagery solutions, the identification to their own fate, and the choice of subject or the film's specialty and/or novelty.

*Keywords: high school and university students, moral levels, motivations, influence of choosing, art education*

## AZ ERKÖLCSI NEVELÉS LEHETŐSÉGEI

**Bertók Rózsa**

*Pécsi Tudományegyetem, Bölcsészettudományi Kar, Pécs, Magyarország  
rozsa.bertok@gmail.com*

**Bécsi Zsófia**

*Babits Mihály Gyakorló Gimnázium, Pécs, Hungary*

Az írás két témakört tartalmaz: az egyik a középiskolások érettségi téma választásának hátterét és motivációt elemzi. E közben kitérnek a diákok érdeklődését meghatározó szülői, iskolai baráti köri befolyásokra. A cikk igyekszik bemutatni az utóbbi évtized tendenciáit és összehasonlító elemzéseket alkalmaz e tendenciák változásaira. A tanulmány második részében bizonyos filmeket elemzünk, olyanokat melyek befolyással voltak/vannak a bölcsész hallgatóinkra és amelyek saját bevallásuk szerint is nagy hatást gyakoroltak rájuk és nem kis szerepet tulajdonítanak ezeknek a saját jellembeli megerősödésük és kritikai érzékük kiteljesedése tekintetében. A filmek kiválasztása önmagában jó arra, hogy megmutassa a hallgatók beállítódását és erkölcsi érzéküknek fejlettségét. A választási szabadságukban megmutatkoztak egyéb szempontok is, amilyen az elemezhetőség, a vonzódás a szép képi megoldásokhoz, a saját sorsukkal való azonosítás, valamint a téma választásnak vagy magának a filmnek a különössége és/vagy újszerűsége.

*Kulcsszavak: érettségizők, bölcsész hallgatók, erkölcsi szintek, motivációk, választási befolyásolás, vizuális nevelés*

## **SPATIAL PROBLEMS IN SERBIAN MATHEMATICS TEXTBOOKS FOR 6–10 YEAR-OLDS BASED ON INSTRUCTIONS IN THE CURRICULUM**

**Gizella Berze**

*Stevan Sremac Elementary School, Senta, Serbia*  
*berzegizi@gmail.com*

Spatial orientation is one of the components of spatial ability. Within general visual ability, we can separate the ability of coding visual informations, and the system of abilities of managing spatial problems at the levels of perception and imagination. According to the curriculum, the components of spatial ability are definable in a two-fold structure: *recognition*, appearing within the abilities of perception of space, and *mental manipulation* which is observable in the transformations by inner vision (Babály, Budai & Kárpáti, 2013). Based on the instructions in the curriculum, the examined Serbian mathematics textbooks contained the following sections from concepts related to spatial abilities and maths problems: (1) spatial orientation – comparisons, (2) planar shapes (on the level of recognition and mental manipulation), and (3) three-dimensional objects (on the level of recognition and mental manipulation).

*Keywords:* *spatial ability, mathematics textbook, curriculum instructions, spatial problems*

## **A TANTERVBEN ELŐLÁTOTT TÉRI PROBLÉMÁK A 6-10 ÉVESEKNEK SZÓLÓ SZERBIAI MATEMATIKA TANKÖNYVEKBEN**

**Berze Gizella**

*Stevan Sremac Általános Iskola, Zenta, Szerbia*

*berzegizi@gmail.com*

A téri tájékozódás a téri képességek egyik komponense. Az általános vizuális képességen belül elkölníthető a téri vizuális információ kódolásának képessége, valamint a téri problémák percepciói és képzeleti szinten történő kezelésének képességrendszeré. A térszemlélet összetevői a tantervi utasítások alapján kettős felosztású szerkezetben határozzatják meg: a *rekogníció* a térrézékeléssel kapcsolatos képességekben, míg a *mentális manipuláció* a belső látással végzett transzformációkban jelenik meg (Babály, Budai és Kárpáti 2013). A tantervi utasítások alapján a téri képességekhez kapcsolódó fogalmak és feladattípusok között, a vizsgált szerbiai matematika tankönyvekben a következő területek különíthetők el: (1) téri tájékozódás – összehasonlítások, (2) síkbeli alakzatok (a rekogníció és a mentális manipuláció szintjén), és (3) térbeli alakzatok (a rekogníció és a mentális manipuláció szintjén).

*Kulcsszavak: térszemlélet, matematika tankönyv, tantervi utasítások, téri problémák*

## **THE EFFECTIVENESS OF A PRIMARY SCHOOL BIOLOGY PROGRAM**

**Éva Borsos**

*University of Novi Sad, Faculty of Teacher Education in the Hungarian Language,  
Subotica, Serbia  
bborsoseva@gmail.com*

Nowadays the environmental pollution grows out of proportion. The key is the future generation, so it is very important to teach the children to the love of nature.

In all of this help the natural sciences, especially the biology. The closing test controls the biology knowledge of the pupils at the end of the 8th grade. These results show us in the best way the effectiveness of the elementary school biology program.

I tested the pupils in 8<sup>th</sup> grade in Novak Radonic Elementary School in Mohol, two months before the closing exam. The pupils in the class (20 pupils) reached 8,25 average (68,75%); the pupils of the b class (11 pupils) reached 7,81 average (65,08%); and the pupils of the c class (17 pupils) reached 8,05 average (67,08%). The maximum was 12.

These results show that the program of the elementary school contributes to make pupils love the nature, to take care of the environment. It helps pupils to learn the elements of biology.

*Keywords: biology, teaching biology, closing exam, environmental protection, 8<sup>th</sup> grade pupils*

## AZ ÁLTALÁNOS ISKOLAI BIOLÓGIA TERV HATÉKONYSÁGA

**Borsos Éva**

*Újvidéki Egyetem Magyar Tannyelvű Tanítóképző Kara, Szabadka, Szerbia  
bborsoseva@gmail.com*

Napjaink rohanó világában egyre nagyobb méreteket ölt a környezetszennyezés. A kulcs a jövő generációnál van, ezért nagyon fontos már kiskorban megszerettetni a tanulókkal a természetet.

Mindebben komoly segítséget nyújtanak a természettudományos tantárgyak, különösen a biológia. A diákok biológia tudásának konkrét felmérése a „záró vizsgán” történik a 8. osztály végén. Az itt elért eredmények tükrözik legszebben a tanterv hatékonyságát.

A moholi Novak Radonic Általános Iskola 8. osztályos tanulóit teszteltük két hónappal a záróvizsga előtt. Az a osztály tanulói 8,25 ( 68,75%); a b osztály tanulói 7,81 (65,08%); a c osztály tanulói pedig 8,05 (67,08%) átlag pontszámot értek el a maximális 12-ből.

A kapott eredmények azt mutatják, hogy az általános iskolai biológia illetve természet és társadalom tantárgyak programja hozzájárul a diákok környezettudatosságának, természet szeretetének kialakításához és lehetővé teszi számukra a biológia alapjainak elsajátítását.

*Kulcsszavak: biológia, biológiatanítás, záróvizsga, környezet-védelem, 8. osztályos diákok*

## **TEACHING IN NATURE – AN INTEGRATED THEMATIC APPROACH**

**Dragana Gavrilović-Obradović**

*Dura Jakšić Elementary School, Kać, Serbia*

*gagaonn@gmail.com*

There are many ways that students learn about the natural and national values of their country, but in the school practice the best results are achieved if the children do the research themselves and their experience becomes knowledge. It is even better, if you can provide students, with the opportunity to demonstrate their ability activities in the practical application of acquired knowledge.

This paper presents an integrated approach to teaching in nature, implemented by students in the fourth grade. As a preparation for the outdoor classes is to organize the space, teacher preparation, preparation of students and parents, the paper put emphasis on the presentation of students' activities. These are activities that are based on their direct observation, search, and practical activities that encourage independent and creative work of students. Five heterogeneous groups of pupils are perceived by the various thematic issues. Each group had its own task, and practical demonstrations of each research group is part of the thematic whole or part of the display classes in nature with a certain aspect.

*Keywords: teaching in nature, integrative classes, groups, students, activities.*

## **NASTAVA U PRIRODI – INTEGRISANI TEMATSKI PRISTUP**

**Dragana Gavrilović-Obradović**

*Osnovna škola „Đura Jakšić”, Kać, Srbija*

*gagaonn@gmail.com*

Postoje mnogi načini da se učenici upoznaju sa prirodnim i nacionalnim vrednostima svoje zemlje, ali se u školskoj praksi najbolji rezultati postižu ukoliko deca samostalno istražuju i putem svog iskustva dolaze do saznanja. Još je bolje, ako se učenicima pruži prilika, da kroz aktivnosti pokažu svoju sposobnost u praktičnoj primeni usvojenih znanja.

U radu je dat prikaz integrisanog tematskog pristupa nastavi u prirodi koji su realizovali učenici četvrtog razreda osnovne škole. S obzirom da priprema za organizaciju nastave u prirodi obuhvata organizaciju prostora, pripreme nastavnika, pripreme učenika i roditelja, u radu je stavljen akcenat na prikazu aktivnosti učenika. To su aktivnosti koje su zasnovane na njihovom neposrednom posmatranju, traganju, ali i praktične aktivnosti koje podstiču samostalnost i stvaralački rad učenika. Pet heterogenih grupa učenika sagledavale su različite tematske probleme. Svaka grupa je imala svoj zadatak, a praktični prikaz istraživanja svake grupe predstavlja deo tematske celine, odnosno deo prikaza nastave u prirodi sa određenog aspekta.

*Ključne reči: nastava u prirodi, integrativna nastava, grupe, učenici, aktivnosti.*

# **THE IMPORTANCE OF PSYCHOLOGICAL AND SOCIOLOGICAL ASPECTS IN THE DEVELOPMENT OF PUPILS' TEAM-WORK SKILLS**

**Bianka Gergel'ová**

*Comenius University in Bratislava, Faculty of Mathematics, Physics and  
Informatics, Bratislava, Slovakia  
gergelova@fmph.uniba.sk*

**Peter Demkanin**

*Comenius University in Bratislava, Faculty of Mathematics, Physics and  
Informatics, Bratislava, Slovakia  
demkanin@fmph.uniba.sk*

Our research activities are guided by the following ideas: "Learning the physics is making sense of new experience by a child in collaboration with others" and „Effect to learning is dependent on well designed equipment or tools and on well selected methods of education“. We are researching the potential of pupil's team-work skills development by physics teaching. Within the scope of physics teaching, the school (laboratory activities) and also the out-of-school environment (outdoor experiments) gives many opportunities to practice such skills. In our contribution, we will present one particular method of pupil's team-work skills development, specifically by the assigning the roles to individual team members. We will show the initial experiences with implementation of this approach discussing the activity focused on effectiveness of cooking (specifically – boiling the water). One of the objectives of this activity is to point out the possibilities of saving energy at home.

*Keywords: student – teacher, teamwork, personality development, goals of physics education, psychological and sociological aspects*

# A PSZICHOLÓGIAI ÉS A SZOCIOLÓGIAI SZEMPONTOK JELENTŐSÉGEI A TANULÓ CSOPORTMUNKÁRA VALÓ KÉSZSÉGÉNEK A FEJLESZTÉSÉNÉL

**Gergel'ová Bianka**

*Pozsonyi Comenius Egyetem Matematika, Fizika és Informatikai Kara, Pozsony,  
Szlovákia  
gergelova@fmpf.uniba.sk*

**Demkanin Peter**

*Pozsonyi Comenius Egyetem Matematika, Fizika és Informatikai Kara, Pozsony,  
Szlovákia  
demkanin@fmpf.uniba.sk*

A munkánk két fő gondolattal van megihletve: „A fizika tanulása nem más, mint a gyermek saját, új tapasztalatainak értelmezése mások együttműködésével” (Harlen, 2006) és „A tanulásra gyakorolt hatás a választott eszközökkel és módszerekkel van meghatározva.” (Demkanin et al., 2012) A fizika oktatásával azokat a lehetőségeket vizsgáljuk, amelyek fejlesztik a tanuló képességét csoporthoz dolgozni. A fizika tanítása iskolai (laboratóriumi gyakorlatok) és iskolán kívüli környezetben is (terep kísérletek) számos lehetőséget nyújt e készség gyakorlására. Ebben a cikkben bemutatunk egy módszert, amellyel fejleszteni lehet a tanuló csoporthunka képességeit. A bemutatott metódus alapja a szerepmegosztás. Bemutatjuk első tapasztalatainkat e módszer használatával egy feladaton, melynek tárgya a főzés (vízmelegítés) hatékonysága. A feladat egyik célja rávilágítani az otthoni energiatakarékosság lehetőségére.

*Kulcsszavak: tanuló – tanár, csoporthunka, képességfejlesztés, a fizika oktatásának céljai, pszichológiai és szociológiai szempontok*

# **THE ROLE OF CURRICULUM IN PROFESSIONAL DEVELOPMENT OF CLASS TEACHERS FOR THE PURPOSES OF REALIZATION OF MUSIC TEACHING IN PRIMARY SCHOOL**

**Jelena Grkić Ginić**

*University of Kragujevac, Faculty of Educational Sciences, Jagodina, Serbia  
jelenagrkic@yahoo.com*

Music teaching in the elementary school is aimed at encouraging aesthetic and emotional experience of pupils, to develop their interest in learning and interpretation of works of art and thus affects the formation of the musical tastes. Success of the tasks in this area of work depends primarily on educational and methodical-didactic teacher preparedness. Primary school teachers often do not have extensive art education, and the music is just one of the subject areas that are qualified during their initial education.

This paper presents the problem of educating class teachers for the purposes of realization of music teaching in primary school. It points to the problems that arise during the education of future teachers to acquire competencies needed for teaching musical education and presents an overview of teachers' music competencies for teaching music culture based on the primary schools subject curriculum.

*Keywords: music education, teachers, students, curriculum, teacher competence*

## **УЛОГА КУРИКУЛУМА У ПРОФЕСИОНАЛНОМ ОБРАЗОВАЊУ УЧИТЕЉА ЗА РЕАЛИЗАЦИЈУ НАСТАВЕ МУЗИЧКЕ КУЛТУРЕ У ОСНОВНОЈ ШКОЛИ**

**Јелена Гркић Гинић**

*Факултет педагошких наука Универзитета у Крагујевцу, Јагодина, Србија  
jelenagrkic@yahoo.com*

Настава музичке културе у основној школи има за циљ да подстиче естетски и емотивни доживљај ученика, да развије интересовање за учење и тумачење уметничких дела и на тај начин утиче на формирање музичког укуса младих. Успех задатака у овој области рада зависи првенствено од образовне и методичко-дидактичке спремности учитеља. Учитељи разредне наставе најчешће немају широко уметничко образовање, а музика представља само једно од предметних подручја за које се током иницијалног образовања оспособљавају. Квалитетна настава музичке културе могућа је једино ако учитељи поседују одређене музичке вештине.

У раду се разматрају проблеми образовања учитеља разредне наставе за реализацију наставе музичке културе у основној школи. Указује се на проблеме који настају у току образовања будућих учитеља за стицање компетенција потребних за извођење наставе музичке културе и дат је преглед музичких компетенција учитеља за наставу музичке културе заснован предметном курикулуму у основној школи.

*Кључне речи: музичка настава, учитељи, студенти, курикулум, компетенције учитеља*

## **CURRICULUM AND TEACHING TOUCH TYPING**

**Katalin Varga Hajdicsné**

*Budapest Centre of Economic Vocational Training – Berzeviczy Gergely Bilingual  
Vocational School, Budapest, Hungary  
hajvarka@gmail.com*

The need for being fast and the expansion of knowledge recommend bigger and wider professional background form the individuals as well. The need for quick and high quality learning is a worldwide phenomenon. Information technology and digital writing result in typing commands, thoughts, text messages. Touch-typing has a big advantage in learning and working as with this ability getting information and communicating can be fast. There are training institutions where touch-typing is taught in a traditional way by using books while others introduce software programs in the teaching phase.

This study presents the program and curriculum we use at economical technical college.

*Keywords: typing, electronic writing, software programs, digital competence, curriculum*

## **AZ ELEKTRONIKUS ÍRÁSTECHNIKA (MANAGEMENT PRACTICES) OKTATÁSÁNAK KÉRDÉSEI**

**Hajdicsné Varga Katalin**

*Budapest Gazdasági Szakképzési Centrum*

*Berzeviczy Gergely Két Tanítási Nyelvű Közgazdasági Szakközépiskolája,*

*Budapest, Magyarország*

*hajvarka@gmail.com*

Korunkban rohamosan bővülnek az ismeretek, s ennek következtében az ismeretszerzsének is gyorsnak kell lennie. Az információs társadalom megköveteli a digitális írástudást, ami együtt jár azzal, hogy billentyűzeten gépeljük be gondolatainkat, üzeneteinket. A tanulásban, munkában nagy előnyvel rendelkezik a 10 ujjal gépelni tudó, mert gyorsabban tud ismereteket szerezni, munkát végezni, kommunikálni. Vannak képzőhelyek, ahol a gépírást csak a hagyományos módon tanítják, másutt különböző oktatóprogramokkal dolgoznak.

Jelen előadásban az iskolában alkalmazott programot, a tanítási terv megvalósulását mutatom be.

*Kulcsszavak: gépírás, elektronikus írástechnika, oktató programok, digitális kompetencia, kerettanterv*

# **THE ATTITUDE OF PUPILS TOWERED ORGANIZATION OF TEACHING AND SCHOOL ASSESSMENT PROCESS**

**Danijela Ilić-Stošović**

*University of Belgrade, Faculty of Special Education and Rehabilitation, Belgrade,  
Serbia  
d.i.stosovic@gmail.com*

**Snežana Nikolić**

*University of Belgrade, Faculty of Special Education and Rehabilitation, Belgrade,  
Serbia  
coan@open.telekom.rs*

**Marija Radulović**

*Stari grad DZ – Developmental counseling, Belgrade, Serbia  
marija0206@gmail.com*

The aim of this research is to examine pupils' attitude towards teaching and school assessment process. Also, the differences between pupils in special and mainstream school were examined.

The sample was made of 68 pupils in special schools and 140 pupils in mainstream school.

Questionnaire was used in collecting data. First part of the questionnaire consisted of the general form questions, and second part consisted of 16 questions about attitude toward organization of teaching and school assessment process.

There are high statistically differences ( $p<0,01$ ) between pupils in special and pupils in mainstream school in six of 12 variables that measured attitude toward organization of teaching process. The pupils in special schools have more positive attitude toward organization of teaching process. There are high statistically differences ( $p<0,01$ ) between two group of pupils two of four variables that measured attitude toward organization of assessment process and statistically important difference in one variable ( $p<0,05$ ). Pupils in mainstream school have more negative attitude toward the organization of assessment process.

*Key words: organization of teaching process, assessment, pupils*

## **СТАВ УЧЕНИКА ПРЕМА ОРГАНИЗАЦИЈИ НАСТАВЕ И ОЦЕЊИВАЊУ<sup>3</sup>**

**Данијела Илић-Стошовић**

*Универзитет у Београду, Факултет за специјалну едукацију и  
рехабилитацију, Београд, Србија  
d.i.stosovic@gmail.com*

**Снежана Николић**

*Универзитет у Београду, Факултет за специјалну едукацију и  
рехабилитацију, Београд, Србија  
coap@open.telekom.rs*

**Марија Радуловић**

*ДЗ „Стари град“- Развојно саветовалиште, Београд, Србија  
marija0206@gmail.com*

Циљ истраживања је да се утврди какав став према организацији наставе и оцењивању имају ученици низких разреда основне школе и да ли постоје разлике између ученика у школама за образовање ученика типичног развоја и ученика у школама за децу са сметњама и тешкоћама у развоју.

Истраживањем је обухваћено 68 ученика из школа за децу са сметњама и тешкоћама у развоју и 140 ученика из школе за ученике типичног развоја.

За прикупљање података коришћен је Упитник, који је садржао 16 питања затвореног типа, којима се испитивао став ученика према организацији наставе и оцењивању.

Ученици у школама за ученике типичног развоја у половини варијабли исказују негативацији став према организацији наставе ( $p<0,01$ ). Високо статистички значајне разлике ( $p<0,01$ ) у ставу према оцењивању, између две групе ученика, бележе се у две варијабле, а код једне се бележи статистички значајна разлика ( $p<0,05$ ). Ученици у школама за образовање ученика типичног развоја имају негативнији став.

*Кључне речи: организација наставе, оцењивање, ученици*

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<sup>3</sup> Рад је реализован у оквиру пројекта „Креирање протокола за процену едукативних потенцијала деце са сметњама у развоју као критеријума за израду индивидуалних образовних програма“ (број 179025), кога финансира Министарство просвете, науке и технолошког развоја РС.

## **THEORY OF CURRICULUM PRO ET CONTRA<sup>4</sup>**

**Josip Ivanović**

*University of Novi Sad, Faculty of Teacher Education in the Hungarian Language,  
Subotica, Serbia  
josip.ivanovic@magister.uns.ac.rs*

**Aleksandar Nadj Olajoš**

*PhD student, University of Novi Sad, Subotica, Serbia  
nadj.aleksandar@gmail.com*

In this paper we try to analyse the curriculum as one of the basic concepts of modern pedagogy and didactics through the lenses of different theories. On the whole, theories of the curriculum are based on the theories of learning and teaching and philosophical theoretical views. In the literature there are different definitions of curriculum (Previšić, 2007; Stenhouse, 1975), which indicate the different ideological and theoretical starting point in understanding education, and thus the determination of the term. Some define it as curriculum, others as a carefully planned teaching and learning, the third viewpoint assumes it as a program for achieving the outcomes, the fourth viewpoint sees it as a learning process in the educational institution, the fifth viewpoint as the life of the program and school etc. Different definitions of curriculum show that the emphasis lies on the individual components of the whole education: content, process, etc., and achievement, indicating the different possible approaches to its conception. Therefore, it is evident that European and American versions of the comprehension of curriculum are reflected in the philosophical tradition of both, or it can be said that they lie between European humanism and idealism and the typical American pragmatism. However, compiling and making an operational synthesis of these attempts, we can observe a number of unbreakable points and components to which it could be said that the modern curriculum development and school education include the establishment of the scientific objectives, tasks, content, curriculum, organization and implementation of technology and different forms of student evaluation.

It is not easy to reconcile some of curriculum theories because they assume different philosophical views. That is, different schools of thoughts are constantly searching for the reliable methodologies of curriculum, regardless of the obvious and common touching points. One thing is certain, the credible curriculum theory is the one which has a more objective and accurately elaborated methodology developed in all areas of knowledge; which has a more appropriate time to arrive at a particular competence and where it is possible to

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<sup>4</sup> The paper was written within the research project "The quality of education system in Serbia from European perspective (QESSEP)", No. 179010, which is funded by the Ministry of Education, Science and Technological Development Republic of Serbia (2011-2015)

check multiple final achievements. Here we must mention certain curricular concepts; two of which are dominant and some others we could generally consider as their subtle variations: the first is the humanistic curriculum focused on development and the other is a functionalist curriculum-oriented product. In the first case, humanistic oriented curriculum is directed towards a pedagogical open approach and focuses on students and certainly has representatives among those who critically examine education and school in terms of its traditional role. In the second case it is a pragmatic understanding of the curriculum which is more focused on practice and training and from goal setting to the evaluation of students, accordingly, has structured its main components. In addition to these curriculum concepts, we will point out the general theoretical understanding of contemporary curriculum.

*Key words: curriculum, understanding of the curriculum, theory of curriculum, philosophy of curriculum, competences*

## KURIKULUMSKE TEORIJE PRO ET CONTRA<sup>5</sup>

**Josip Ivanović**

*Učiteljski fakultet na mađarskom nastavnom jeziku u Subotici Univerziteta u Novom Sadu, Subotica, Srbija  
josip.ivanovic@magister.uns.ac.rs*

**Aleksandar Nađ Olajoš**

*Student doktorskih studija, Univeruitet u Novom Sadu, Subotica, Serbia  
nadj.aleksandar@gmail.com*

U radu ćemo pokušati analizirati kurikulum kao jedan od osnovnih pojmove suvremene pedagogije i didaktike kroz prizmu različitih teorija. Gledano u cjelini, teorije kurikuluma zasnovane su na teorijama učenja, odnosno podučavanja i filozofskim teorijskim pogledima. U literaturi postoje različite definicije kurikuluma (Previšić, 2007; Stenhouse, 1975), što ukazuje na različita ideoološka i teorijska polazišta u shvaćanju samog obrazovanja, pa samim tim i određivanju ovog pojma. Neki ga određuju kao nastavni plan i program, drugi kao pažljivo planirano podučavanje i učenje, treći kao program za postizanje utvrđenih ishoda, četvrti kao proces učenja u obrazovnoj ustanovi, peti kao život i program škole i sl. Različita određenja kurikuluma pokazuju da se naglasak stavlja na pojedine komponente cjeline obrazovanja: sadržaj, proces, postignuća i sl., što ukazuje na moguće različite pristupe u njegovom koncipiranju. Prema tome je vidljivo da se europska i američka varijanta poimanja kurikuluma ogledaju u filozofskoj tradiciji jednih i drugih, odnosno može se reći da se nalaze između europskog humanizma i idealizma i tipično američkog pragmatizma. Ipak kompilirajući i čineći jednu operativnu sintezu od navedenih pokušaja određenja možemo uočiti nekoliko neraskidivih točaka i komponenti prema kojima bi se moglo reći da kurikulum suvremenog razvoja i obrazovanja škole podrazumijeva znanstveno zasnivanje cilja, zadataka, sadržaja, plana i programa, organizaciju i tehnologiju provođenja te različite oblike evaluacije učenika.

Neke od kurikulumskih teorija nije lako „pomiriti“ jer polaze od različitih filozofskih pogleda. Zato se i događa da različita teorijska polazišta stalno tragaju za svojim pouzdanim metodologijama izrade kurikuluma, bez obzira na očigledne zajedničke i dodirne točke. Jedno je ipak sigurno, vjerodostojna je ona kurikulumska teorija koja ima objektivniju i preciznije razrađenu metodologiju izrade za sva područja znanja; koja ima primjereniji put dolaska do određene kompetencije i koju je moguće višestruko provjeriti krajnjim postignućima. Ovdje moramo spomenuti određene kurikulumske koncepte; od kojih su dva dominantna, a neke druge mogli bismo uglavnom smatrati njihovim podvarijacijama: prvi je humanistički kurikulum orijentiran na razvoj, a drugi

<sup>5</sup> Rad je nastao u okviru naučnoistraživačkog projekta „Kvalitet obrazovnog sistema Srbije u evropskoj perspektivi (KOSSEP)“ br. 179010, kojega finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije (2011-2015)

funkcionalistički kurikulum orijentiran na proizvod. Prvi, humanistički orijentiran kurikulum teži pedagoški otvorenom pristupu usmjeren je na učenika i svakako nalazi zastupnike u onima koji kritički ispituju odgoj i školu sa stanovišta njene tradicionalne uloge. U drugom slučaju riječ je o pragmatičnom poimanju kurikuluma koji je više orijentiran na praksi i osposobljavanje pa su od postavljanja cilja do vrednovanja učenika, u skladu s tim, strukturirane i njegove glavne komponente. Pored navedenih koncepata kurikuluma u radu ćemo ukazati na opće teorijska shvaćanja suvremenog kurikuluma.

*Ključne riječi: kurikulum, poimanja kurikuluma, teorije kurikuluma, filozofija kurikuluma, kompetencije*

## **INVESTIGATION-BASED TEACHING**

**Marko Jurčić**

*University of Zagreb, Faculty of Philosophy, Zagreb, Croatia*

*mpustike@gmail.com*

**Irena Klasnić**

*Juraj Habdelić Elementary School, Velika Gorica, Croatia*

*idklasnic@net.hr*

One of the didactic concepts of modern teaching is research oriented teaching. It is increasingly becoming a central theme of didactics and a subject of research and exploration in order to reach a more complete application in most school subjects with a goal to improve the education of children and youth as much as possible. The aim of this paper is to make a contribution to that goal. The paper is divided in two sections. The first one considers theoretical principals of research oriented teaching, by the model of problem teaching, and it involves insights about its contribution to applicative, creative and experiential student's knowledge. The second one represents elaboration of empiric research, carried out with the goal of establishing the presence of research in three school subjects: the Croatian language, foreign language and Mathematics. This chapter contains a methodological frame of research, together with the analysis and interpretation of students' perceptions about research oriented teaching by age, gender and school subject (6th and 8th grades, N=1167). Statistically significant differences in all three variables have been confirmed. Research quality was considered the highest in the foreign language class, followed by the Croatian language class, and statistically significantly lower in Mathematics.

Considering the contribution of research oriented teaching, in the context of "student guide" for achieving their own learning goals, cooperation and their referral to self-awareness, the conclusion emphasizes the need for moving away from direct (frontal) teaching and creating a process of education which is reflected in students' active participation. What else is pointed out are the competencies of teachers, which is observed in layered complexity, being a characteristic of the pedagogical-didactic approach in the implementation of research-based teaching.

*Keywords: student, teacher, investigation-based teaching*

## **ISTRAŽIVAČKI USMJERENA NASTAVA**

**Marko Jurčić**

*Filozofski fakultet Sveučilišta u Zagrebu, Zagreb, Hrvatska  
mpustike@gmail.com*

**Irena Klasnić**

*Osnovna škola Jurja Habdelića, Velika Gorica, Hrvatska  
idklasnic@net.hr*

Jedan od didaktičkih koncepata suvremene nastave jest istraživački usmjereni nastava. Sve više postaje središnjom temom didaktike, pokušava se istražiti, sagledati i doprijeti do što potpunije primjene u većini nastavnih predmeta kako bi se maksimalno unaprijedio odgoj i obrazovanje djece i mlađih. Tomu želi pridonijeti i ovaj rad, podijeljen u dvije cjeline. Prva razmatra teorijske osnove istraživački usmjereni nastave, po modelu problemske nastave, te obuhvaća spoznaje o njenom doprinosu aplikativnom, kreativnom i iskustvenom učenikovu znanju. Druga predstavlja elaboraciju empirijskog istraživanja, obavljenog s ciljem utvrđivanja prisutnosti istraživanja u tri nastavna predmeta: hrvatski jezik, strani jezik i matematika. Ovo poglavlje sadrži metodološki okvir istraživanja te analizu i interpretaciju učeničke procjene istraživački usmjereni nastave prema dobi, spolu i nastavnom predmetu (6. i 8. razredi, N=1167). Potvrđeno je postojanje statistički značajne razlike u sve tri navedene varijable. Učenici su procijenili najvišom kvalitetu istraživanja u nastavi stranog jezika, nešto niže u nastavi hrvatskog jezika, a statistički značajno niže procijenili su kvalitetu istraživanja u nastavi matematike.

Imajući u vidu doprinos istraživački usmjereni nastave, u kontekstu „vodiča“ učenicima u postizanju vlastitih ciljeva učenja, suradnje i njihovo upućivanje u samospoznavanje, u zaključku se ističe potreba za odmicanjem od direktnog (frontalnog) poučavanja i oblikovanje procesa odgoja i obrazovanja u kojem se očituje učenička aktivna participacija. Istim se i kompetentnost učitelja, promatrana u slojevitoj složenosti, koja obilježava pedagoško-didaktički pristup u provođenju istraživački usmjereni nastave.

*Ključne riječi: učenik, učitelj, istraživački usmjereni nastava*

## **VIRTUAL SPACES IN THE FUTURE OF EDUCATION DIGITAL GAMIFICATION**

**Szabolcs Krajnik**

*University of Kaposvár, Kaposvár, Hungary*

*szabolcs.krajnik@gmail.com*

We look with high expectations to the promise of using twenty-first-century technology in learning. This is a great challenge in the education of children living in the “information age”. Virtual spaces are inevitable medium of the future of this area. The educational platforms need to find ways to the growing up generation in this medium. I recently took part in the development of games for an educational portal on the Internet. My personal experiences in my own educational work and of other researches in this topic raises questions about the way of this development. Gamification is well-established in many areas of life and in learning too, but the digital way is far from being developed. I want to represent some projects from traditional approaches, and ideas that searching new ways of utilization I am involved in.

*Keywords: education, digital technologies, virtual spaces, gamification*

## **VIRTUÁLIS TEREK AZ OKTATÁS JÖVŐJÉBEN DIGITÁLIS JÁTÉKOSÍTÁS**

**Krajnik Szabolcs**

*Kaposvári Egyetem, Kaposvár, Magyarország*  
*szabolcs.krajnik@gmail.com*

Mondhatjuk, hogy nagy elvárásokkal tekintünk a XXI. Századi technológiák felhasználásáraaz tanulásban. Nagy kihívás ez az „információ korában” élő gyermekok oktatásában. Ezen terület jövőjének színhelyei egyértelműen a virtuális terek. Az oktatásnak utat kell találnia a felnövekvő nemzedékhez ebben a közegben. Jelenleg részt veszek olyan játékok fejlesztésben, melyek egy oktatási portál részét képeznék. Oktatási munkám során szerzett szemmelyes tapasztalataim, valamint kutatási eredmények nyomán felvetődnek kérdések e terület fejlesztésének irányával, jövénél kapcsolatosan. A „játékosítás” már jól bevált módszer az élet számos területén, így az oktatásban is, azonban a digitális technológiában ez a munka még messze nem fejeződött be. Előadásom második részében szeretnék bemutatni néhány, a hagyományos utakon elindult játékfejlesztést és új megoldásokat kutató projektet is.

*Kulcsszavak: oktatás, digitális technológia, virtuális terek, gamifikáció (játékosítás)*

## **PHYSICAL EDUCATION AND KEY-COMPETENCES IN PUBLIC EDUCATION**

**Josip Lepeš**

*University of Novi Sad, Faculty of Teacher Education in the Hungarian Language,  
Subotica, Serbia  
lepes@tippnet.rs*

**Szabolcs Halasi**

*University of Novi Sad, Faculty of Teacher Education in the Hungarian Language,  
Subotica, Serbia  
halasi.sabolc@gmail.com*

The relationship between key-competences and physical education is contradictory all over Europe. This paper intends to present some elements of physical education in Serbia in the light of competence based education which is widely used in public education following a European pattern. The author analyses a few components of the target and instrument systems applied in physical education, as well as the necessity of the introductions of everyday physical training.

*Keywords: physical education, everyday physical education, key-competences*

## **KLJUČNE KOMPETENCIJE U OSNOVNOM I SREDNjem OBRAZOVANJU S ASPEKTA FIZIČKOG VASPITANJA**

**Josip Lepes**

*Učiteljski fakultet na mađarskom nastavnom jeziku u Subotici Univerziteta u  
Novom Sadu, Subotica, Srbija  
lepes@tippnet.rs*

**Szabolcs Halasi**

*Učiteljski fakultet na mađarskom nastavnom jeziku u Subotici Univerziteta u  
Novom Sadu, Subotica, Srbija  
halasi.sabolc@gmail.com*

Odnos ključnih kompetencija u osnovnom i srednjem obrazovanju i fizičkog vaspitanja pun je protivrečnosti širom Evrope pa tako i u Srbiji. Istraživanje je pokušaj da se prikažu neki elementi fizičkog vaspitanja u Srbiji u svetlu sve prisutnijih primera iz Evrope koji počivaju na temeljima ključnih kompetencija u nastavi. Autori vrše analizu stanja u fizičkom vaspitanju Srbije sa isticanjem važnosti uvođenja svakodnevne nastave fizičkog vaspitanja, potrebe za stvaranjem uslova za svakodnevno fizičko vežbanje i modernizaciju sadržaja fizičkog vaspitanja.

*Ključne reči: fizičko vaspitanje, svakodnevno fizičko vaspitanje, ključne kompetencije*

## **LINGUISTIC EDUCATION IN THE CURRICULUM OF THE HUNGARIAN LANGUAGE AND LITERATURE OF ROMANIA**

**Sára Magyari**

*Partium Christian University, Oradea, Romania*

*saramagyary@yahoo.com*

In the Romanian high schools there is no grammar teaching. The requirements prescribe the necessity to teach the pupils to practice a conscious linguistic behavior: correct speech and writing; recognizing the misdemeanor of speaking or the inappropriate style, but in practice we experience that the correct speech and writing is depreciated. In the grade school we teach descriptive linguistics but the functionality is not prevailed. In the majority of the grammar hours only the rules are taught and then asked back. The sense of the language, the logic of it or the exploration of the meaning get lost. In the school practice we got to hate grammar – to teach and to learn as well. Why? In my presentation I am looking for the answer to this question. My methodological approach is an observation known from the anthropological linguistics (from the teacher training to usual, day by day educational work) on one hand and a comparative analyze of educational strategies on the other hand.

*Keywords: language teaching, curriculum, teacher training, Hungarian, Romania*

## A NYELVI NEVELÉS A ROMÁNIAI MAGYAR NYELV ÉS IRODALOM TANTERVÉNEK FÜGGVÉNYÉBEN

**Magyari Sára**

*Partium Kereszteny Egyetem, Nagyvárad, Románia*  
*saramagyary@yahoo.com*

A romániai középiskolákban évek óta nincs nyelvtantanítás. A követelményrendszer előírja a tudatos nyelvi magatartás fejlesztését: helyes beszéd és a helyesírási készség működtetésére; a nyelvhelyességi vétségek és stílustalanságok, stílustörések felismerésére és javítására kell őket ösztönöznünk, de a gyakorlatban azt tapasztaljuk, hogy minden leértékelődött. Az általános iskolában leíró grammaticával foglalkozunk, de nem érvényesül a funkcionális szemlélet. A legtöbb nyelvtanórán a szabályok bemagoltatása, visszakérdezése működik, a nyelvérzék, a nyelvi logika, a jelentések feltárása elsikkad. A mindennap iskolai gyakorlatban oda jutottunk, hogy utáljuk a nyelvtant – tanulni is, tanítani is. Miért van így? Előadásomban erre kerem a választ. Módszertani megközelítésem egyrészt az antropológiai nyelvészettől ismert részvevő megfigyelés (a pedagógusképzés gyakorlatán át egészen a mindennap oktatói munkáig), másrészt a komparatív elemzése oktatásstratégiai dokumentumoknak.

*Kulcsszavak: nyelvtantanítás, tantervezek, tanárképzés, magyar, Románia*

## **COMICS IN PRIMARY SCHOOL TEXTBOOKS**

**Valentina Majdenić**

*Josip Juraj Strossmayer University of Osijek, Faculty of Educational Sciences,  
Osijek, Croatia  
vmajdeni@gmail.com*

**Antea Bogetić**

*Josip Juraj Strossmayer University of Osijek, Faculty of Educational Sciences,  
Osijek, Croatia  
abogetic@foozos.hr*

Comics are a series of connected narrative scenes. A comic book comes from the name of the American comic strip which literally means comic strip. Its existence is linked to the advent of mass media. Although initially existed as an entertainment for the readers of the newspaper, it soon became independent media, or so called "ninth art". The peculiarity of the comic book is its time dimension, which is achieved by stringing staff, which creates a similarity between the comic and the movie. The frame is a frame in which to visualize an action. A topic indicates what is the comic book about, and you need to figure it out in advance. The frame is determined by the plan and point of view. Comics accompany us throughout life, from childhood or school to adulthood. They can be found in school textbooks and newspapers. They are a topic we talk about in schools.

*Keywords: strip, comic strip, media, cadre, plan, foreshortening, image, text, cloudet*

## **STRIP U OSNOVNOŠKOLSKIM UDŽBENICIMA**

**Valentina Majdenić**

*Sveučilište Josipa Jurja Strossmayera u Osijeku, Facultet za odgojne i obrazovne  
znanosti, Osijek, Hrvatska  
vmajdeni@gmail.com*

**Antea Bogetic**

*Sveučilište Josipa Jurja Strossmayera u Osijeku, Facultet za odgojne i obrazovne  
znanosti, Osijek, Hrvatska  
abogetic@foozos.hr*

Strip je niz naracijom povezanih prizora. Dolazi od američkog naziva comic strip što doslovno znači komična traka. Njegov o je postojanje povezano s pojmom masovnih medija. Iako početku egzistira kao dodatna zabava za čitatelje novina ubrzo postaje neovisni medij ili kako se voli kazati „deveta umjetnost”. Osobitost stripa je njegova vremenska dimenzija koja se ostvaruje nizanjem kadrova, što stvara sličnost između stripa i filma. Kadar je okvir u kojem se vizualizira neka radnja. Tema označava ono o čemu se radi u stripu, i potrebno ju je smisliti unaprijed. Kadar je određen planom i rakursom. Strip nalazimo preko školskih udžbenika do dnevних novina. Obrađuje se kao nastavna tema u školama.

*Ključne riječi: strip, comic strip, medij, kadar, plan, rakurs, slika, tekst, oblačić*

## **THE STATUS OF ENVIRONMENTAL EDUCATION IN THE SYSTEM OF SUBJECTS**

**Lenke Major**

*University of Novi Sad, Faculty of Teacher Education in the Hungarian Language,  
Subotica, Serbia  
lenkemajor@gmail.com*

**Rita Horák**

*University of Novi Sad, Faculty of Teacher Education in the Hungarian Language,  
Subotica, Serbia  
horakrita83@gmail.com*

Subjects taught in schools bear separate contents and can be incorporated into a well-defined system. Environmental education, however, is an exception, namely it is not an independent subject, but appears in an integrated form in other subjects.

The basic principles of environmental education are subjects that are related to environmental, nature and social contents. During learning these subjects, pupils acquire various knowledge, relationships and interactions related to nature.

Schools attempt to realize the objective of environmental education within the framework of natural sciences subjects. However, the roots of environmental issues are not natural science related since it is certain human activities, interest and conflicts that cause environmental issues.

The present study aims to demonstrate the environmental education as well as its integration into the curriculum.

*Keywords: environmental education, curriculum, interdisciplinary feature, subject purposes*

## A KÖRNYEZETI NEVELÉS HELYE A TANTÁRGYAK RENDSZERÉBEN

**Major Lenke**

*Újvidéki Egyetem Magyar Tannyelvű Tanítóképző Kara, Szabadka, Szerbia  
lenkemajor@gmail.com*

**Horák Rita**

*Újvidéki Egyetem Magyar Tannyelvű Tanítóképző Kara, Szabadka, Szerbia  
horakrita83@gmail.com*

Az iskolában tanítandó tantárgyak különálló tartalommal bírnak, és egy meghatározott rendszerbe sorolhatók. A környezeti nevelés azonban kivételt képez. Ugyanis nem önálló tantárgyként, hanem a többi tantárgyba integrálva jelenik meg.

A környezeti nevelés alapvető pillérei a környezeti, természeti és társadalmi tartamakat feldolgozó tantárgyak. E tantárgyak tanulása során szerzi a tanuló a természetre vonatkozó ismeretek, összefüggések, kölcsönhatások sokaságát. A környezeti nevelés átfogja az alsó tagozatos tantárgyak körét, valamennyi tantárgy ismeretanyagába beépítve a környezettudatos magatartás alapelveit.

Az iskolák környezeti nevelési céljaikat legtöbbször a természettudományi tantárgyakon belül igyekeznek megvalósítani. Ugyanakkor a környezeti problémák alapjukat tekintve nem természettudományi jellegűek, mert mööttük valamilyen emberi cselekvés, érdekek és ellentétek húzódnak meg.

Munkánkban a környezeti nevelés jellemzőit, tantervbe illesztésének lehetőségeit mutatjuk be.

*Kulcsszavak: környezeti nevelés, tanterv, interdiszciplináris jelleg, tantárgyi célok*

## **THE POSSIBILITIES OF INNOVATING THE ENGLISH LANGUAGE CURRICULUM IN SECONDARY BALLET AND MUSIC SCHOOL**

**Sladana Marić**

*PhD student, University of Novi Sad, Faculty of Philosophy, Novi Sad, Serbia  
sladjana\_elt@gmail.com*

The main characteristic of the contemporary school is teaching in which the needs and experiences of students are of the most importance for the process of education. Many different opinions and approaches to the curriculum theory and practice exist, such as curriculum as a programme, product, process, practice, curriculum in context, etc., although, insufficient to understand its philosophy, paradigms, methodology, content, the structure of its implementation and practical outcomes of education. In this paper, we review the possibilities of innovation of the English language curriculum in secondary ballet and music schools. The current official curriculum, the objectives and tasks are analysed, with the purpose of finding better ways of cross-curricular connection between learning foreign language and learning professional music and dance subjects, or correlating the humanistic social science and the arts curriculum areas. The efforts are aimed at a broader concept of curriculum based on the outcomes of learning and competencies, stressing out the cross-curricular topics, learning to learn and the application of digital and media technologies.

*Keywords: cross-curricular correlation, curriculum, educational aims, English language, innovation.*

## **МОГУЋНОСТИ ИНОВАЦИЈЕ КУРИКУЛУМА ЕНГЛЕСКОГ ЈЕЗИКА У СРЕДЊОЈ БАЛЕТСКОЈ И МУЗИЧКОЈ ШКОЛИ**

**Слађана Марић**

*Студент докторских студија, Филозофски факултет Универзитета у Новом Саду, Србија  
sladjana.elt@gmail.com*

Основна карактеристика савремене школе јесте настава у којој су потребе и искуства ученика од суштинског значаја за процес образовања. Постоје различита схватања и приступи теорији и пракси курикулума: курикулум као програм, продукт, процес, пракса, курикулум у контексту, и др., али још увек недовољна да би се схватила његова филозофија, парадигме, методологија, садржај, структура деловања и практични исходи васпитања и образовања. У овом раду разматрамо могућности иновације курикулума енглеског језика у средњим балетским и музичким школама. Анализира се наставни план и програм, циљеви и задаци, а циљ је проналажење начина боље међупредметне повезаности страног језика и стручних музичких/играчких предмета, тј. корелације друштвено-хуманистичког и уметничког курикулумског подручја. Тежи се ширем концепту курикулума заснованом на исходима учења и компетенцијама, уз наглашавање међупредметних тема, учење учења и употребе дигиталних и медијских технологија.

*Кључне речи: енглески језик, иновације, курикулум, међупредметна корелација, циљеви образовања.*

## **CATHOLIC RELIGIOUS EDUCATION IN THE TEACHING CURRICULUM IN THE REPUBLIC OF CROATIA**

**Marjan Ninčević**

*University of Zagreb, Croatian Studies, Zagreb, Croatia*  
*m nincevic@hrstud.hr*

Democratic changes that took place in the Republic of Croatia in the 1990s have encouraged the Catholic Church in Croatia to engage itself in opening the religious dimension and culture to the public, that is in creating for it an adequate place in the schooling and educational system, in order to create an opportunity for members of all religions to familiarize with, preserve and develop their religious, national and cultural identity also in the school curricula.

Religious education in the Republic of Croatia has since the school year 1991/1992 until today mainly managed to be integrated in the school system as obligatory-elective part of the school programme/curriculum. The teaching content of religious education contributes to the realization of a comprehensive student formation. In addition to the acquisition of general knowledge, one of the key questions of the educational system is the question of upbringing and values. Special attention and intensity were given to the education for values in the Republic of Croatia during the design of the Croatian National Educational Standard and later also the national curriculum. Catholic religious education in schools is essentially characterized by the value educational dimension and is directed at the formation of personalities open to the values of justice, solidarity, peace and quality coexistence.

Objectives and content of Catholic religious education as a school subject are developed towards a specific standpoint, which is Christian-Catholic and includes the analysis of cultural reality, interpretation of signs, helping in developing critical awareness, instruction to respect the values that stimulate mankind in the complete sense and invitation to dismiss everything inhumane or alienating, both in the state and world-wide. School can be of high quality only when all its activities connect students, who are different.

Based on this, the author analyses the position of religious education in school as one of the most challenging pedagogical-didactic questions of contemporary schooling.

*Keywords:* *education, school, curriculum, religious education, catholic religious education*

## **KATOLIČKI VJERONAUK U ŠKOLSKOM KURIKULUMU U REPUBLICI HRVATSKOJ**

**Marjan Ninčević**

*Hrvatski studiji Sveučilišta u Zagrebu, Zagreb, Hrvatska  
m nincevic@hrstud.hr*

Vjeronauk se u Republici Hrvatskoj, od 1991/92 do danas, uspio integrirati u školski sustav kao obvezni-izborni dio školskoga kurikuluma. Sadržaji vjeronaučne nastave pridonose ostvarivanju cjelovite formacije učenika. Katolički školski vjeronauk bitno je označen odgojnom dimenzijom, te je usmjeren formaciji osobnosti otvorenih vrjednotama pravde, solidarnosti, mira i kvalitetnog suživota.

U tom pravcu se katolički vjeronauk po svojim ciljevima i sadržajima postavlja kao školski predmet koji ima specifično stajalište: religijsko i kršćansko-katoličko i koji razabire kulturnu stvarnost, tumači znakove, pomaže u otkrivanju i razvijanju kritičke ocjene, upućuje na poštivanje vrijednosti koje potiču čovječanstvo u najpotpunijem smislu te poziva na odbacivanje svega onoga što je nehumano i otuđujuće, kako na teritorijalnoj tako i na planetarnoj razini.

*Ključne riječi: odgoj i obrazovanje, škola, kurikulum, katolički vjeronauk;*

## **SEX EDUCATION – (NON) POSSIBILITIES OF ITS IMPLEMENTATION IN SCHOOL**

**Slavica Pavlović**

*University of Mostar, Faculty of Science and Education, Mostar, Bosnia and  
Hercegovina  
godotcici@gmail.com*

Sexuality – an integral part of human development and everyday life and/or a taboo (?!?) including in education field. On the other hand, sex education raises controversies in some countries while in others it is included into educational quotidianity. Young people often find themselves at a kind of crossroads between the (im)possibilities of having necessary information about sexuality and the appropriate interpretation of relevant issues. Therefore, this paper deals with some sexuality issues of the youth as well as (im)possibilities of sex education within educational system, through a brief comparative overview of the experiences in several European and world countries. The paper also presents a part of the research, carried out in Mostar, in 2015. It explores, through a five-point Likert scale, the attitudes of 120 students of the grammar school, towards sexuality and sex education. There is a necessity for more appropriate ways of informing young people about sexuality (about sexual health and responsible behaviour, in particular); and sex education could be one of the possible solutions. Finally, the guidelines are given for more open consideration of sexuality issues of the youth at the educational level, through the team work and co-operation of the relevant stakeholders.

*Keywords: sexuality, sex education, responsibility, secondary school, students, co-operation*

## **SPOLNI ODGOJ – (NE)MOGUĆNOSTI PROVEDBE U ŠKOLAMA**

**Slavica Pavlović**

*Fakultet prirodoslovno-matematičkih i odgojnih znanosti Sveučilišta u Mostaru,  
Mostar, Bosna i Hercegovina  
godotcici@gmail.com*

Seksualnost – integralni dio ljudskog razvoja i svakodnevice ili/i tabu tema (?!), uključujući područje odgoja i obrazovanja. S druge strane, pak, dok spolni odgoj izaziva kontroverze u nekim zemljama, u drugima predstavlja dio odgojno-obrazovne svakodnevice. Mladi se često nalaze na raskrižju između (ne)mogućnosti dobivanja potrebnih informacija o seksualnosti i adekvatne interpretacije relevantnih pitanja. Stoga se ovaj rad bavi nekim pitanjima seksualnosti mladih, te (ne)mogućnostima spolnog odgoja u obrazovnom sustavu kroz kratki komparativni prikaz iskustava nekoliko europskih i svjetskih zemalja. U radu je prezentiran dio istraživanja provedenog 2015. godine u Mostaru, putem petostupanjske Likertove skale, o stavovima 120 učenika gradske gimnazije o seksualnosti i spolnom odgoju. Proizlazi potreba boljeg informiranja mladih o seksualnosti (posebice, o spolnom zdravlju i odgovornom ponašanju); spolni odgoj bi mogao biti jedno od mogućih rješenja. Na kraju su dane smjernice za otvorenije razmatranje tema seksualnosti mladih na obrazovnoj razini, kroz timski rad i suradnju relevantnih subjekata.

*Ključne riječi: seksualnost, spolni odgoj, odgovrnost, srednja škola, učenici, suradnja*

## **THE CYBERNETICALLY-ORIENTED STRATEGY FOR MATHEMATICS EDUCATION**

**Valéria Pintér Krekić**

*University of Novi Sad, Faculty of Teacher Education in the Hungarian Language,  
Subotica, Serbia  
valeria.krekic@magister.uns.ac.rs*

The decreasing of the successfulness of mathematics teaching requires every expert to research effective teaching methods. The most active teaching method these days is the cybernetic oriented teaching. The basics of this teaching method are modeling and creative mathematization of a real problem in order to solve it.

In Serbia cybernetic oriented teaching has a tradition in the curricula and in teachers' education as well, but in practice that is not the case because there is a need to do some more research in this field of practice.

*Keywords: teaching mathematics, cybernetics, strategy*

## **A KIBERNETIKUSAN ORIENTÁLT STRATÉGIA A KEZDŐ MATEMATIKAOKTATÁSBAN**

**Pintér Krekić Valéria**

*Újvidéki Egyetem Magyar Tannyelvű Tanítóképző Kara, Szabadka, Szerbia*  
*valeria.krekic@magister.uns.ac.rs*

Az informatikai korszak kezdő matematikaoktatási stratégiái közül legaktuálisabb a kibernetikusan orientált. Alappillérei a valóság jelenségei és problémái matematikai-kibernetikai modellezése, kreatív matematizálása, azok indirekt kivizsgálásának érdekében.

A kibernetikusan orientált matematikaoktatásnak Szerbiában már hagyományai vannak, mind a tantervezek, mind a tanítók képzésében és továbbképzésében, azonban a gyakorlat szintjén ezt nem állíthatjuk, ugyanis az ilyen nemű felméréseink még váratnak magukra.

*Kulcsszavak: matematikaoktatás, kibernetika, stratégia.*

## **THE ART OF “LISTENING TO THE CHILD” – AN IMPORTANT COMPETENCE OF THE MODERN EDUCATOR**

**Katarina Pinjuh**

*University of Mostar, Faculty of Science and Education, Mostar, Bosnia and  
Hercegovina  
katarinapinjuh1@gmail.com*

Communication is an essential part of everyday life and it serves us for the transmission of information, messages and instructions to others. In interpersonal communication listening is its significant part. In the educational institutions for the children of early and preschool age by listening to a child one can get to know his interests, skills and activities in which he wishes to participate. The competence of teachers is reflected in their ability to adapt contents and activities to children in accordance with their needs, interests and abilities.

*Keywords: the art of listening, the kids early and pre-school children, educators, content*

## **UMIJEĆE „SLUŠANJA DJETETA” – VAŽNA KOMPETENCIJA SUVREMENOG ODGAJATELJA**

**Katarina Pinjuh**

*Fakultet prirodoslovno-matematičkih i odgojnih znanosti Sveučilišta u Mostaru,  
Mostar, Bosna i Hercegovina  
katarinapinjuh1@gmail.com*

„Razlog zbog kojeg imamo dva uha,  
a samo jedna usta je da bismo više slušali,  
a manje govorili.”  
(Latinska poslovica)

Komunikacija je neizostavan dio svakodnevnog života i služi nam za prijenos informacija, poruka i uputa drugima. U interpersonalnoj komunikaciji slušanje predstavlja njezin značajan dio. U odgojno-obrazovnoj ustanovi rane i predškolske dobi slušanjem djeteta možemo spoznati njegove interese, sposobnosti, aktivnosti u kojima želi sudjelovati. Kompetencija odgajatelja ogleda se u njegovoj mogućnosti prilagodbe sadržaja i aktivnosti djeci u skladu s njihovim potrebama, intersima i mogućnostima.

*Ključne riječi: umijeće slušanja, djeca rane i predškolske dobi, odgajatelji, sadržaj*

## **POSSIBILITIES OF APPLYING COLLABORATIVE LEARNING IN ONLINE PROFESSIONAL DEVELOPMENT OF PRIMARY AND SECONDARY SCHOOL TEACHERS**

**Suzana Rukavina**

*Budapest, Hungary*

*suzanar76@gmail.com*

New perspectives of teacher professional development are based on constructivism, observing professional development as continuous process, while professional development activities are seen as collaborative process which can take place in different environments. In the center of constructivism lies collaborative learning which is at the same time one of characteristics of adult learning, forming an integral part of successful online learning and deep learning where the aim is to understand and rank information in accordance with its meaning as well as to integrate it with existing knowledge. Starting from the assumption that deep learning lies in the foundation of successful learning of adults in online professional development courses, based on the community of inquiry model, which is founded on deep learning, meaningful and planned learning environment for the purpose of achieving successful learning experience, as well as reflective and collaborative learning (Garrison, Anderson & Archer, 2000), this case study aimed to give answers to two research questions, namely, how and to what extent is collaborative learning applied in teacher professional development, face-to-face and online, and what is the nature of social, cognitive and teacher presence in online professional development course for primary and secondary school teachers in question. The results of the study indicated mainly positive attitudes of the participants of the study in general towards collaborative learning, collaborative learning in professional development, face-to-face and online. Elements of collaboration have been noted in online professional development course in question. Characteristics of social, cognitive and teacher presence and course design as key prerequisites for successful online learning have been singled out, too.

*Keywords:* *constructivism, collaborative learning, online teacher professional development, community of inquiry framework.*

## **MOGUĆNOSTI PRIMJENE SURADNIČKOG UČENJA U STRUČNOM USAVRŠAVANJU OSNOVNOŠKOLSKIH I SREDNJOŠKOLSKIH NASTAVNIKA NA MREŽI**

**Suzana Rukavina**

*Budimpešta, Mađarska  
suzanar76@gmail.com*

Nove perspektive stručnog usavršavanja nastavnika temelje se na konstruktivizmu, promatranju stručnog usavršavanja kao dugoročnog procesa, dok se aktivnosti stručnog usavršavanja promatraju kao suradnički postupak koji se može odvijati u različitim okruženjima. U središtu socijalnog konstruktivizma nalazi se suradničko učenje koje je istodobno jedno od obilježja učenja odraslih te je sastavni dio uspješnog učenja na mreži i dubinskog učenja kod kojeg je cilj razumjeti i poredati prema značaju informacije te ih integrirati s postojećim znanjem. Polazeći od pretpostavke da se dubinsko učenje nalazi u osnovi uspješnog učenja odraslih polaznika tečajeva stručnog usavršavanja na mreži, na temelju okvira istraživačke zajednice, koji se zasniva na dubokom učenju, svrshishodnom i planiranom obrazovnom okruženju radi postizanja uspješnog iskustva učenja, te reflektivnom i suradničkom učenju (Garrison, Anderson i Archer, 2000.), u ovoj studiji slučaja nastojalo se odgovoriti na dva istraživačka pitanja: u kojoj mjeri i na koji način se suradničko učenje primjenjuje u stručnom usavršavanju nastavnika, uživo i na mreži, te kakva je priroda društvene, kognitivne i prisutnosti poučavanja u tečaju stručnog usavršavanja osnovnoškolskih i srednjoškolskih nastavnika na mreži. Rezultati studije pokazali su pretežito pozitivna mišljenja ispitanika o suradničkom učenju općenito, te o suradničkom učenju u stručnom usavršavanju u učionici i na mreži, te su uočene sastavnice suradnje u provedenom tečaju. Izdvojena su obilježja društvene i kognitivne prisutnosti te prisutnosti poučavanja i dizajna tečaja kao ključnih preduvjeta uspješnog učenja na mreži.

*Ključne riječi: konstruktivizam, suradničko učenje, stručno usavršavanje nastavnika na mreži, okvir istraživačke zajednice*

## **RAISING SPREADSHEET RISKS AND ERRORS AWARENESS THROUGH IMPROVEMENT OF UNIVERSITY COURSES**

**Marton Sakal**

*University of Novi Sad, Faculty of Economics, Subotica, Serbia*  
*marton@ef.uns.ac.rs*

**Lazar Raković**

*University of Novi Sad, Faculty of Economics, Subotica, Serbia*  
*rakovicl@ef.uns.ac.rs*

**Predrag Matković**

*University of Novi Sad, Faculty of Economics, Subotica, Serbia*  
*pedja\_m@ef.uns.ac.rs*

**Pere Tumbas**

*University of Novi Sad, Faculty of Economics, Subotica, Serbia*  
*ptumbas@ef.uns.ac.rs*

**Veselin Pavlićević**

*University of Novi Sad, Faculty of Economics, Subotica, Serbia*  
*pavlicevic@gmail.com*

Content taught within courses covering use of spreadsheets for business purposes at Serbian universities is primarily based on techniques and possibilities for their practical use. Analysis of the content has revealed that most courses partially or completely overlook the necessity of raising awareness of risks and possible devastating consequences of errors that occur throughout use of spreadsheets. In this regard, this paper provides suggestions on how to innovate and improve courses dealing with end-user application development using spreadsheet programmes at business-oriented higher education institutions. The results of research on most frequently occurring errors in end-user application development using spreadsheet programmes are presented in this paper, as well as users' habits that are manifested in the use of spreadsheet tools. A section within the paper provides an overview of several selected real-life examples of errors and their financial consequences. Finally, following a brief overview of possibilities of applying the life cycle concept in the development of spreadsheets, the final section examines a selection of error taxonomies that could be included into spreadsheet courses to improve their quality, along with best practice examples in spreadsheet development.

*Keywords:* *end-user application development, spreadsheet programmes, spreadsheet errors, university courses, business informatics.*

## **PODIZANJE SVESTI O RIZICIMA I GREŠKAMA U ELEKTRONSKIM TABELAMA PUTEM UNAPREĐENIH UNIVERZITETSKIH KURSEVA**

**Marton Sakal**

*Ekonomski fakultet u Subotici Univerziteta u Novom Sadu, Subotica, Srbija*  
*marton@ef.uns.ac.rs*

**Lazar Raković**

*Ekonomski fakultet u Subotici Univerziteta u Novom Sadu, Subotica, Srbija*  
*rakovicl@ef.uns.ac.rs*

**Predrag Matković**

*Ekonomski fakultet u Subotici Univerziteta u Novom Sadu, Subotica, Srbija*  
*pedja\_m@ef.uns.ac.rs*

**Pere Tumbas**

*Ekonomski fakultet u Subotici Univerziteta u Novom Sadu, Subotica, Srbija*  
*ptumbas@ef.uns.ac.rs*

**Veselin Pavlićević**

*Ekonomski fakultet u Subotici Univerziteta u Novom Sadu, Subotica, Srbija*  
*pavlicevic@gmail.com*

Sadržaji koji se na univerzitetima u Srbiji nude u okviru kurseva čiji su predmet izučavanja programi za tabelarne kalkulacije u poslovanju, prvenstveno su bazirani na tehnikama i mogućnostima upotrebe istih, zanemarujući u potpunosti ili marginalizujući neophodnost podizanja svesti o rizicima i devastirajućim posledicama grešaka prilikom njihovog korišćenja. U tom smislu, u radu su dati predlozi za inovaciju i dopunu kurseva koji se bave korisničkim razvojem aplikacija pomoću programa za tabelarne kalkulacije na poslovno orijentisanim visokoškolskim institucijama. Prikazani su rezultati sprovedenih istraživanja najčešće prisutnih grešaka u korisničkom razvoju aplikacija pomoću programa za tabelarne kalkulacije, kao i navika korisnika u njihovoj upotrebi. Segment rada čini i osvrt na izabrane primere grešaka iz prakse i njihovih finansijskih konsekvensi. Na kraju, uz sažet prikaz mogućnosti primene koncepta životnog ciklusa na razvoj elektronskih tabela, u radu se razmatraju izabrane taksonomije grešaka kojima bi se mogli unaprediti sadržaji kurseva korišćenja programa za tabelarne kalkulacije, kao i primeri dobrih praksi razvoja elektronskih tabela.

*Ključne reči: korisnički razvoj aplikacija, programi za tabelarne kalkulacije, greške u elektronskim tabelama, univerzitetски kursevi, poslovna informatika.*

## **THE APPLICATION OF BOLYAI TEACHER-STUDENT SYSTEM APPROACH TO THE METHODOLOGY OF MULTIMEDIA SUPPORTED EDUCATION**

**Imre Seebauer**

*Zrinyi Miklós Military Academy, Budapest, Hungary*

*imreseebauer@yahoo.com*

A Hungarian scientist – creator of the non-Euclidean geometry – János Bolyai was not only a great mathematician in the 19th century. He created a Salvation doctrine in which he described a new model for cognition of natural, social and cultural environment. But it is realized simultaneously in interactional observation, thinking and intuitive processes. In this process the units of mental efficiencies: knowing, feeling and wanting direct creating of formation of thoughts. The direction of development of e-learning coincides with János Bolyai methodological ideas in the pedagogy of the 21st century. Learning in the virtual space models our view about real world by multimedia curricula. A teacher becomes the organizer of knowledge transfer, and students can sort out what is necessary for their knowledge of life by themselves. The modeling method of János Bolyai assists the organizing teacher who provides access for the students to get their own knowledge personalized by systemized sound, writing, animation and video.

*Keywords: appendix controversial structures, modeling, to know, to feel, to want, cyberspace, multimedia curriculum development, personalized teaching, multimedia supported education.*

# BOLYAI JÁNOS TANÍTÓ-TANULÓ RENDSZERSZEMLÉLETÉRE ÉPÜLT MÓDSZERTAN ALKALMAZÁSA A MULTIMÉDIÁVAL TÁMOGATOTT OKTATÁSBAN

**Seebauer Imre**

*Zrínyi Miklós Katonai Akadémia, Budapest, Magyarország*  
*imreseebauer@yahoo.com*

A tudományos kutatások, elsősorban a megismerés-tudomány igazolta, hogy Bolyai János elmemodellje pontosan visszatükrözi, sőt több területen túlmutat a jelenlegi valóság látásunkon. A saját elméjének megfigyeléséből következett, hogy az Appendixben megfogalmazott ellenmondásos struktúrák kezelésére kidolgozott geometriai rendszere, mint modell alkalmas eszköz a természeti, társadalmi, kulturális környezet megismerésére. A modellen a valóság megismerése azonban nem olyan sorrendben történik, egyidőben történő és egymásra ható: észlelő, gondolkodó, intuitív folyamatban, melyekben gondolatok létrehozását: a tudni, az érezni és akarni szellemi képességek egysége irányítja. A virtuális térben a Bolyai szemléletére épült modellezési módszer, segítséget tud nyújtani a tananyag „rendezőjének”, a tanárnak, aki a multimédia elemeinek rendszerben való használatával el tudja érni, hogy a tanuló személyre szabottan, a saját tudásához jusson.

*Kulcsszavak: appendix, ellenmondásos struktúrák, modellezés, tudni, érezni, akarni, virtuális tér, multimédiás tananyag fejlesztés, személyére szabott tanítás, multimédiával támogatott oktatás.*

## **THE CHILD'S TRANSITION FROM NURSERY TO PRIMARY SCHOOL**

**Vesna Schreiner**

*Ministry of Education, Science and Technological Development – School  
Administration, Sombor, Serbia  
susombor.schreiner@gmail.com*

The transition from nursery to primary school is, like any other change of educational or social context, an important experience for the child. The success of child's entire further school education depends on its first impression of school. As children start school learning gradually becomes their main activity. Creating a positive attitude towards school and obligations that await them will help children to progress in school.

*Keywords: nursery school, primary school, preparing for school, cooperation between nursery and primary school.*

## **ПРЕЛАЗ ДЕТЕТА ИЗ ВРТИЋА У ШКОЛУ**

**Весна Шрајнер**

*Министарство просвете, науке и технолошког развоја – Школска управа*

*Сомбор, Србија*

*susombor.schreiner@gmail.com*

Прелаз из вртића у школу, као и свака промена образовне или друштвене средине је значајан доживљај за дете. Од првог утиска детета у школи зависи успешност његовог целокупног даљег школовања. Поласком детета у школу учење постепено постаје дететова основна активност. Дете ће напредовати у школи ако код детета формирајмо позитиван однос према школи и обавезама које га чекају.

*Кључне речи: дечји вртић, основна школа, припрема за полазак у школу, сарадња вртића и школе.*

## **DIDACTIC APPROACH OF THE EUROPIAN DIMENSION**

**Valéria Varga**

*University of Novi Sad, Faculty of Philosophy, Novi Sad, Serbia*

*w.valerija71@gmail.com*

The following study is searching for an answer about which possibilities exist for the realization of the curricular education among the frameworks of domestic education. The European dimension, as the cultural inheritance, includes the content of factors and the totality of the competencies.

In the introductory part of the study the authoress provides insight on the substance of the contemporary curricular education. Shortly afterwards she provides insight on the substantial connection of the national curricula, and points out significant differences between the traditional and the curricular education.

The main part of the study discusses the concept of competencies as the requirement for the developed competencies and the mobilization of the knowledge of teachers, cognitive and practical skills, social and behavior components and attitudes, emotions and values as well.

In the final part of the study, the author discusses the directed development of the curriculum relevant competencies.

*Keywords: curriculum, key competencies, lifelong learning, educational goals, educational value, educational outcomes*

## AZ EURÓPAI DIMENZIÓ DIDAKTIKAI MEGKÖZELÍTÉSE

**Varga Valéria**

*Újvidéki Egyetem, Bölcsészettudományi Kar, Újvidék, Szerbia*

*w.valerija71@gmail.com*

A tanulmány arra keres választ, hogy a hazai oktatás keretei között milyen lehetőségek vannak a curricurális oktatás megvalósításának. Az európai dimenzió mint kultúrális örökség tartalmazza az oktatás tartalmi tényezőit és kompetenciák összességét.

A szerző a tanulmány bevezető részében betekintést nyújt a kortárs curriculáris oktatás lényegére és a nemzeti curriculum lényegi tartalmára. Rámutat a lényegesebb különbségekre a tradicionális és curricurális oktatás között.

A tanulmány fő része a kompetencia fogalmát, valamint a fejlesztendő kompetenciák követelményét tárgyalja, a tanítói és tanári ismeretek mobilizálását, kognitív és gyakorlati képességeket, szociális és magatartási komponenseket és attitűdöket, az érzelmeket és értékeket egyaránt.

A tanulmány befejező részében a szerző a curriculumreleváns kompetenciák fejlesztésére irányuló kompetencialapú programok hazai gyakorlati megvalósításának lehetőségeit tárgyalja.

*Kulcsszavak: curriculum, kulcs kompetenciák, az egész életen át tartó tanulás, oktatási célok, oktatási értékek, oktatás kimenete*

## **THE COMPATIBILITY OF THE CURRICULUM OUTCOMES OF TEACHERS EDUCATION WITH THE INCLUSIVE EDUCATION**

**Otília Velisek-Braskó**

*University of Novi Sad, Faculty of Teacher Education in the Hungarian Language,  
Subotica & Preschool Teacher Education College, Novi Sad, Serbia  
otilia.velisek@gmail.com*

Inclusive education is regulated since 2009 by the Primary Education Act (Official Journal of RS, 2009, No. 72/09). Thereby it has become a right and an obligation to include children with disabilities into the regular educational system with the general population – with children without disabilities. The role of teachers in performing and exercising their professional duties in schools has changed in inclusive education. The teaching profession is facing challenges with regard to the implementation of quality education for all children.

The new requirements posed to teachers regarding the implementation of inclusive education are individualization of teaching, development of pedagogical profiles and Individual Education Plan for children who need additional educational support, organization of teaching and teaching with interactive methods, fostering diversity and tolerance in the classroom and school, collaboration with parents and involving parents as partners in the educational process and education of their child within an inclusive team in school. It is necessary to educate and empower teachers to be able to properly implement their professional duty in these new roles, because the teacher's competence is a key factor in achieving quality education for all children. This study researches the compatibility of the curriculum and curriculum outcomes of teacher education with the inclusive education. The research included the teacher education system, through which they are educated and trained for their profession, as well as inclusive education, which includes the formal education of future teachers. Based on theoretical foundations and research, a supplement was generated as an appendix to the existing curriculum for teacher education in order to empower teachers for inclusive education, as well as an entire syllabus was made for a subject, as part of undergraduate education, on inclusive education, which would be used to educate teachers to gain competence in the implementation of inclusion.

*Keywords: curriculum, outcomes, competencies, teachers, inclusion*

## **УСКЛАЂЕНОСТ КУРИКУЛУМСКИХ ИСХОДА ОБРАЗОВАЊА НАСТАВНИКА СА ПОТРЕБАМА ИНКЛУЗИВНОГ ОБРАЗОВАЊА**

**Отилиа Велишек-Брашко**

*Учитељски факултет на мађарском наставном језику Универзитета у Новом Саду и Висока школа струковни студија за обрауовање васпитача у Новом Саду, Србија  
otilia.velisek@gmail.com*

Инклузивно образовање је од 2009. године је и законом регулисано у Закону о основама система образовања и васпитања (Сл. Гласник РС, 2009, бр. 72/09). Тиме је постало право и обавеза укључивање деце са сметњама у развоју у редован образовни систем са општом популацијом, односно са децом која немају тешкоће у развоју. Инклузијом се променила улога наставника у процесу обављања и остваривања њихове професионалне обавезе у школама. Професија наставника је пред великим искушењем и изазовом када је реч о реализацији квалитетног образовања за сву децу.

Индивидуализација наставе, израда педагошког профила и индивидуалног образовног плана за дете које има потребу за додатном образовном подршком, организација наставе и реализација наставе уз интерактивне методе, неговање различитости и толеранције у одељењу и школи, сарадња са родитељима и укључивање родитеља као партнера у процес образовања и васпитања њиховог детета унутар инклузивног тима у школи су нови захтеви који се постављају пред наставнике када је реч о реализацији инклузивног образовања. За новине у улози наставника потребно је наставнике образовати и оснажити како би били у могућности да квалитетно реализују своју професионалну обавезу, јер су компетенције наставника кључни фактор у остваривању квалитетног образовања за сву децу. У студији се проучава усклађености курикулума и курикулумских исхода образовања наставника са потребама инклузивног образовања. Истраживањем је обухваћен систем образовања наставника, путем којег се образују и оснажују за реализацију своје професије, као и за инклузивно образовање, које укључује формално образовање будућих наставника. На основу теоријске основе и резултата истраживања израђено је програмско језгро у виду допуне већ постојећих курикулума за образовање наставника са циљем оснаживања наставника за инклузивно образовање, као и целокупан силабус посебног предмета о инклузивном образовању којим би наставници у оквиру додипломског образовања стекли компетенције за реализацију инклузије.

*Кључне речи: курикулум, исходи, компетенције, наставници, инклузија*

## **CONSTRUCTIVIST APPROACH AND DEVELOPMENT OF CRITICAL THINKING**

**Klára Velmovská**

*Comenius University in Bratislava, Faculty of Mathematics, Physics and Informatics, Bratislava, Slovakia  
velmovska@post.sk*

**Monika Vanyová**

*Comenius University in Bratislava, Faculty of Mathematics, Physics and Informatics, Bratislava, Slovakia  
vanyova@fmph.uniba.sk*

After the content reform of the school system in 2008, new physics textbooks for ISCED 2 were issued, which are substantially different compared to the former educational concept. Procedures related to the empirical model of learning and associated graphical method of imaging are emphasized in these. Students' critical thinking is stimulated by questions and problems mainly within the students' experimental activities. Key problems and experiments from textbooks require methodological guidelines, which are being designed within our project. We have shown, that students who have acquired knowledge through individual experimental activity – the implementation of experiments, graphical processing of results and data-analysis – scored better on tests focused on reading and interpretation of graphical data than students who were not required to be actively and individually involved in such activity and who used the graphs only as the illustrations and representation of idealized situations.

*Keywords: physics textbooks, critical thinking, individual experimental activity, graphic literacy*

## A KONSTRUKTÍV MEGKÖZELÍTÉS ÉS A KRITIKUS GONDOLKODÁS FEJLŐDÉSE

**Velmovská Klára**

*Pozsonyi Comenius Egyetem Matematika, Fizika és Informatikai Kara, Pozsony,  
Szlovákia  
velmovska@post.sk*

**Vanyová Monika**

*Pozsonyi Comenius Egyetem Matematika, Fizika és Informatikai Kara, Pozsony,  
Szlovákia  
vanyova@fmph.uniba.sk*

2008-ban az oktatás tartalmi reformja után új tankönyveket adtak ki az általános iskolák számára, amelyek jelentős mértékben eltérnek a korábbi használt tankönyvektől. A hangsúly az empirikus megismerés modelljére és az ezzel összefüggő grafikus ábrázolás módszerére van helyezve. A diákokat a kritikus gondolkodásra kérdésekkel és feladatokkal vezethetjük rá elsősorban kísérletek végzése során. A tankönyv legfontosabb feladatai és kísérletei módszertani útmutatást igényelnek, amelyek a projektünkön belül elő vannak készítve. Felméréssel igazoltuk, hogy a diákok, akik önálló kísérleti munkával szerezték meg az ismereteiket – kísérletek végrehajtásával, az eredmények grafikus ábrázolásával és azok kiértékelésével – a tesztekben, amelyek a grafikonok olvasására és értelmezésére összpontosultak nagyobb sikereket értek el, mint azok a diákok, akiknél nem részesítették előnyben az önálló aktív tevékenységet és a grafikonokat csak szemléltető eszközként használták.

*Kulcsszavak: fizika tankönyv, kritikus gondolkodás, önálló kísérleti tevékenység, grafikus műveltség*

## **HISTORY OF EDUCATION, HISTORY OF CHILDHOOD AND OLD HUNGARIAN LITERATURE: INTERDISCIPLINARITY, TEXTS ANALYSIS AND HUMAN IDEALS**

**Elza-Emőke Veress**

*Babeş-Bolyai University, Faculty of Letters, Hungarian Literature Institute,  
Hungarian Studies Doctoral School, Cluj-Napoca, Romania  
veresselzaemoke@yahoo.com*

In my paper I wonder in what manner can we discuss about the components of the pedagogical skills (subject knowledge and pedagogical knowledge) if we refer to disciplines like the history of education, history of childhood and old Hungarian literature. Referring to examples from the period of Reformation and Counter-Reformation, I wish to outline the relation between the history of educational practices, theories and educational institutions and the history of childhood, of textbooks, of reading and writing. I also question if the texts written for children in the early modern age can be considered part of the children's literature, and whether they reflect the early modern human model properly enough to be integrated in childhood history researches. For this I will suggest text analysis methods used in old Hungarian literature research, that can also constitute a new criteria in teaching the history of education and of textbooks.

*Keywords: history of education, history of childhood, children's literature, interdisciplinarity, text analysis, human ideals*

## **NEVELÉSTÖRTÉNET, GYERMEKKORTÖRTÉNET ÉS RÉGI MAGYAR IRODALOM: INTERDISZCIPLINARITÁS, SZÖVEGVIZSGÁLAT ÉS EMBERMODELL**

**Veress Elza-Emőke**

*Babeş-Bolyai Tudományegyetem, Bölcsészettudományi Kar, Magyar  
Irodalomtudományi Intézet, Doktori iskola, Kolozsvár, Románia  
veresselzaemoke@yahoo.com*

Dolgozatomban arra keresem a választ, hogy a pedagógiai kompetenciák tantárgyi és pedagógiai tartalmú tudásra vonatkozó összetevői hogyan tárgyalhatóak a neveléstörténet, a gyermekkortörténet és a régi magyar irodalom összefüggésében. Ennek érdekében a reformáció és az ellenreformáció korszakát vizsgálva annak körvonalazására vállalkozom, hogy a nevelési gyakorlat, a nevelési elméletek és intézmények története milyen jellegű tantárgyközi kapcsolatban áll a gyermekkortörténettel, a tankönyvtörténettel, illetve az írás- és olvasástörténettel. Kérdésfelvetésem arra is vonatkozik, hogy a kora újkori gyermekeknek szánt irodalom a gyermekirodalom részének tekinthető-e, s hogy tükrözi-e olyan mértékben a kora újkori embermodellt, hogy az beépíthető legyen a gyermekkortörténeti kutatásokba. Ennek a megvizsgálására a régi magyar irodalomban használatos szövegvizsgálati módszereket javasolom, amelyek egyben új szempontot képezhetnek a neveléstörténet és ezen belül a tankönyvtörténet oktatásához.

*Kulcsszavak: neveléstörténet, gyermekkortörténet, gyermekiroda-lom, interdiszciplinaritás, szövegvizsgálat, embermodell*

# **ACHIEVEMENTS OF STUDENTS OF TEACHER EDUCATION STUDY – EXPECTED AND REALIZED LEARNING OUTCOMES IN THE CONTEXT OF COMPETENCES TO WORK IN THE INCLUSIVE CLASSROOM**

**Smiljana Zrilić**

*University of Zadar, Zadar, Croatia*  
*szrilic@unizd.hr*

**Violeta Valjan Vukić**

*University of Zadar, Zadar, Croatia*  
*vvukic@unizd.hr*

**Vesna Bedeković**

*College for Management in Tourism and Informatics in Virovitica, Virovitica,  
Croatia*  
*dekan@vsmti.hr*

Competencies for educational work in an inclusive classroom are acquired primarily during the study, so the expected and actual learning outcomes will be elaborated at the level of program and courses.

Expected outcomes will be analyzed in the documentation and syllabi of the courses, and the actual outcomes of a questionnaire that will fulfill the students of 3rd, 4th and 5th years of teacher study at the University of Zadar, who have completed courses in the field of inclusive education. Although the testing encompasses only the students of one university, the results will give a definition of the representation of the course, necessary to develop the teachers' competences in inclusive classrooms, as well as possible deficiencies of the program, study and courses. Sufficiency or deficiency of the number of hours provided with a program and schedule of lectures will be determined. This will be the guidelines for a possible revision of the program of teacher studies and the introduction of additional courses, that are required by the needs of actual practice.

*Keywords: inclusive education, students with disabilities, learning outcomes, the competences of teachers and students*

# **POSTIGNUĆA STUDENATA UČITELJSKOG STUDIJA – OČEKIVANI I REALIZIRANI ISHODI UČENJA U KONTEKSTU KOMPETENCIJA ZA RAD U INKLUZIVNOM RAZREDU**

**Smiljana Zrilić**

*Sveučilište u Zadru, Zadar, Hrvatska*  
*szrilic@unizd.hr*

**Violeta Valjan Vukić**

*Sveučilište u Zadru, Zadar, Hrvatska*  
*vvukic@unizd.hr*

**Vesna Bedeković**

*Visoka Škola za menadžment u turizmu i informatici u Virovitici, Virovitica,  
Hrvatska*  
*dekan@vsmti.hr*

Kompetencije za rad u inkluzivnom razredu stječu se ponajprije na studiju, pa će se u radu elaborirati očekivani i stvarni ishodi učenja na razini programa i kolegija.

Očekivani ishodi analizirat će se iz dokumentacije i syllabusa kolegija, a stvarni ishodi anketnim upitnikom koji će ispunjavati studenti 3. 4. i 5. godine učiteljskog studija Zadarskog sveučilišta, koji su odslušali kolegije iz područja inkluzivnog odgoja i obrazovanja. Iako će se ispitivanjem obuhvatiti samo studenti jednog sveučilišta, rezultati će dati određenje zastupljenosti kolegija, neophodnih za razvoj kompetencija učitelja za rad u inkluzivnom razredu, te eventualne manjkavosti programa, kako studija, tako i kolegija i odrediti dostatnost ili manjkavost broja sati predviđenih redom predavanja. To će biti smjernice za moguće revizije programa učiteljskih studija, uvođenjem dodatnih kolegija, koje nalažu potrebe prakse.

*Ključne riječi: inkluzivni odgoj i obrazovanje, učenici s teškoćama, ishodi učenja, kompetencije učitelja i studenata*

## **LIST OF AUTHORS**

## List of authors

<b>BOSNIA AND HERZEGOVINA</b>	
<b>1.</b>	<b>Slavica Pavlović, PhD</b> University of Mostar, Faculty of Science and Education, Mostar godotcici@gmail.com
<b>2.</b>	<b>Katarina Pinjuh, MSc</b> University of Mostar, Faculty of Science and Education, Mostar katarinapinjuh1@gmail.com
<b>CROATIA</b>	
<b>3.</b>	<b>Vesna Bedeković, PhD</b> College for Management in Tourism and Informatics in Virovitica, Virovitica dekan@vsmti.hr
<b>4.</b>	<b>Antea Bogetic, student</b> Josip Juraj Strossmayer University of Osijek, Faculty of Educational Sciences, Osijek abogetic@foozos.hr
<b>5.</b>	<b>Marko Jurčić, PhD</b> University of Zagreb, Faculty of Philosophy, Zagreb mpustike@gmail.com
<b>6.</b>	<b>Irena Klasnić, PhD</b> Juraj Habdelić Elementary School, Velika Gorica idklasnic@net.hr
<b>7.</b>	<b>Valentina Majdenić, PhD</b> Josip Juraj Strossmayer University of Osijek, Faculty of Educational Sciences, Osijek vmajdeni@gmail.com
<b>8.</b>	<b>Marjan Ninčević, PhD</b> Univesity of Zagreb, Croatian Studies, Zagreb mnincevic@hrstud.hr
<b>9.</b>	<b>Vlatko Previšić, PhD</b> University of Zagreb, Faculty of Philosophy, Zagreb vprevisi@ffzg.hr

<b>10.</b>	<b>Violeta Valjan Vukić, PhD</b> University of Zadar, Zadar vvukic@unizd.hr
<b>11.</b>	<b>Smiljana Zrilić, PhD</b> University of Zadar, Zadar, Croatia szrilic@unizd.hr

<b>HUNGARY</b>	
<b>12.</b>	<b>Bencéné Fekete Andrea, PhD</b> University of Kaposvár, Faculty of Pedagogy, Kaposvár fekete.andrea@ke.hu
<b>13.</b>	<b>Bertók Rózsa, PhD</b> University of Pécs, Faculty of Philosophy, Pécs rozsa.bertok@gmail.com
<b>14.</b>	<b>Bécsi Zsófia, PhD student</b> Babits Mihály High School, Pécs becsizsofi@gmail.com
<b>15.</b>	<b>Csapó Benő, DSc</b> University of Szeged, Institute of Education, Szeged csapo@edpsy.u-szeged.hu
<b>16.</b>	<b>Hajdicsné Varga Katalin, PhD</b> Budapest Centre of Economic Vocational Training – Berzeviczy Gergely Bilingual Vocational School, Budapest hajvarka@gmail.com
<b>17.</b>	<b>Krajnik Szabolcs, PhD</b> University of Kaposvár, Kaposvár, Hungary szabolcs.krajnik@gmail.com
<b>18.</b>	<b>Suzana Rukavina, PhD</b> Budapest suzanar76@gmail.com
<b>19.</b>	<b>Seebauer Imre, PhD</b> Zrínyi Miklós Military Academy, Budapest imreseebauer@yahoo.com

<b>ROMANIA</b>	
<b>20.</b>	<b>Bartha Krisztina, MSc</b> Partium Christian University, Oradea krisztinabartha@yahoo.co.uk
<b>21.</b>	<b>Magyari Sára, PhD</b> Partium Christian University, Oradea saramagyary@yahoo.com
<b>22.</b>	<b>Veress Elza-Emőke, MSc</b> Babeş-Bolyai University, Faculty of Letters, Hungarian Literature Institute, Hungarian Studies Doctoral School, Cluj-Napoca veresselzaemoke@yahoo.com

<b>SERBIA</b>	
<b>23.</b>	<b>Marija Anđelković, MA, PhD student</b> University of Belgrade, Faculty of Special Education and Rehabilitation, Belgrade marijaandja14@yahoo.com
<b>24.</b>	<b>Berze Gizella, MA</b> Stevan Sremac Elementary school, Senta berzegizi@gmail.com
<b>25.</b>	<b>Borsos Éva, PhD</b> University of Novi Sad, Faculty of Teacher Education in the Hungarian Language, Subotica bborsoseva@gmail.com
<b>26.</b>	<b>Branka Eškirović, PhD</b> University of Belgrade, Faculty of Special Education and Rehabilitation, Belgrade brankaesk@sbb.rs
<b>27.</b>	<b>Dragana Gavrilović-Obradović, PhD</b> Đura Jakšić Elementary School, Kać, Serbia gagaonn@gmail.com
<b>28.</b>	<b>Jelena Grkić Ginić, MSc</b> University of Kragujevac, Faculty of Educational Sciences, Jagodina – jelenagrkic@yahoo.com

29.	<b>Halasi Szabolcs, PhD student</b> University of Novi Sad, Faculty of Teacher Education in the Hungarian Language, Subotica halasi.sabolc@gmail.com
30.	<b>Horák Rita, PhD</b> University of Novi Sad, Faculty of Teacher Education in the Hungarian Language, Subotica horakrita83@gmail.com
31.	<b>Danijela Ilić-Stošović, PhD</b> University of Belgrade, Faculty of Special Education and Rehabilitation, Belgrade d.i.stosovic@gmail.com
32.	<b>Josip Ivanović, PhD</b> University of Novi Sad, Faculty of Teacher Education in the Hungarian Language, Subotica josip.ivanovic@magister.uns.ac.rs
33.	<b>Branka Jablan, PhD</b> University of Belgrade, Faculty of Special Education and Rehabilitation, Belgrade jablanb@vektor.net
34.	<b>Josip Lepeš, PhD</b> University of Novi Sad, Faculty of Teacher Education in the Hungarian Language, Subotica lepes@tippnet.rs
35.	<b>Major Lenke, MA, PhD student</b> University of Novi Sad, Faculty of Teacher Education in the Hungarian Language, Subotica, Serbia lenkemajor@gmail.com
36.	<b>Sladjana Marić, MA, PhD student</b> PhD student, University of Novi Sad, Faculty of Philosophy, Novi Sad, Serbia sladjana_elt@gmail.com
37.	<b>Predrag Matković, PhD</b> University of Novi Sad, Faculty of Economics, Subotica pedja_m@ef.uns.ac.rs

<b>38.</b>	<b>Aleksandar Nađ Olajoš, MA, PhD student</b> University of Novi Sad, Faculty of Philosophy, Novi Sad nadj.aleksandar@gmail.com
<b>39.</b>	<b>Snežana Nikolić, PhD</b> University of Belgrade, Faculty for Special Education and Rehabilitation, Belgrade coan@open.telekom.rs
<b>40.</b>	<b>Veselin Pavličević, PhD</b> University of Novi Sad, Faculty of Economics, Subotica pavlicevic@gmail.com
<b>41.</b>	<b>Pintér Krekić Valéria, PhD</b> University of Novi Sad, Faculty of Teacher Education in the Hungarian Language, Subotica valeria.krekic@magister.uns.ac.rs
<b>42.</b>	<b>Marija Radulović</b> DZ „Stari grad“ – Developmental counseling, Belgrade marija0206@gmail.com
<b>43.</b>	<b>Lazar Raković, PhD</b> University of Novi Sad, Faculty of Economics, Subotica rakovici@ef.uns.ac.rs
<b>44.</b>	<b>Marton Sakal, PhD</b> University of Novi Sad, Faculty of Economics, Subotica marton@ef.uns.ac.rs
<b>45.</b>	<b>Vesna Schreiner</b> Ministry of Education, Science and Technological Development – School Administration, Sombor, Serbia susombor.schreiner@gmail.com
<b>46.</b>	<b>Melinda Torok, Mgr</b> University of Novi Sad, Faculty of Teacher Education in the Hungarian Language, Subotica melinda_torok2000@yahoo.com
<b>47.</b>	<b>Pere Tumbas, PhD</b> University of Novi Sad, Faculty of Economics, Subotica ptumbas@ef.uns.ac.rs
<b>48.</b>	<b>Valéria Varga, MA, PhD student</b> University of Novi Sad, Faculty of Philosophy, Novi Sad w.valerija71@gmail.com

49.	<b>Otília Velisek-Braskó, PhD</b> University of Novi Sad, Faculty of Teacher Education in the Hungarian Language, Subotica & Preschool Teacher Education College, Novi Sad <a href="mailto:otilia.velisek@gmail.com">otilia.velisek@gmail.com</a>
50.	<b>Vesna Vučinić, PhD</b> University of Belgrade, Faculty of Special Education and Rehabilitation, Belgrade <a href="mailto:vesnavucinic@live.com">vesnavucinic@live.com</a>

<b>SLOVAKIA</b>	
51.	<b>Peter Demkanin, Mgr</b> Comenius University in Bratislava, Faculty of Mathematics, Physics and Informatics, Bratislava <a href="mailto:demkanin@fmph.uniba.sk">demkanin@fmph.uniba.sk</a>
52.	<b>Bianka Gergel'ová, Mgr</b> Comenius University in Bratislava, Faculty of Mathematics, Physics and Informatics, Bratislava <a href="mailto:bianka.gergelova@gmail.com">bianka.gergelova@gmail.com</a>
53.	<b>Monika Vanyová</b> Comenius University in Bratislava, Faculty of Mathematics, Physics and Informatics, Bratislava <a href="mailto:vanyova@fmph.uniba.sk">vanyova@fmph.uniba.sk</a>
54.	<b>Klára Velmovská, PhD</b> Comenius University in Bratislava, Faculty of Mathematics, Physics and Informatics, Bratislava <a href="mailto:velmovska@post.sk">velmovska@post.sk</a>

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