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KINEZIOLOGIJA U EUROPI
IZAZOVI PROMJENA
KINESIOLOGY IN EUROPE
Challenges of Changes

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SADRŽAJ / CONTENTS

PREDGOVOR	27
-----------------	----

GLAVNI REFERAT / OPENING KEY REPORT

Dario Novak

QUO VADIS, TJELESNA I ZDRAVSTVENA KULTURA?	30
--	----

KOREFERATI / KEY REPORTS

Krešimir Šamija

SUSTAV SPORTA U REPUBLICI HRVATSKOJ – IZAZOVI PROMJENA	38
--	----

Tamás Csányi PhD

STRATEGICAL DEVELOPMENTS TO INCREASE THE QUALITY OF PE IN HUNGARY	55
--	----

POZVANO IZLAGANJE / INVITED LECTURE

Jugoslav Spasikj, Biljana Popeska, Zoran Jovanov, Gordan Stojcevski

GOOD PRACTICES FROM ONLINE PHYSICAL EDUCATION TEACHING AND HOW TO IMPLEMENT THEM AT REGULAR OFFLINE PHYSICAL EDUCATION CLASSES	58
--	----

Branislav Antala

PHYSICAL EDUCATION IN ACTIVE SCHOOL AFTER THE CORONA PANDEMIC - CASE OF SLOVAKIA	69
---	----

Włodzimierz Starosta

PAST, PRESENT AND FUTURE OF KINESIOLOGY SCIENCE – DEVELOPMENT IN EUROPE AND THE WORLD	77
--	----

SEKCIJA EDUKACIJA / SESSION EDUCATION

Domagoj Bagarić, Dražan Ćurčić, Goran Rogalo ZIMSKI KAMP KADETA OSRH – PLAN I PROGRAM OSNOVNE ŠKOLE ALPSKOG SKIJANJA	86
Iva Barković, Ivan Čolakovac PRIMJENA INFORMACIJSKO-KOMUNIKACIJSKE TEHNOLOGIJE U VISOKOŠKOLSKOM OBRAZOVANJU	94
Roberta Basić, Dubravka Basić Vidović, Marijana Hraski RAZINA TJELESNE AKTIVNOSTI UČENICA I UČENIKA 5. RAZREDA OŠ DOBRIŠE CESARIĆA	101
Loris Benassi, Ljiljana Štingl STANJE UHRANJENOSTI LABINSKIH SREDNJOŠKOLACA	111
Mateo Blažević, Jasminka Blažević, Mirela Šunda, Davor Grbavac, Mate Ćorluka PRIMJER PRIMJENE MOBINIH APLIKACIJA U NASTAVI TJELESNE I ZDRAVSTVENE KULTURE	120
Svetlana Božić Fuštar, Nenad Krošnjar, Nikolina Skender PRAKTIČNI PRIMJERI NASTAVE TZK UPOTREBOM MOBILNIH APLIKACIJA NA FILOZOFSKOM FAKULTETU SVEUČILIŠTA U ZAGREBU	127
Đina Brlečić, Lucas Šaravanja INKLUZIJA UČENIKA S MIŠIĆNOM DISTROFIJOM U NASTAVI TJELESNE I ZDRAVSTVENE KULTURE – PRIKAZ SLUČAJA	134
Marko Čule, Ivan Milinović, Marko Lepoglavec UTJECAJ PANDEMIJE NA SLOBODNO VRIJEME UČENIKA	141
Dražan Ćurčić, Marinko Vrkić, Branimir Hamer PRIMJERI METODIČKIH FORMI TRENAŽNOG RADA U NASTAVI TJELESNE I ZDRAVSTVENE KULTURE S KADETIMA NA HRVATSKOM VOJNOM UČILIŠTU „Dr. FRANJO TUĐMAN“	150
Sanja Ćurković TJELESNA AKTIVNOST I PREHRAMBENE NAVIKE STUDENATA BIOTEHNIČKOG PODRUČJA ZNANOSTI	163

Maja Dukarić, Violeta Čor

ETIČKI PRINCIPI PROVEDBE ZNANSTVENIH ISTRAŽIVANJA U KINEZIOLOGIJI S POSEBNIM OSVRTOM NA OSOBE S INVALIDITETOM	170
---	-----

Andrijana Đumlan, Brunela Majstorović

RAZINE PODRŠKE UČENIKU S CEREBRALNOM PARALIZOM PRI IZVOĐENJU NASTAVE TJELESNE I ZDRAVSTVENE KULTURE	179
--	-----

Željka Dvoržak Jekić, Damir Džaja, Miroslav Komar

PLESOM I GLAZBOM UPOZNAJMO SVIJET	186
---	-----

Klara Findrik, Lucija Zrno

RAZINA TJELESNE AKTIVNOSTI MEĐU STUDENTIMA KINEZIOLOŠKOG FAKULTETA OSIJEK	192
--	-----

Dario Franjić, Hrvoje Borovina, Hrvoje Lekić, Petra Pavlović

AKTIVNOSTI ŠKOLSKOG SPORTSKOG SAVEZA GRADA ZAGREBA ZA VRIJEME PANDEMIJE COVID-19	201
---	-----

Ksenija Fučkar Reichel, Natalija Špehar, Kristina Šteković

RAZINA TJELESNE AKTIVNOSTI STUDENATA VISOKIH UČILIŠTA U ZAGREBU TIJEKOM PANDEMIJE	209
--	-----

Mirela Gec, Dario Gec

PUSTOLOVI – IZVANNASTAVNA SKUPINA ZA REKREACIJU I BORAVAK U PRIRODI	217
--	-----

Tanja Hajtić, Anna Lauš, Damir Lauš

RAZLIKE U MOTORIČKIM SPOSOBNOSTIMA PETOGODIŠNJIH DJEVOJČICA I DJEČAKA	223
--	-----

Ljiljana Hanžek, Ivana Olivari, Natalia Radanović

DJELOVANJE ODABRANIH KINEZIOLOŠKIH OPERATORA NA POBOLJŠANJE MOTORIČKIH POSTIGNUĆA U SKOKU U DALJ S MJESTA	231
---	-----

Mladen Hraste, Igor Jelaska, Luka Subašić

UTJECAJ TJELESNE AKTIVNOSTI, KVALITETE ŽIVOTA TE PREHRAMBENIH NAVIKA I ZNANJA NA STRUKTURU TIJELA KOD STUDENATA	238
---	-----

Matija Jandrić

20m SHUTTLE RUN TEST KAO MJERNI INSTRUMENT ZA
MJERENJE FUNKCIONALNIH SPOSOBNOSTI UČENIKA 245

Josip Jularić, Ivan Brkljačić

PRIMJENA SKOKOVA U NASTAVI TZK ZA OSNOVNE
ŠKOLE U POUČAVANJU TEHNIKE SKOKA U DALJ 254

Antonio Knežević, Dario Novak, Branislav Antala

USPOREDBA SATNICE NASTAVNOG PREDMETA
TJELESNE I ZDRAVSTVENE KULTURE U REPUBLICI
HRVATSKOJ SA SUSJEDNIM ZEMLJAMA 263

Zdenko Kosinac, Nina Perić

DJELOKRUG PREVENTIVNOG TJELESNOG VJEŽBANJA
I SPORTA U ŠKOLI NA POSTURALNA STANJA I NAVIKE 269

Slaven Krtalić, Ivan Vrbik, Nenad Krošnjar

UDIO TJELESNO AKTIVNIH PETNAESTOGODIŠNJAKA
U INDUSTRIJSKO-OBRTNIČKOJ ŠKOLI SISAK 277

Davor Kuna, Željko Beissmann

PRILAGODBE U ORGANIZACIJI I PROVOĐENJU NASTAVE TJELESNE
I ZDRAVSTVENE KULTURE ZA VRIJEME COVID-19 PANDEMIJE 285

Dubravka Kunić, Ana Oreški

USPOREDBA STANJA KINANTROPOLOŠKIH OBILJEŽJA
UČENICA 4. RAZREDA GOSPODARSKE ŠKOLE
VARAŽDIN SA CROFIT NORMAMA 293

Constanza Lizačić, Vendi Lizačić

FAKTORSKA ANALIZA ADAPTIRANOG UPITNIKA ZA PROCJENU
UŽIVANJA U TJELESNOJ AKTIVNOSTI KOD STUDENATA
EKONOMSKOG FAKULTETA SVEUČILIŠTA U ZAGREBU 302

Petra Lončar

USPOREDBA KINANTROPOLOŠKIH OBILJEŽJA SREDNJOŠKOLACA
S CROFIT NORMAMA TE TJELESNA AKTIVNOST UČENIKA 311

Mate Maglov, Nikola Prlenda, David Hrabrić

POVIJESNI RAZVOJ PREDMETA SPORTOVI NA VODI NA
KINEZIOLOŠKOM FAKULTETU U ZAGREBU OD 1959. DO 2019. GODINE 322

Lidija Marković, Višnja Đorđić, Predrag Božić, Halaši Sabolč, Dragan Cvejić, Sergej M. Ostojić OBRASCI ISHRANE KOD DECE MLAĐEG ŠKOLSKOG UZRASTA	331
Mirjana Matić, Meri Matušan UČENICI STRUKOVNIH ŠKOLA I GIMNAZIJA SE RAZLIKUJU – MIT ILI ISTINA?	341
Brigita Mieziene, Arunas Emeljanovas, Dario Novak LIFE SATISFACTION AND ITS INTERPERSONAL AND BEHAVIORAL PREDICTORS AFTER A YEAR OF COVID-19 PANDEMIC	348
Alen Miletić, Andrijana Fistanić, Sunčica Delaš Kalinski VREDNOVANJE PLESNIH STRUKTURA U UVJETIMA UČENJA NA DALJINU	357
Alen Miletić, Gabrijela Bešker, Sunčica Delaš Kalinski PRIMJENA SPORTSKOG PLESA U NASTAVI – PREDNOSTI I RIZICI	364
Saša Milovuković STAVOVI ŽELIBIT STUDENATA KINEZIOLOGIJE O ŠKOLI, ŠKOLSKIM PREDMETIMA I EKSTRAKURIKULARNOM UČENJU – GENERACIJSKE RAZLIKE	372
Josip Mrgan NEKE ANTROPOLOŠKE KARAKTERISTIKE UČENIKA I UČENICA U DOBI OD DEVET GODINA U GRADU SISKU	380
Boris Neljak, Danijela Kuna, Ivica Franjko NOVI PRISTUP PODUCI ALPSKOGA SKIJANJA	386
Miran Pehar, Danilo Bojanić, Milovan Ljubojević, Dragan Krivokapić, Damir Sekulić USPJEH U NASTAVI TJELESNE I ZDRAVSTVENE KULTURE JE POVEZAN S TJELESNIM FITNESOM I TJELESNOM AKTIVNOŠĆU	394
Mia Perić PROMJENE U UČESTALOSTI KONZUMIRANJA SUPSTANCI (ALKOHOL I CIGARETE) IZMEĐU 1. i 2. RAZREDA SREDNJE ŠKOLE	401

Tin Petračić

KINEZIOLOŠKA KULTURA U VISOKOM OBRAZOVANJU – POVRATNE INFORMACIJE STUDENATA	407
--	-----

Tin Petračić, Vedran Stojsavljević, Vibor Vičević

PLANINARSKÉ TURE SA STUDENTIMA – PROVEDBA I IZAZOVI	414
---	-----

Hrvoje Podnar

MIŠLJENA O PROVEDBI NASTAVE TZK NA DALJINU TIJEKOM COVID-19 PANDEMIJE S OBZIROM NA RAZINU ZVANJA UČITELJA I NASTAVNIKA	419
--	-----

Albin Redžić, Maja Redžić

MIŠLJENJA STUDENATA O ONLINE NASTAVI TJELESNE I ZDRAVSTVENE KULTURE ZA VRIJEME IZAZOVA PROMJENA	425
--	-----

Goran Rogalo, Domagoj Bagarić, Dražan Čurčić

MOGUĆNOST PRIMJENE MORNARIČKOG POLIGONA PREPREKA U OBUCI KADETA OS RH	435
--	-----

Tomislav Romić, Igor Sedlanić

ELEMENTI VIJAČOM KAO SREDSTVO NASTAVE I TRENINGA U OSTVARIVANJU ODGOJNIH CILJEVA	442
---	-----

Franjo Rozijan, Ivica Rozijan, Radovan Cesarec

EFEKTI VISOKOINTEZIVNOG INTERVALNOG TRENINGA I BODYBUILDING TRENINGA NA KONDICIJSKA SVOJSTVA UČENIKA SREDNJE ŠKOLE KRAPINA	448
--	-----

Tatjana Stibilj-Batinić, Martina Sesar

KORACI U SMJERU IZAZOVA PROMJENA – PANTA RHEI	457
---	-----

Joso Šarlija, Marinko Vrkić, Branimir Hamer

SUSPENZIJSKI TRENAŽER (TRX) U NASTAVI TJELESNE I ZDRAVSTVENE KULTURE NA HVU „Dr. FRANJO TUĐMAN“	464
---	-----

Vesna Širić, Petar Kerže, Zoran Vladović

KAMILO FIRINGER, ZNAČAJNA OSOBA JAVNOG I SPORTSKOG ŽIVOTA GRADA OSIJEKA	471
--	-----

Sara Štefanac, Katarina Ohnjec STAVOVI UČENIKA PREMA IGRAMA S LOPTOM NA SATU TJELESNE I ZDRAVSTVENE KULTURE	477
Vesna Štemberger, Tanja Petrušić CLASSROOM TEACHERS' VIEWS ON THE INFLUENCE OF THE NUMBER OF SCHOOL ACTIVITY PROPS ON STUDENTS' PHYSICAL ACTIVITY	485
Mirela Šunda, Mateo Blažević, Jasminka Blažević, Luka Posavac, Mate Brekalo KONZUMACIJA ENERGETSKIH NAPITAKA KOD ADOLESCENATA	494
Marina Tomac-Rojčević ERASMUS PLUS I INTERREG PROJEKTI S AKTIVNOSTIMA NA OTVORENOM U NASTAVI TJELESNE I ZDRAVSTVENE KULTURE	501
Braco Tomljenović, Ivana Nadarević, Maja Gržan RAZLIKE U ANTROPOLOŠKIM OBILJEŽJIMA UČENIKA I UČENICA ČETVRTOG RAZREDA OSNOVNE ŠKOLE PRIJE I POSLIJE COVIDA-19	507
Biljana Trajkovski, Đeni Blarežina, Grgur Višić DIJAGNOSTICIRANJE, PROGNOZIRANJE I VREDNOVANJE KINANTROPOLOŠKIH OBILJEŽJA, MOTORIČKIH ZNANJA I MOTORIČKIH POSTIGNUĆA UČENIKA DRUGOG RAZREDA OSNOVNE ŠKOLE	516
Jasmina Vlašić, Maja Flego Ostović UTJECAJ TJELESNOG VJEŽBANJA NA RAZVOJ MOZGA	524
Nera Žigić, Ivana Martinčević, Igor Mraz RAZLIKE U NAVIKAMA TJELESNE AKTIVNOSTI STUDENATA FAKULTETA ELEKTROTEHNIKE I RAČUNARSTVA U VRIJEME I NAKON COVID-19 PANDEMIJE	532

SEKCIJA KINEZITERAPIJA / SESSION KINESITHERAPY

Ana Crnjac, Ivica Aladenić, Snježana Schuster

VAŽNOST IZOKINETIKE U REHABILITACIJI NAKON REKONSTRUKCIJE
PREDNJEG KRIŽNOG LIGAMENTA (ACL) – PRIKAZ SLUČAJA 542

Violeta Čor, Maja Dukarić

BIOLOŠKI MEHANIZMI UČINKA TJELESNE AKTIVNOSTI U
HABILITACIJI OSOBA S CEREBRALNOM PARALIZOM 551

Nikola Dobrijević, Mark Tomaj

PROBLEMI HODA KOD GUILLAIN-BARRE SINDROMA:
POST-COVID PRIKAZ SLUČAJA 557

Domagoj Galkowski, Tatjana Trošt Bobić, Lidija Petrinović

OZLJEDE ELITNIH EUROPSKIH JUNIORSKIH
IGRAČA BADMINTONA 566

Vedrana Grbavac, Ivana Čerkez Zovko, Tijana Šušnjar

LJEVOSTRANA SKOLIOZA 574

Mihaela Grubišić, Andrea Krajačić, Lana Erjavec

UTJECAJ PROPRIOCEPTIVNOG TRENINGA
U PREVENCIJI SPORTSKIH OZLJEDA KOD DJECE 580

Morana Horvat, Iris Zavoreo

UTJECAJ TELEMEDICINE NA KRIŽOBOLJU
TIJEKOM COVID-19 PANDEMIJE 587

**Kateřina Jenčíková, Mario Kasović, Lovro Štefan, Andro Štefan,
Martin Zvonař, Tomáš Vespalec, Larisa Gomaz, Anton Vincent, Filip Bolčević**

IMPACT OF SCHOOL BAGS ON HEALTH OF
PRIMARY SCHOOL CHILDREN – REVIEW 595

Miloš Kojić, Tijana Šćepanović, Bojan Rašković

UTJECAJ INTEGRATIVNE METODE ZAGRIJAVANJA NA OPSEG
POKRETA DONJIH EKSTREMITETA STARIJIH ADOLESCENATA 610

Lea Matešić, Dora Miklić, Luka Dominković, Ivan Dominković, Jerko Čaleta

MEHANIZMI NASTANKA I PREVENCIJA OZLJEDE
PREDNJE UKRIŽENE SVEZE U ŽENSKOJ KOŠARCI 619

Martina Mavrin Jeličić, Matea Knezović

POVEZANOST SJEDENJA NA RADNOME MJESTU I ZDRAVLJA 632

Igor Mraz, Ivana Martinčević, Nera Žigić, Lana Ružić

UČESTALOST SPORTSKIH OZLJEDA U ORTOPEDSKOJ AMBULANTI 638

Mateja Očić, Ivan Bon, Vjekoslav Cigrovski

PERCEPCIJA STRESA KOD TJELESNO NEAKTIVNIH

OSOBA ŽENSKOG SPOLA SREDNJE ŽIVOTNE DOBI 647

Nina Perić, Zdenko Kosinac

REHABILITACIJA OSOBA S PARKINSONOVOM

BOLESTI PO KONCEPTU PROPRIONEUROMUSKULARNE

FACILITACIJE (PNF) 656

Snježana Schuster, Lana Palijan, Iva Lončarić Kelečić

USPOREDBA OZLJEDA MIŠIĆNO-KOŠTANE PROBLEMATIKE

KOD PLIVAČICA I SINKRONIZIRANIH PLIVAČICA 662

Tijana Ščepanović, Miloš Kojić, Bojan Rašković, Darinka Korovljev,

Ivana Milovanović, Borislav Obradović, Nebojša Maksimović

DOES THE WEIGHT OF THE SCHOOL BAG REALLY

AFFECT THE POSTURE OF 8-YEAR-OLD CHILDREN? 674

Matilda Šola, Branimir Šola

POVEZANOST NAVIKA SPAVANJA I OZLJEDA U RUKOMETU 681

Ivančica Vadjon, Irena Bagarić

EUROPSKI TREND PREVENCIJE OBOLJENJA OD OSTEOPOROZE 691

SEKCIJA PREDŠKOLSKI ODGOJ I PRIMARNO OBRAZOVANJE /

SESSION PRESCHOOL AND PRIMARY EDUCATION

Ana Bjelobradić, Ana Žnidarec Čučković

ULOGA RODITELJSTVA U OSTVARIVANJU PRAVA DJECE U SPORTU 698

Blago Čepo, Jana Gregurić

KONCEPT UNIVERZALNE SPORTSKE ŠKOLE: JE LI POTREBAN? 707

Tonkica Čižmar, Tamara Vrdoljak

UTJECAJ STAVA RODITELJA O TJELESNOJ AKTIVNOSTI NA TJELESNU AKTIVNOST DJECE	714
---	-----

Sara Fumis, Đeni Blarežina

USPOREDBA OBUKE NEPLIVAČA U PROJEKTU „RIJEKA PLIVA“ S OSTALIM EUROPSKIM ZEMLJAMA	723
---	-----

Gordana Ivković, Ivana Dujić

POTPORA RODITELJA DJECI U PROVOĐENJU I IZBORU TJELESNE AKTIVNOSTI	730
--	-----

Marija Kapular, Sanja Šalaj

POVEZANOST POČETKA HODANJA S MOTORIČKIM ZNANJIMA DJECE U PREDŠKOLSKOJ DOBI	738
---	-----

Ksenija Medini, Vanja Petrović, Jelena Alić

PRIMJENA ATLETSKIH KINEZIOLOŠKIH SADRŽAJA U RADU S DJECOM PREDŠKOLSKE DOBI	747
---	-----

Tena Pejčić, Biljana Trajkovski, Petra Pejić Papak

RELACIJE KINANTROPOLOŠKIH OBILJEŽJA I MOTORIČKIH DOSTIGNUĆA I NJIHOVA POVEZANOST S PROVOĐENJEM SLOBODNOG VREMENA KOD DJECE RANE ŠKOLSKE DOBI	755
---	-----

Doroteja Santi, Petar Otković, Tihomir Vidranski

ANKSIJZNOST U UČENIKA RAZREDNE NASTAVE TIJEKOM SUDJELOVANJA U ŠKOLSKIM NATJECANJIMA	764
--	-----

Jasminka Štefčić, Ivana Purgar

LOPTA KAO SREDSTVO ZA POTICANJE MOTORIČKOG RAZVOJA DJECE	772
---	-----

Katarina Tadić, Renata Grdić, Igor Bokor

HODANJE I TRČANJE = OBITELJSKI SPORT KROZ PROJEKT ERASMUS+ PROJEKT <i>FULL STEAM AHEAD</i> <i>LEARNING THROUGH PLAY</i> U DV ISKRICA (2021. / 2023.)	779
--	-----

Ivana Tičić, Jelena Alić

POUČAVANJE FOLKLORNIH PLESNIH SADRŽAJA DJECE PREDŠKOLSKE DOBI	788
--	-----

Slavica Trčak, Suzana Gojsević, Dunja Čuljak

POZITIVNI UČINCI TJELESNOG VJEŽBANJA NA RAZVOJ SAMOSTALNOSTI, EMPATIJE I PRIHVAĆANJE RAZLIČITOSTI KOD DJECE RANE I PREDŠKOLSKJE DOBI – PRIMJERI DOBRE PRAKSE	796
--	-----

SEKCIJA SPORT / SESSION SPORT

Ljubomir Antekolović, Jan Marton, Goran Bošnjak

RAZLIKE U REZULTATU BACANJA VORTEXA KOD DJECE 10 DO 12 GODINA NAKON EKSPERIMENTALNOG PROGRAMA UČENJA ANALITIČKOM I SINTETIČKOM METODOM	804
--	-----

Matej Babić

BATERIJA TESTOVA ZA EVALUACIJU MOTORIČKOG PROFILA MLADIH TAEKWONDO SPORTAŠA	811
--	-----

Vesna Babić, Paula Matijašević, Danijela Grgić, Aleš Dolenec

ANALIZA PREPONSKOG TRČANJA: STUDIJA SLUČAJA	820
---	-----

Marijo Baković, Katarina Ivšac, Ljubomir Antekolović

EFEKTI PLIOMETRIJSKIH TRENINGA HORIZONTALNIH I VERETIKALNIH ODRAZA NA BRZINSKE I SKAKAČKE SPOSOBNOSTI DJECE OD 10 DO 12 GODINA	828
--	-----

Petar Barbaros

RAZLIKE U PARAMETRIMA SITUACIJSKE EFIKASNOSTI VRAĆANJA SERVISA IZMEĐU IGRAČA POBJEDNIKA NA AUSTRALIAN OPENU 2014. I 2019. GODINE	836
--	-----

Lea Barković, Marjeta Mišigoj-Duraković

PROBLEMI I POSLJEDICE NAGLOG GUBITKA TJELESNE MASE U VRHUNSKIH NATJECATELJA BORILAČKIH SPORTOVA	843
---	-----

Dora Belas, Jadranka Vlašić, Stipo Dajaković

METODIKA PILATES VJEŽBI ZA RAZVOJ JAKOSTI I SNAGE U SPORTSKOM PLESU	850
--	-----

Ivan Belčić

RAZLIKUJU LI SE RUKOMETNI SUCI IZ RAZLIČITIH RANGOVA NATJECANJA U REZULTATIMA TESTOVA MOTORIČKIH SPOSOBNOSTI?	859
---	-----

Zlatan Bilić, Petar Barbaros, Filip Sinković

RAZLIKE U PARAMETRIMA SITUACIJSKE USPJEŠNOSTI SERVISA IZMEĐU TENISAČA POBJEDNIKA NA AUSTRALIAN OPENU 2014. I 2019. GODINE	865
---	-----

Goran Bobić, Lidija Bojić Čačić, Gašper Kovač

POKAZATELJI SITUACIJSKE EFIKASNOSTI U RUKOMETU – PREGLED DOSADAŠNJIH SPOZNAJA	871
--	-----

Ivan Bon, Mateja Očić, Stipe Čubrić, Ivan Belčić, Damir Knjaz

APPLICATION OF GYRO INERTIAL DEVICE IN DIAGNOSTIC PROCEDURES AND SPECIFIC MOTOR TASKS	882
--	-----

Hrvoje Borovina, Tomislav Đurković, Maja Horvatin, Ivana Straža

ZADOVOLJSTVO POLAZNIKA ŠKOLA ODOJKE RAZLIČITIM SADRŽAJIMA ODOJKAŠKOG TRENINGA	889
--	-----

Bruna Botić, Dario Vrdoljak, Mirjana Milić

DOPRINOS POJEDINIHI ANTROPOMETRIJSKIH KARAKTERISTIKA I MOTORIČKIH SPOSOBNOSTI U PREDIKCIJI USPJEŠNOSTI IGRAČKE KARIJERE U ODOJCI	895
--	-----

Mate Brekalo, Ninoslav Šilić, Ivan Kvesić

RAZLIKE U EKSPLOZIVNOJ SNAZI IZMEĐU KADETA I JUNIORA NK HŠK ZRINJSKI	902
---	-----

Liam Cano Coyle, Laura Salmerón Baños

GENDER DIFFERENCES OF THE PERCEIVED QUALITY OF A MUNICIPAL SPORT SERVICE	908
---	-----

María Carboneros Castro, María Martínez-Quiles, Irene Monreal

REVIEW OF ACCESSIBILITY AND GROWTH IN EFFECTIVE EQUALITY STUDIES IN WOMEN'S SPORT	915
--	-----

María Carboneros Castro, Laura Salmerón-Baños, Rosendo Berengüi

SOCIAL RECOGNITION AS A CONDITION FOR EFFECTIVE EQUALITY IN WOMEN'S SPORT: A SYSTEMATIC REVIEW	922
---	-----

Josip Cvenić, Hrvoje Ajman

PRIJEDLOG KRITERIJA VREDNOVANJA RADA SPORTSKIH UDRUGA 929

Ana Čagalj - Vidaković

AGILITY IN HANDBALL PLAYERS: A REVIEW OF TEST

VARIETIES AND RECENT TRENDS 936

Stipe Čubrić, Damir Harapin, Li Feng, Tomislav Rupčić

DEVELOPMENT PROGRAM FOR YOUTH BASKETBALL PLAYERS 944

Dominik Družeta, Ivan Segedi, Hrvoje Sertić

TRENDVI U NATJECATELJSKOM JUDU U KADETSKOM

UZRASTU U PERIODU OD 2011. DO 2021. 952

Barbara Gilić, Dario Vrdoljak, Ivana Čerkez Zovko,

Filip Novak, Stanislav Dragutinović

POUZDANOST TESTA EKSPLOZIVNOSTI GORNJEG DIJELA

TIJELA KOD MLADIH VRHUNSKIH SPORTSKIH PENJAČA 958

Neven Gladović, Dino Bartoluci, Irena Vuglovečki

PRIMJENA COERVER METODE ZA POBOLJŠANJE KOORDINACIJE

S LOPTOM NOGOMETASA UZRASNE KATEGORIJE 2010. GODIŠTA 965

Petra Gumbarević, Marijo Možnik, Lucija Milčić

VJEŽBE SNAGE S PILATES LOPTOM U PRIPREMNOJ

DIJELU GIMNASTIČKOG TRENINGA 972

Damir Harapin, Dražen Orešković, Tomislav Rupčić,

Bojan Matković, Damir Knjaz

KOŠARKA 3x3 – NOVI OLIMPIJSKI SPORT 978

Luka Horvat, Marijo Baković, Martina Baković

ASIMETRIJA U EKSPLOZIVNOJ SNAZI DONJIH

EKSTREMITETA KOD MLADIH TAEKWONDO BORACA 985

Gordana Ivković, Dinko Jadrešić

ULOGA SPORTSKO DIJAGNOSTIČKOG

CENTRA U LOKALNOJ ZAJEDNICI 992

Gordan Janković

VAŽNOST VISOKOKVALITETNE TEHNIČKE IZVEDBE

U NATJECATELJSKOM TENISU 998

Dajana Jašić

PERCEPCIJA ELITNIH HRVATSKIH SPORTAŠA O FENOMENU VRHUNSKOG SPORTA	1005
--	------

Igor Jelaska, Mario Jeličić, Karlo Antonio Bulić

DOBNA KATEGORIJA JE ZNAČAJAN PREDIKTOR MORFOLOŠKIH KARAKTERISTIKA, MOTORIČKIH SPOSOBNOSTI I FUNKCIONALNIH KARAKTERISTIKA KOD MLADIH NOGOMETAŠA	1013
--	------

Marijan Jozić, Dalibor Franulović, Aleksandar Čubrilo

TRENING POLICIJSKIH SLUŽBENIKA ZA SUDJELOVANJE U MEĐUNARODNIM AKTIVNOSTIMA PREMA BOPPPS MODELU	1020
--	------

Josip Jularić, Stjepan Strugar, Ivan Brkljačić

ANALIZA RAZVOJNIH TRENDOVA REZULTATA U FINALIMA ATLETSKIH SVJETSKIH PRVENSTAVA NA 400M ZA MUŠKARCE U ZADNJIH 20 GODINA	1028
--	------

Petar Kaučić, Sara Šanjug, Bojan Matković

SPECIFIČNA IZDRŽLJIVOST U TENISU	1037
--	------

Georgiy Korobeynikov, Lesia Korobeinikova, Markus Raab,

<i>Ivanna Korobeinikova, Gou Shengpeng, Irene Khmel'nitska</i> COGNITIVE FUNCTIONS AND SPECIAL WORKING CAPACITY IN ELITE BOXERS	1044
--	------

Andrea Krajačić, Lea Bušac Krišto, Mihaela Grubišić

UTJECAJ TJELESNE AKTIVNOSTI NA BIOLOŠKE FAKTORE KOD DJECE I ADOLESCENATA SA SINDROMOM DOWN	1056
---	------

Tomislav Krističević, Marija Milas, Kamenka Živčić

<i>Dan Lanc, Aleksandra Aleksić - Veljković</i> METODE UČENJA SALTA NAPRIJED	1063
--	------

Marko Kunac, Dragan Milanović

POSTOJE LI RAZLIKE U BROJU OSVOJENIH MEDALJA POJEDINIH EUROPSKIH DRŽAVA U PLIVANJU NA VELIKIM SVJETSKIM NATJECANJIMA PRIJE I ZA VRIJEME PANDEMIJE COVID-19?	1071
--	------

Iva Macan, Ana Kezić

UTJEČE LI HIPERMOBILNOST KOLJENA
NA EKSPLOZIVNU JAKOST RITMIČARKI? 1080

Kristijan Marić

POVEZANOST NEKIH ANTROPOMETRIJSKIH
OBILJEŽJA S IGRAČKOM KVALITETOM
KOŠARKAŠA KADETSKOG UZRASTA 1089

Marin Marinović, Sara Radanović

OMJER AKTIVNE I PASIVNE FAZE IGRE TIJEKOM
ZAVRŠNICE MUŠKOG ODBOJKAŠKOG KUPA HRVATSKE U
SEZONI 2020/21 – TREBAMO LI TRENIRATI DRUGAČIJE
OD VRHUNSKIH SPORTAŠA? – PILOT ISTRAŽIVANJE 1096

María Martínez-Quiles, Liam Cano Coyle, Irene Monreal

PHYSICAL ACTIVITY AND SPORT IN CHILDREN
AND YOUNG PEOPLE WITH DISABILITIES:
A SYSTEMATIC REVIEW 1104

Antonio Martinko, Andrija Mikša, Mateja Krmpotić

FUNKCIONALNE SPOSOBNOSTI SE RAZLIKUJU
IZMEĐU RUKOMETAŠICA SENIORSKE I JUNIORSKE DOBI 1111

Marin Masnić, Iris Vukušić, Antonio Surač, Luka Penga, Mirjana Milić

DINAMIKA RAZVOJA MOTORIČKIH SPOSOBNOSTI
KOD ODBOJKAŠA MLADIH DOBNIH KATEGORIJA 1120

Mario Matić, Mirna Mikić, Željko Lukenda

RAZLIKE U ANTROPOLOŠKIM KARAKTERISTIKAMA
TRI GENERACIJE UČENICA 8. RAZREDA OSNOVNE ŠKOLE
U RAZDOBLJU OD 2000. DO 2019. GODINE 1129

Bruno Matijašević

DEPRESIVNI SIMPTOMI KOD MLADIH SPORTAŠA 1139

Mirna Mikić, Mario Matić, Marko Milanović

GENERACIJSKE RAZLIKE U ANTROPOLOŠKIM
OBILJEŽJIMA UČENIKA 8. RAZREDA OSNOVNE ŠKOLE
U RAZDOBLJU OD 2000. DO 2019. GODINE 1146

Andrija Mikša, Antonio Martinko, Dragan Milanović RAZLIKE VRHUNSKIH RUKOMETAŠICA KADETSKE (U-15) I SENIORSKE DOBI U ANTROPOMETRIJSKIM KARAKTERISTIKAMA	1155
Luka Milanović, Marin Dadić, Marc Rochon MORFOLOŠKE DIMENZIJE VRHUNSKIH NOGOMETAŠA RAZLIČITIH IGRAČKIH POZICIJA	1163
Lucija Milčič UTJECAJ NEKIH ANTROPOLOŠKIH MJERA NA NATJECATELJSKI REZULTAT U SPORTSKOJ GIMNASTICI	1171
Ivan Milinović VAŽNOST TESTA TRČANJA 20 m IZ NISKOG STARTA PRI PREDIKCIJI REZULTATA U TRČANJU 100 m	1179
Josip Miočić ESPORT – NOVI SPORT ILI ZABAVA?	1186
Toni Modrić, Ivan Zeljko, Ana Čerkez, Marin Čorluka, Kemal Idrizović UTJEČE LI VANJSKO TRENAŽNO OPTEREĆENJE NA ISHOD UTAKMICE? ANALIZA NOGOMETAŠA ELITNOG RANGA NATJECANJA	1195
Tihana Nemčić PARAMETRI SITUACIJSKE EFIKASNOSTI EKIPA PLASIRANIH U ZAVRŠNICU MALONOGOMETNOG TURNIRA „KUTIJA ŠIBICA 2021.“	1204
Vladimir Pavlinović, Nikola Foretić, Šime Veršić, Ante Burger, Tine Sattler VALIDACIJA NOVOKONSTRUIRANOG TESTA 20-JARDI BLAZEPOD SUSTAVOM ZA PROCJENU NEREAKTIVNE AGILNOSTI DJECE ŠKOLSKE DOBI	1211
Dražen Pejić, Marko Kunac PROCJENA RAZINE IZVOĐENJA I POVEZANOSTI TEHNIČKIH ELEMENATA U ŠKOLI KOŠARKE KK „BOROVO“ VUKOVAR	1219
Ivan Perzel, Dajana Karaula, Jernej Kapus RAZLIKE U TESTU 400 M TEHNIKOM KRAUL IZMEĐU PLIVAČA I PARAPLIVAČA TIJEKOM OBUSTAVE TRENAŽNOG PROCESA USLIJED PANDEMIJE COVID-19	1230

Josipa Radaš, Gordana Furjan-Mandić, Rebeka Stojković RAZLIKE U NEKIM MOTORIČKIM SPOSOBNOSTIMA IZMEĐU RITMIČARKI I ŠKOLSKE DJECE ISTE DOBI	1239
Janja Ricov, Miroslav Hrženjak, Marijan Jozić RAZLIKE U FINACIJSKIM ULAGANJIMA U SPORTSKE PROGRAME IZMEĐU ČETIRI HRVATSKA GRADA U TRI GRUPE SPORTOVA	1246
Nenad Rogulj, Ante Burger, Davor Karl DOBNA I SPOLNA PRILAGODBA DIMENZIJA IGRALIŠTA I LOPTE U SPORTSKIM IGRAMA	1270
Igor Sedlanić, Tomislav Romić EKSCENTRIČNI TRENING NA IZO-INERCIJALNOJ PLATFORMI	1279
Djordje Sekulić, Nikola Todorović, Valdemar Štajer, Bogdan Andjelić, Marijana Ranisavljev, Asier Santibañez, Julen Fernández-Landa IS FITNESS APP 'MY JUMP' RELIABLE AND VALID?	1285
Luka Slišković, Ivan Mikulić, Valentin Barišić RAZLIKE U POKAZATELJIMA SITUACIJSKE EFIKASNOSTI HRVATSKOG NOGOMETNOG PRVAKA U GRUPNIM FAZAMA EUROPSKIH NATJECANJA 2018. I 2019. GODINE	1292
Stjepan Strukar, Anamarija Jularić ANALIZA RAZVOJNIH TRENDOVA REZULTATA U FINALIMA ATLETSKIH SVJETSKIH PRVENSTAVA NA 400 M ZA ŽENE U ZADNJIH 20 GODINA	1299
Bela Ščapeč UTVRĐIVANJE OPTIMALNOG OPTEREĆENJA ZA MAKSIMALNI IZLAZ PROSJEČNE I VRŠNE SNAGE U VJEŽBAMA ČUČANJ I MRTVO DIZANJE TE PRIKAZ VRIJEDNOSTI U ODNOSU NA SPOL	1306
Klara Šiljeg RAZLIKE IZMEĐU REZULTATA NA 100 METARA PRSNO PLIVAČICA NA OLIMPIJSKIM IGRAMA I REZULTATA HRVATSKIH PLIVAČICA POSTIGNUTIH U GODINAMA OLIMPIJSKIH IGARA (2012., 2016. i 2021.)	1316
Dario Škegro TRANZICIJSKI NAPAD U KOŠARCI	1325

Suzana Šop

UGOVOR O DJELU NASUPROT UGOVORU O RADU S OSVRTOM NA SUDSKU PRAKSU	1332
--	------

Anja Topolovec, Jadranka Vlašić, Maja Horvatin

METODE RAZVOJA AGILNOSTI U STANDARDNIM I LATINSKO-AMERIČKIM PLESOVIMA	1340
--	------

Nebojša Trajković, Goran Sporiš

DIFFERENCES IN MOTOR COORDINATION OF YOUNGER SCHOOL-AGE CHILDREN DEPENDING ON THE ENGAGEMENT IN PHYSICAL ACTIVITY	1350
---	------

Martina Vargek

TIŠINA NA SEDMERCU	1357
--------------------------	------

José Miguel Vegara Ferri, Sanela Škorić, Salvador Angosto

SOCIAL PERCEPTION OF SPANISH RESIDENTS ABOUT THE CYCLING ROAD SPORT EVENT “LA VUELTA 2021”	1368
---	------

Despina Vounasis, Nika Velhes, Marin Galić

RODITELJI SPORTAŠI – PRESUDAN FAKTOR ZA USPJEH DJETETA U SPORTU U HRVATSKOJ	1375
--	------

Dario Vrdoljak, Luka Penga, Anđela Šiškov

UKLJUČENOST RODITELJA U POTPORU SPORTSKIH AKTIVNOSTI MLADIH ODBOJKAŠICA	1382
--	------

Bartol Vukelić, Klara Šiljeg, Milivoj Dopsaj

UTVRĐIVANJE RAZLIKA U OSNOVNIM POKAZATELJIMA IZVEDABA PLIVAČA U FINALNIM UTRKAMA 50 METARA SLOBODNO NA PRVENSTVU HRVATSKE I EUROPSKOM JUNIORSKOM PRVENSTVU 2021.	1391
--	------

Dinko Vuleta, Božica Palčić, Tonči Jerak

ANALIZA POKAZATELJA SITUACIJSKE UČINKOVITOSTI VANJSKIH IGRAČICA HRVATSKE ŽENSKKE RUKOMETNE REPREZENTACIJE NA EUROPSKOM PRVENSTVU 2020. U DANSKOJ	1400
--	------

Tariq Ali Yousif, Ahmed Farhan Ali

ANALYTICAL STUDY OF SKILL EFFECTIVENESS AND
PLANNING PERFORMANCE ACCORDING TO AN ANALYTICAL
PROGRAM ON VOLLEYBALL PLAYERS 1408

Ivan Zeljko, Šime Veršić, Mile Galić, Vladimir Ivanek, Tomislav Volarić

KVALITATIVNE RAZLIKE MEĐU FUTSAL IGRAČIMA U
ANTROPOMETRIJSKIM KARAKTERISTIKAMA ESPLOZIVNOSTI 1417

Kamenka Živčić, Tomislav Krističević, Dan Lanc, Marija Milas

PREVENTIVNI TRENING U SPORTSKOJ GIMNASTICI 1424

SEKCIJA SPORT I EKOLOGIJA KAO ČIMBENICI KVALITETE ŽIVOTA /
SESSION SPORT AND ECOLOGY IN QUALITY OF HUMAN LIFE

Mario Oršolić, Mijo Ćurić, Zlatan Bilić

TJELESNA AKTIVNOST STUDENATA KAO DIO SVAKODNEVICE
ZA VRIJEME PANDEMIJE UZROKOVANE VIRUSOM Sars-CoV-2 1434

**Nenad Rogulj, Marijana Čavala, Josipa Nakić, Josefina Đuzel,
Petra Rajković Vuletić**

KINEZIOLOGIJA FIZIČKIH ZANIMANJA 1443

SEKCIJA SPORTSKA REKREACIJA / SESSION PHYSICAL RECREATION

Josipa Antekolović, Grgur Kovačić

ZADOVOLJSTVO TJELESNIM IZGLEDOM
STUDENTICA I STUDENATA 1452

Sara Aščić

TJELESNA AKTIVNOST STUDENATA NA
STUDENTSKOJ RAZMJENI U LJUBLJANI 1465

Petar Čuljak, Grgur Bulović

SINDROMI PRENAPREZANJA KOD TRKAČA REKREATIVACA 1473

Jozo Dubravac, Renata Barić

KVALITETA ŽIVOTA I ZADOVOLJSTVO POSLOM
TJELESNO AKTIVNIH I NEAKTIVNIH ZAPOSLENIKA 1481

***Vedran Dukarić, Lucijan Šupljika Gabelica, Irena Bagarić,
Ivančica Vadjon***

POVEZANOST IZMEĐU AKADEMSKOG USPJEHA
I RAZINE TJELESNE AKTIVNOSTI STUDENATA 1491

Danijela Gudelj Šimunović, Maja Vukelja

MOTIVI UKLJUČIVANJA U REKREACIJSKO TJELESNO VJEŽBANJE 1497

Dražen Harasin

OBUĆA NAMIJENJENA ZA BORAVAK I
AKTIVNOSTI NA OTVORENOME 1505

Ana-Marija Jagodić Rukavina

RAZLIKE IZMEĐU BODY TEHNIKE I NEKIH DRUGIH SPORTSKIH
I REKREATIVNIH PROGRAMA U ZDRAVSTVENIM UČINCIMA
PRIKAZANIM PREKO MOTORIČKIH SPOSOBNOSTI 1516

Ana-Marija Jagodić Rukavina, Marija Nemet Petračić

AKUTNI UČINCI 7 VJEŽBI BODY TEHNIKE NA SAMOPROCJENU
IZABRANIH POKAZATELJA VITALNOSTI 1526

Dajana Karaula

VAŽNOST EDUKACIJE O PODUCI NEPLIVAČA
KOD ANIMATORA U TURIZMU 1536

Ivana Kujundžić Lujan, Karla Đolo, Ninoslav Šilić

UTJECAJ KOLIČINE SEDENTARNOG I ORGANIZIRANOG
KINEZIOLŠKOG AKTIVITETA NA USVAJANJE
KOREOGRAFIJE DRUŠTVENOG PLESA CHA-CHA-CHA 1544

Jurica Lovrinčević, Daria Župan Tadijanov, Dražen Rastovski

RAZINA TJELESNE AKTIVNOSTI OSOBA RAZLIČITE
DOBI TIJEKOM PANDEMIJE COVID-19 1553

Goran Marić, Vesna Alikalfić, Marija Andrijašević

PRIKAZ MODERNIH GRUPNIH FITNESS PROGRAMA 1560

Filip Matković, Dominik Zeljko, Tihomir Mostovac

USPOREDBA TEHNIČKE IZVEDBE FORHEND I
BEKEND UDARACA I NJIHOVE PRECIZNOSTI U TENISU 1568

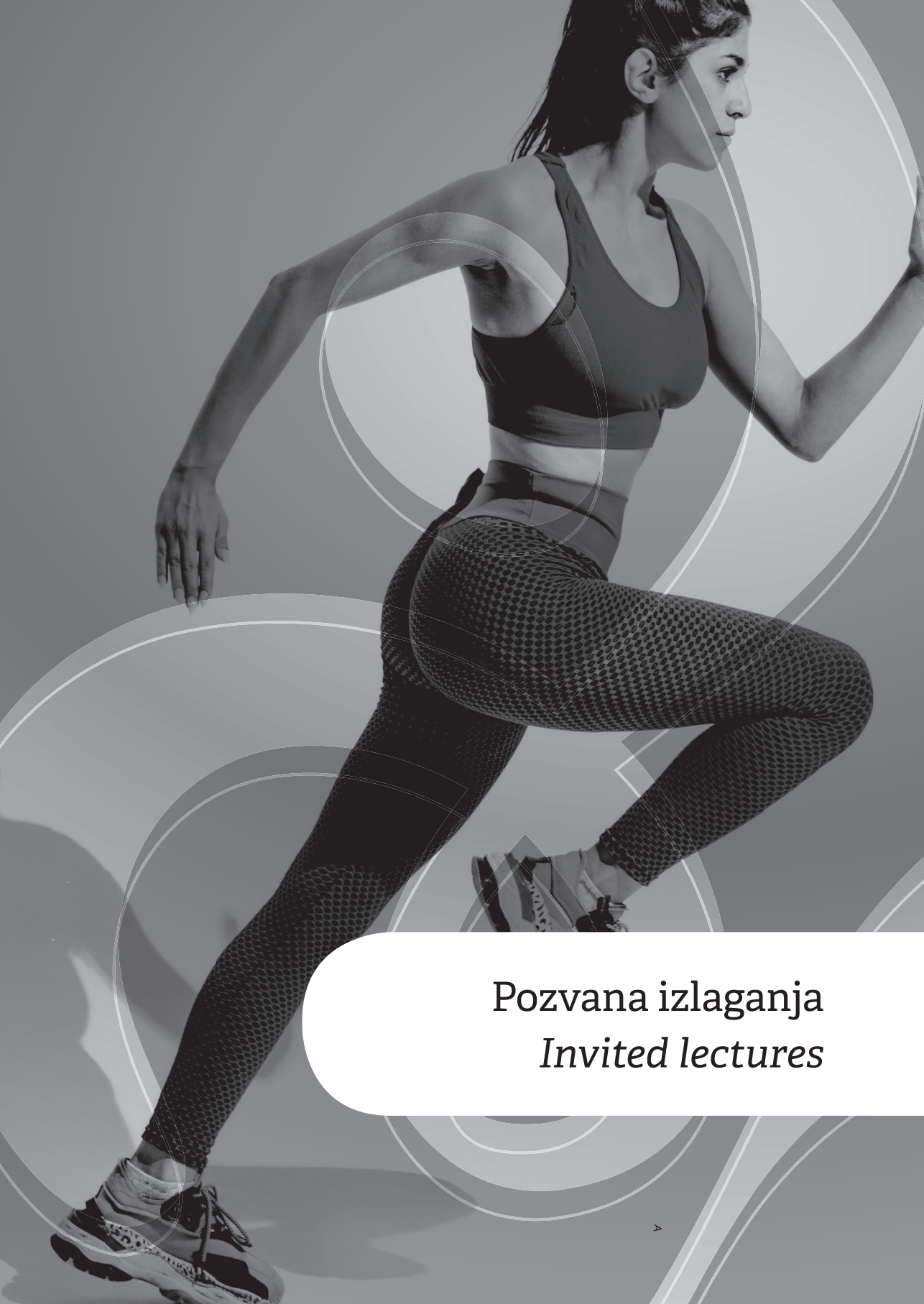
Lara Pavelić Karamatić, Donata Vidaković Samaržija, Antun Karamatić RELACIJE PUŠAČKOG STATUSA I MOTORIČKO-FUNKCIONALNIH SPOSOBNOSTI VOJNIH OSOBA	1576
Petra Rajković Vuletić, Karla Šitić, Marijana Čavala, Robert Jelaska SLIČNOSTI I RAZLIKE U MOTIVACIJI ZA VJEŽBANJEM KOD ŽENA RAZLIČITE ŽIVOTNE DOBI	1583
Marijana Ranisavljev, Valdemar Štajer, Nikola Todorović, Bogdan Andjelic, Asier Santibañez, Julen Fernández-Landa, Darinka Korovljev EFFECTS OF LONG-LASTING POST-COVID SYMPTOMS/LONG-COVID PHENOMENON ON PHYSICAL ACTIVITY – A MINI REVIEW	1591
Saša Rodić, Željka Kovačić, Vjekoslav Cigrovski PROJEKTI LJETNE I ZIMSKE IGRAONICE U PROVEDBI „DRUŠTVA NAŠA DJECA JASTREBARSKO“	1598
Natalija Špehar, Ksenija Fučkar Reichel ONLINE TRENING, BUDUĆNOST ILI KRATKOTRAJNI HIT?	1606
Lucijan Šupljika Gabelica, Vedran Dukarić, Nenad Zvonarek SPOLNE RAZLIKE U RAZINI TJELESNE AKTIVNOSTI RADNO AKTIVNIH OSOBA UKLJUČENIH U ORGANIZIRANO TJELESNO VJEŽBANJE	1614
Vlatko Vučetić, Tomislav Leško, Dalibor Medvedec Vesna Šantak, Leon Levar, Damjan Josipović UČINCI SUDJELOVANJA U UMJETNIČKIM PROGRAMIMA NA KOGNITIVNE SPOSOBNOSTI I FINU MOTORIKU STARIJIH OSOBA	1622
Domagoj Vulić, Dražen Rastovski, Jurica Lovrinčević UTJECAJ PANDEMIJE COVID-19 NA POSLOVANJE FITNES I REKREACIJSKIH CENTARA GRADA OSIJEKA	1633
Miroslav Zečić, Dora Vajdić, Vlatko Vučetić, Tomislav Leško UTJECAJ TRENINGA SPORTOVA S REKETOM NA FINU MOTORIKU I STISAK ŠAKE KOD STARIJIH OSOBA	1640

SATELITSKI SIMPOZIJ – HRVANJE / SATELLITE SYMPOSIUM – WRESTLING

Krystyna Aniol-Strzyżewska, Włodzimierz Starosta, Benedykt Opaszowski THE COMPARISON OF ACHIEVEMENTS OF OLYMPIC MEDALISTS IN SPECIFIC ENDURANCE TEST WITH THE RESULTS OF ELITE POLISH WRESTLERS OF GRECO-ROMAN STYLE	1654
Mirzaei Bahman, Hamid Arazi, Abolfazl Rahmani, Sina Norasteh THE EFFECTS OF RESISTANCE EXERCISE WITH BLOOD FLOW AND RESPIRATORY RESTRICTION ON TESTOSTERONE, CORTISOL AND TESTOSTERONE/CORTISOL RATIO RESPONSES IN MALE WRESTLERS	1662
Adrián Bayonas-Ruiz, Cristina Casas-Moreno, Daniel Mon López, Alejandro Martínez-Cava ADHERENCE TO A MEDITERRANEAN DIET IN HIGH-LEVEL SPANISH WRESTLERS	1674
Rosendo Berengüí, Adrián Ruiz-Bayonas, Marina Ruedas Flores EATING DISORDERS IN OLYMPIC WRESTLING: RISK AND RELATIONSHIP ANALYSIS	1681
Ivica Biletić, Mario Baić, Benjamin Perasović RODITELJSKA POTPORA DJEČACIMA HRVAČIMA U DOBI OD 11 DO 13 GODINA	1688
Cristina Casas-Moreno, María del Carmen Castejón, Alejandro Martínez-Cava, Pablo Ruben Pintos Figueroa AN INVERTED CLASSROOM DIDACTIC PROPOSAL FOR LEARNING OLYMPIC WRESTLING IN HIGH SCHOOL	1696
Hrvoje Karninčić, José María López Gullon, Krešimir Škugor REGULATION OF BODY WEIGHT IN WRESTLING – A REVIEW	1702
Ivanna Korobeinikova PSYCHOLOGICAL STATE AND AGGRESSION IN WRESTLERS	1715
Georgiy Korobeynikov, Nikola Starčević, Vladimir Potop, Lesia Korobeinikova, Markus Raab, Ivanna Korobeinikova, Andriy Chernozub, Danko Taras PSYCHOPHYSIOLOGICAL STATE OF ELITE WRESTLERS OF THE CROATIAN AND UKRAINIAN TEAMS	1720

Jovan Kuzmanović, Bábszky Gergely Zsolt, Roberto Roklicer, Barbara Gilić, Nikola Starčević, Valdemar Štajer WRESTLING SPECIFIC FITNESS TESTS	1729
José María López-Gullón, Alejandro Martínez-Cava, Carlos Argudo Fuentes, Alberto Martínez-Abellán IMPORTANCE OF PSYCHOLOGICAL WORK IN THE TRAINING OF SPANISH OLYMPIC WRESTLERS	1734
Marko Manojlović, Roberto Roklicer, Krešo Škugor, Nemanja Maksimović, Carlo Rossi, Patrik Drid RAPID WEIGHT LOSS ALTERS HANDGRIP STRENGTH IN GRECO-ROMAN WRESTLERS	1741
Damir Pekas, Domagoj Bagarić, Dalibor Vračan, Amel Mekić, Nebojša Trajković ANKSIOZNOST I OBLICI PONAŠANJA HRVAČA UZROKOVANI PANDEMIJOM COVID-19	1747
Marina Rueda Flores, Daniel Mon López, Rosendo Berengüi, José María López-Gullón EATING BEHAVIOR DISORDERS IN SPANISH HIGH-PERFORMANCE WOMEN'S OLYMPIC WRESTLING ATHLETES. A QUALITATIVE STUDY	1755
Kristijan Slačanać SITUACIJSKA EFIKASNOST HRVATSKE HRVAČKE REPREZENTACIJE NA EUROPSKOM PRVENSTVU 2022	1762
Kristijan Slačanać, Domagoj Bagarić, Dalibor Vračan, Milorad Dokmanac RAZLIKE U ANKSIOZNOSTI I PROMJENAMA PONAŠANJA MEĐU HRVAČIMA RAZLIČITE DOBI TIJEKOM PANDEMIJE COVID-A 19	1768
Włodzimierz Starosta, Iwona Dębczyńska-Wróbel, Mario Baić LATERAL DIFFERENTIATION IN RESULTS OF GLOBAL MOVEMENT COORDINATION LEVEL IN SELECTED COMBAT SPORTS AND TEAM SPORT GAMES OF HIGH PERFORMANCE ATHLETES	1775
Sanela Škorić, Pablo Ruben Pintos Figueroa, José Miguel Vegara-Ferri, Salvador Angosto ECONOMIC IMPACT ASSESSMENT OF THE EUROPEAN JUNIOR OLYMPIC WRESTLING CHAMPIONSHIPS 2019	1785

<i>Krešo Škugor, Nenad Žugaj, Barbara Gilić, Valdemar Štajer, Roberto Roklicer</i> SNAGA I JAKOST GORNJEG DIJELA TIJELA VRHUNSKIH JUNIORSKIH HRVAČA: RAZLIKE PREMA KVALITETI SPORTAŠA	1792
<i>Ana Žnidarec Čučković, Ana Sabolić, Anja Topolovec, Mia Gugec, Damir Pekas, Mario Baić</i> MAPIRANJE POTREBA RAZLIČITIH GRUPACIJA SPORTAŠA I SPORTSKIH DJELATNIKA GRADA ZAGREBA I RH ZA VRIJEME KRIZNIH SITUACIJA (COVID-19 I POTRES) – REZULTATI PREDISTRAŽIVANJA	1798
KAZALO AUTORA / INDEX OF THE AUTHORS	1811



Pozvana izlaganja
Invited lectures

GOOD PRACTICES FROM ONLINE PHYSICAL EDUCATION TEACHING AND HOW TO IMPLEMENT THEM AT REGULAR OFFLINE PHYSICAL EDUCATION CLASSES

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Invited lecture

ABSTRACT

Online teaching was an emergency response to COVID 19 pandemic and a way to continue the educational process in safe environment. In terms of online teaching in physical education, there were many challenges, considering the nature of the subject, its goals and manners of its realization. Physical education teachers applied many different strategies and approaches in order to ensure quality realization of PE in home and online setting. Presented paper analyses those strategies. Its aim is to identify the best practices and positive experiences from online PE teaching and suggest manners how to implement them in regular offline physical education classes. Best practices in online PE teaching were identified using online survey. It was applied on a sample of 168 PE teachers from different cities in North Macedonia. Following best practices were identified: recording online video with PE contents by teachers, recording video movement challenges by students, PE homeworks, use easy accessible tools as equipment for PE, use of different mobile application for monitoring and recording of physical activity, increase participation in outdoor activities and contents related to dance at PE classes etc. For each identified practice, we give suggestions how to implement them at regular offline teaching and make benefit from previous experiences.

Key words: *physical education, online teaching, best practices, teaching strategies*

INTRODUCTION

COVID 19 pandemic indicated many changes in everyday life that also included education and sport. One of those changes was implementation of online teaching and learning as a response to closure of schools and universities. In the period of lockdown sport clubs, fitness centres were locked, and sport and sport events were cancelled or postponed. Answers to this situation were different in different period of pandemics and were related with level of imposed restrictions and applied measures. The pandemic of COVID 19, was another challenge for movement and PA level in all generations. It caused a crisis in the health, economic, education, political systems, and social life worldwide. Education systems were especially impacted by the pandemic, and many countries were forced to change the way education was delivered. In this regard, more than 92% of students worldwide in more than 188 countries have been affected by the pandemic as schools have been closed and the teaching process continued through distance learning (UNESCO, 2020). It also affected movement and physical activity habits. Maintaining the recommended level of PA becomes challenging in period of COVID 19 due to isolation, restricted movement, closed sport halls and fitness clubs etc.

In this situation, online teaching was an emergency response to COVID 19 pandemic and was a way to continue the educational process in safe environment. In this regard, we all recall to technology and its use, even more then previously. Online classes and distance learning were implemented in nearly all educational systems worldwide at all level of education. Educational process was transferred to online distance learning. Whenever was possible human contact was changed with online communication – online shopping, online ordering, online payment etc. Zoom, Skype, Snapchat, Facebook, Instagram and all other media were used for communicating and being close to friends and family in period when quarantine and social distance were active. Different technology tool, mobile application and self – monitoring training apps were suggested as effective way to improve motivation for movement during pandemic (Chen et al, 2020; Jakobsson et al, 2020). Different forms of outdoor physical activities such as walking, cycling, hiking, running etc were also recommended and many of them were supplemented with use of wearable devices, smart watches and phones that follow health parameters and intensity level etc. Technology was also widely applied by preparing and using YouTube videos, organizing online classes, active video games etc.

Physical education classes were also suspended as schools were closed. In such conditions, technology was applied as main tool for class delivery of online classes, learning as well as for motivation for health behaviour and regular physical activity. In these terms, technology was applied at PE classes. Online platforms were developed for online teaching, materials for online teaching were prepared. While PE teachers

were faced with many difficulties regarding online PE teaching, such as lack of proper equipment at home, a lack of proper training for IT use, decrease motivation for work, concerns regarding pupils' safety, intellectual property of resources and quality of curriculum delivery (Korcz et al.2021), children and young people were more into use of technology. They accepted online teaching easily as technology was something more closer to them.

Namely, for children and young people technology can provide fun, attractiveness and enjoyment and they want to be engaged in activities that are interesting and enjoyable. Nowadays, children are “born” with technology and different IT gadgets. Many studies evidence for possitive effects of use of mobile applications, vidoe games and internet-based PA intervention on childrens' interest in PA (Marcus et al 2015; Hall&Bierman, 2015; González, et al 2016) and promotion on active lifestyle (McMullen et al, 2014). The use mobile phones to smart watches, heart rate monitors, wearable devices, gamification, technology-based interventions is a research trend in last decade and become popular in process of promotion of physical activity in PE teaching process, sport training and sport performance. In the study of Kamerow (2013) was identified that in 2013, there were over 100,000 health-related mobile apps available for smartphones, and it was predicted that by the end of 2015 over 500 million smartphone owners globally will use health-related apps (Kamerow, 2013). Along with smartphone-based health tracking, the market for wearable computing devices and other PA monitoring devices (ie. heart rate monitors) has grown substantially in recent years, and is expected to continue to grow at an increasingly rapid rate (Danova, 2015). There is an emerging trend of studies that evaluate the effects of technology-based PA tracking device and their use in health and movement related interventions, confirming that mobile devices may be an effective means for motivation for physical activity, movement goal setting and motivation, influencing PA behaviour in children, adolescents, and adults (Fanning et al, 2012; Moorheard et al, 2013; Shapiro et al, 2008; Papalia et al, 2018; Yaneva A. et al. 2016).

These mentioned aspects, suggest that technology has an important place in education, including physical education, sport and movement sciences. This become even more important and significant in terms of COVID 19 pandemic and online teaching. In period of pandemic, teachers developed many startegies in online PE teaching in order to ensure quality realization of PE in home and online setting. Now, when we alredy move to normal offline teaching, some of those strategies are still find to be useful and can improve or supplement the work of PE teachers. Therefore, the presented paper presents those strategies and possibilities for their further use in online teaching.

The aim of preseneted study is to identify the best practices and possitive experiences from online PE teaching and suggest manners how to implement

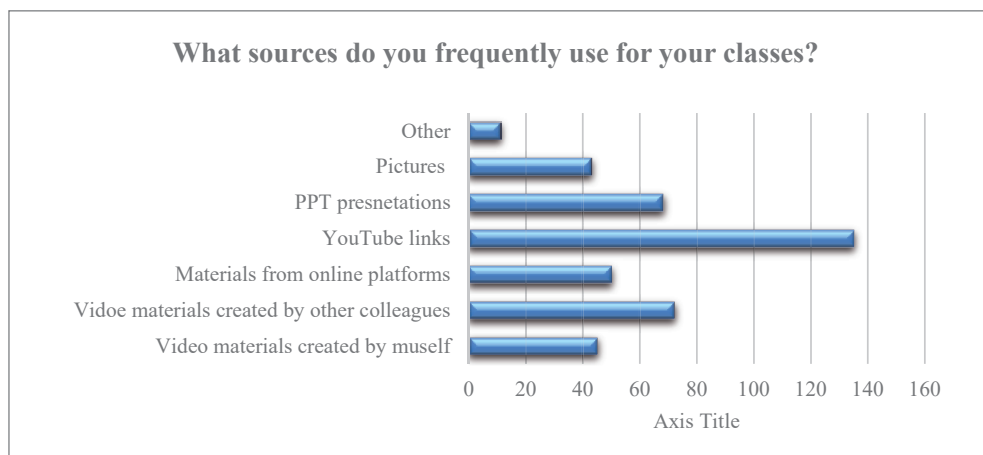
them in regular offline physical education classes. The final goal in all cases was optimization of teaching and learning process, increase motivation for movement and physical activity by having real time feedback, clear insights of personal performance, etc. and bring closer the benefits of practicing physical activity for children, young people and students.

METHOD OF WORK

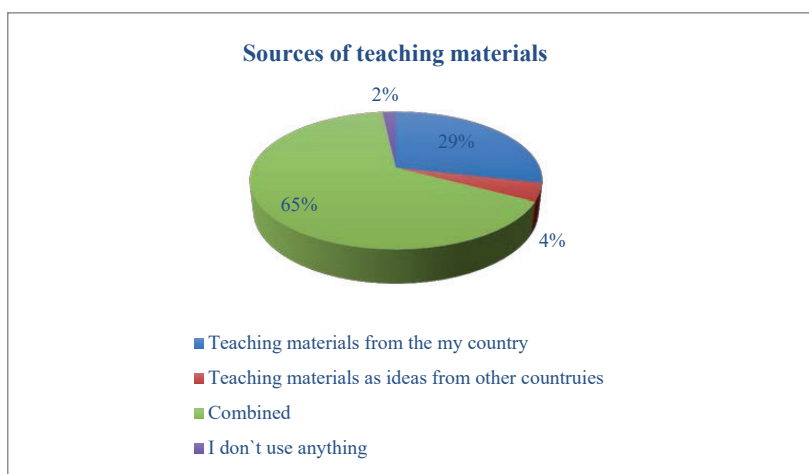
The study was conducted on a sample of 168 PE teachers from different cities in North Macedonia. The total sample included 153 primary school teachers (91%) and 15 secondary school PE teachers (9%). From the sample, 73% (122 PE teachers) were males and 2% (46 PE teachers) were females. Majority of teachers included in the study have working experience between 5 and 20 years (29% had working experience under 5 years, 12% from 5 – 10 years, 23% from 10 – 15 years, 17% between 15 – 20 years, the rest of the participants had working experience above 20 years). The study was realized in January, 2021 as online survey aimed to identify the experiences and feedback of PE teachers from online teaching in first half of school year 2020/2021. The survey included 15 Likert type questions related to different aspects of organization of online teaching, difficulties, advantages etc and 3 open questions with examples of good practices and suggestions for improvement. Microsoft Excel and Statistica 13.0 software (StatSoft Inc., USA) were used for data analysis. Descriptive statistics were used to describe the PE teachers' characteristics (means $\pm$ standard deviations, percentage values). Percentage values have been used in all the questions with single choice answers.

RESULTS AND DISCUSSION

The analyses of obtain results, suggests that teachers were delivering PE teaching process following the national curriculum adapted for online teaching suggested by the Bureau of Education and Ministry of education. In this regard, 28% of the teachers, did the planning of the classes by themselves, 37% supported by colleagues on level of activities of PE teachers for particular grade and 34% did it independently by consulting with other colleagues. The graphic 1 and Graphic 2 presents the sources of ideas for preparation of classes. It indicates that YouTube videos and videos prepared by colleagues were more frequently used and most of the teachers used both resources on macedonian language or other languages.



Graphic 1. Sources for preparation of online PE classes



Graphic 2. Sources of used teaching materials

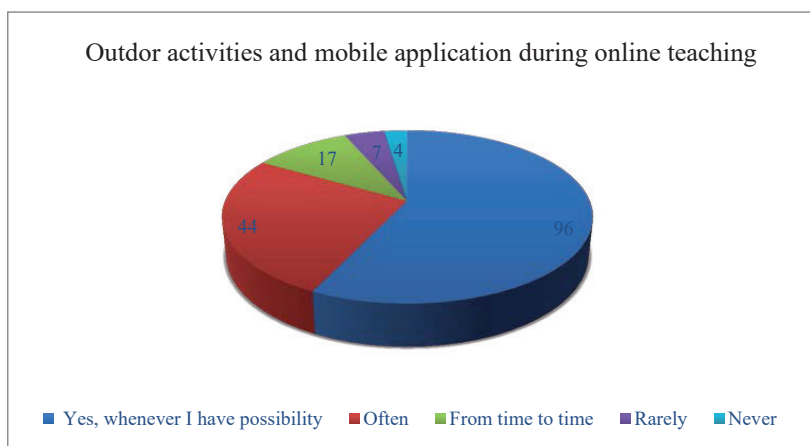
In terms of problems that teachers faced with, the biggest issue was identified in use of microfons and cameras during the classes (75%), poor internet connection or disruptions in connection (79%), lack of feedback information from the students (50% of teachers), limited conditions at home for PE classes (34% identified as serious problem, 20% partly), there are divided oppinions regarding use of equipement and use of adapted equipement available at home.

In terms of advantages of online PE teaching, teachers mentioned following: children are in safe environment, no additional financial costs for equipment, many children were more motivated to join, be active and prove themselves, possibility to use different mobile applications, improvement of IT skills as well as more experienced in use different platforms.

In terms of motivation of work, personal engagement of teachers during online teaching, different opinions were identified. Namely, 48% of teachers answered that they experienced decrease in their motivation for work and only 12% were more motivated; 51% agree that there is more theory than practice during online teaching. Online teaching improved IT skills for 61% of teachers and improved the creativity at 59% of them. It also helped teachers to think about different approaches in their work (69%). On personal level, less than 20% of interviewed teachers experienced increased level of stress, anxiety and lack of interest for work.

From the aspect of preparation and realization of online teaching, the biggest difficulties were identified in selection of equipment and tools for online teaching (57%), selection of contents appropriate for home facilities for each child (49%), evaluation of students (51%), to keep students motivated for each class (54%).

Identifying best practices and positive approaches to work was also one of the aspects of analyses in our study. Graphic 3 presents the implementation of outdoor activities and use of different mobile tools during this period.



Graphic 3. Organization of outdoor activities and use of mobile application during online teaching

In terms of best practices, following were identified:

- Use of video materials prepared from colleagues from our countries
- Use of mobile application, mainly Strava – motivating students to walk, run, cycling
- Use of different tools from the house as equipment for online PE classes
- Use of mobile application and video to motivate students to work on improvement of their motor abilities.
- Implementation of dance contents

EXAMPLES OF GOOD PRACTICE FROM PE ONLINE TEACHING IN NORTH MACEDONIA

Recorded video classes by PE teachers, members of Association of sport pedagogues of Macedonia

A positive example of effective PE virtual lessons comes from, particularly from PE teachers, members of Federation of sport pedagogues of Macedonia. The general frame of the PE curriculum during COVID 19 was developed by the Bureau for Development of Education and this was an element that needed to be followed regarding contents. Led by the idea to design interesting virtual classes that will attract students to be active in virtual PE classes, the members of the FSPRM, recorded the Physical Education classes using 360-degree technology, for different ways of exercising from home. Videos integrated different contents based on suggested curriculum framework. They were intentionally prepared for realization in home conditions (limited space, limited resources and equipment easy to find at home). With the 360-degree technology and the wearing of VR glasses by the students at home, in fact, virtual lessons were directly realized with which the students had the feeling that they were working with the teacher in the school gym (Unpublished work Popeska, B. Spasikj, J. Jovanov, Z. Stojcevski, G.). Prepared video was uploaded at YouTube channel and access free on following link YouTube: <https://www.youtube.com/c/SportskiPedagoziKumanovo>. Furthermore, using translation option, the same video can be found on different languages. These video classes were accepted by many PE teachers and are evaluated very positive from students. All recorded videos are available on <https://www.youtube.com/c/SportskiPedagoziKumanovo>.

These materials have several benefits: can be used in online teaching when physical presence is not possible; to use as source of ideas for teachers when having offline teaching; to use as source for children that because of different reasons are not in position to attend school and be at class etc.

Preparation of video for healthy lifestyle

Many of the teachers devoted themselves to the health aspect of physical education and used a number of classes to demonstrate exercises and record classes to prevent deformities and poor posture. In addition, they prepared classes for proper and sports nutrition for students and athletes, proper breathing, mental training. In cooperation with other colleagues and the management, PE teachers make short videos with physical activities during the breaks that they used for online teaching, and they are also applied in the classical teaching. We strongly support the idea of creating video exercises by both teachers and children. We consider that such participation will support the creativity of both teachers and children and will strengthen the learning and teaching processes (Popeska B. et al.2018).

Educational workshops and webinars for students

Using the potentials of online teaching, one of the benefits is to connect many students in same time at one place. This is also a possibility for teachers to present interesting topics for students, that in normal conditions are often neglected due to lack of time for theoretical contents. In these terms, teachers used this possibility to organize different webinars and online workshops on topics related to health protection, good nutrition, maintaining good posture, safety measures in outdoor movement etc. Such forms of education also provide possibility to invite famous persons and athletes to share their personal experiences, children also to share their personal stories, to ask questions etc.

Implementation of outdoor activities on regular bases

While most of the classes were delivered online, yet many teachers started to implement outdoor activities and motivate students to be active outdoor. Activities like hiking, cycling, mountain bike, walking and running in nature, aerobics, and outdoor fitness, become very popular and attractive for children. In this regard some teachers started to organize outdoor activities for students once a week as a part of PE programs to keep them active. These activities were also very well accepted by children and increased their interest for outdoor activities. These was also supported by using different mobile apps that additionally increased children motivation and also provide teachers possibilities to follow the progress, monitor the activities etc.

CONCLUSION

Although it was difficult to conduct and organize online PE classes, some positive examples and best practices were identified. Many teachers become skilled in preparing and recording video materials. These materials in future can be used by children that are not able to come in school for different reasons, but also can be use by children out of school as additional form for physical activity. Improved IT skills of teachers will provide them possibility to record their regular classes, make new video when needed, used for analyses of their work, evaluation etc.

Use of mobile apps can also be implemented in PE offline classes as tool for motivation and monitoring of the work.

The use of Microsoft Teams platform was not only applied for conducting online classes, but it was also used to upload recorded content, analysed recorded video, organizing webinars on many interesting topics etc. In terms of adaptations, teachers become more creative using different objects from home as tools for movement and physical education (chairs, pillows, water bottles, boxes, balloons etc.). Its use can also continue during offline teaching.

Other effective way for effective virtual PE classes is preparation of content-based video tutorials recordings that will be uploaded to some platform and make them available for all students. Through the development of video tutorials as video-audio criteria for assessing the achievement of students, technology can be used in a good way as a tool for the teacher in improving the quality of the teaching process in physical education. The assessment and compliance of concrete, precise, measurable expected outcomes of sporting knowledge as students previously known criteria of evaluation of such knowledge by weight levels and representation in the guide all stakeholders: teachers, students and parents, teachers provide real prerequisites to achieve the goals of the curriculum through physical activity of students and thereby to achieve a basic level of knowledge appears with each student (Spasikj J. 2020).

When it comes to use of technology at PE classes, it can serve to complement the efforts of the physical education teacher as a tool to improve engagement and in the assessment process by assisting in the learning, performance and motivational processes. Certainly, technology can assist in recording performance and results. There should be a balance between the use of technology for teaching purposes and assessment in physical education classes in school settings” (Edington et al. 2016).

All mentioned aspects, suggest that even we faced many difficulties during COVID 19 pandemics, yet teachers learned a lot and all that experience can be and should be implemented in future in many ways.

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