

## Characteristics of the submitted research/ artistic/other output

**Name and surname** PaedDr. Róbert Osad'án, PhD.  
**Document type:** Characteristics of the submitted research/ artistic/other output  
**The name of the university** Comenius University Bratislava  
**The seat of the university** Šafárikovo námestie 6, 818 06 Bratislava

|                                                                                         |                                                                                                     |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| <b>OCA1. - Surname awarded to the assessed person</b>                                   | Osad'án                                                                                             |
| <b>OCA2. - Name awarded to the assessed person</b>                                      | Róbert                                                                                              |
| <b>OCA3. - Degrees awarded to the assessed person</b>                                   | PaedDr., PhD.                                                                                       |
| <b>OCA4. - Hyperlink to the entry of the person in the Register of university staff</b> | <a href="https://www.portalvs.sk/regzam/detail/5904">https://www.portalvs.sk/regzam/detail/5904</a> |

### 1st evaluated output

#### OCA5.1 - Area of assessment

Preschool and Elementary Pedagogy (1st degree), Teacher Education for Primary Schools (integrated 1st and 2nd degree)

#### OCA6.1 - Category of the research/ artistic/other output

pedagogical output

#### OCA7.1 - Year of publication of the research/artistic/other output

2022

#### OCA8.1 - ID of the record in the Central Registry of Publication Activity (CRPA) or the Central Registry of Artistic Activity (CRAA)

ID: 485903

#### OCA9.1 - Hyperlink to the record in CRPA or CRAA

<https://petra.uniba.sk/?fn=detailBiblioForm&sid=E643C899C25A215CD50883813E>

#### Title of the publication to which the hyperlink points

Úvod do rodovosti a sexuality detí

#### Suggested output quality level

B

#### OCA14.1 - Characteristics of the author's contribution

The college textbook is the work of 3 authors. The author R. Osad'án is the author of the first part of the textbook, which dealt with the issue of gender in the context of preschool and younger school-age children. The authors P Rapošová and D. Smetanová are the authors of the second part of the textbook, which focused on the development of sexuality, its healthy and unhealthy forms as well as the issue of prevention against sexual abuse.

#### OCA15.1 - Annotation of the output with contextual information concerning the description of creative process and the content of the research/artistic/other activity, etc.

The textbook was prepared on the initiative of R. Osadian due to the lack of university textbooks focusing on the issues of gender and sexuality for the education at the faculties of education. Its development was based on the summarization of the most recent up-to-date knowledge, which built on previous research and theories.

#### OCA16.1 - Annotation of the output in English

College textbook arose from the need summarization of information from courses held at the Faculty of Education at Comenius University in Bratislava, Slovensko, presented to students daily, and in external expansion study. The text in this textbook is to serve as a clear, basic and complementary component bringing the necessary information for the future teacher of students in the first to fourth year of primary school. At the end of each chapter there is a space for questions and discussion, which stimulates a meaningful debate on specific topics. It is necessary to pay special attention to them, because many of them lead to the active work of the student directly in educational practice, or to further study.

#### OCA17.1 - List of maximum 5 most significant citations corresponding to the output

**2022 [02/20] / SVK** - Merica, Marián - Trubanová, Klaudia. **Plávanie v primárnej edukácii v meste a na dedine** [elektronický dokument] = Swimming in primary education in the city and in the village. SING-UKO PD PP/22 In: Žiak, pohyb, edukácia: vedecký zborník 2022. Bratislava: Univerzita Komenského v Bratislave, 2022, s. 102-114 [CD-ROM]. ISBN (online) 978-80-223-5471-4, s. 102 - 114

**2024 [02/20] / SVK** - Merica, Marián - Harsa, Pavel - Labašková, Jana. **Ako je to s výskytom cukrovky (diabetes mellitus) u žiakov na základnej škole** [elektronický dokument] = How is it with incidence of diabetes mellitus primary school students In: Žiak, pohyb, edukácia: vedecký zborník 2024: scientific proceedings 2024. Bratislava: Univerzita Komenského v Bratislave, 2024, s. 157-169 [CD-ROM]. ISBN (online) 978-80-223-5909-2, s. 169

#### **OCA18.1 - Characteristics of the output's impact on socio-economic practice**

In creating the chapters, we have oriented our interest not only to the pupil and his or her development, but also to other significant attributes of gender and sexuality in the context of the younger school-age years. It was important to mention the current state of scientific knowledge, its connection with existing theoretical perspectives. Particular attention was also paid to the influence of the media, which have an irreplaceable place in the development of personality in the 21st century. The impact on social and legal practice can be seen in the chapter dealing with the issue of child sexual harassment and its prevention, which is a cross-cutting theme aimed at the protection of children.

#### **OCA19.1 - Characteristics of the output and related activities' impact on the educational process**

The university textbook is primarily intended for university students of pre-primary and primary pedagogy, who are preparing for their future teaching profession. However, other pedagogical or non-pedagogical employees (primary school teachers, etc.) can also draw a lot of knowledge from the textbook. The presented text is mainly based on the study of professional literature by several dozen authors. In addition to this literature, other available professional monographs, magazines, anthologies, scripts were also used, which are listed in the list of used literature at the end of each chapter. They should mainly serve as another source of inspiration when expanding your knowledge in a specific area.

### **2nd evaluated output**

#### **OCA5.2 - Area of assessment**

Preschool and Elementary Pedagogy (1st degree), Teacher Education for Primary Schools (integrated 1st and 2nd degree)

#### **OCA6.2 - Category of the research/ artistic/other output**

scientific output

#### **OCA7.2 - Year of publication of the research/artistic/other output**

2025

#### **OCA8.2 - ID of the record in the Central Registry of Publication Activity (CRPA) or the Central Registry of Artistic Activity (CRAA)**

ID = 2068829

#### **OCA9.2 - Hyperlink to the record in CRPA or CRAA**

<https://petra.uniba.sk/?fn=detailBiblioForm&sid=01F693E10B7407154BB6212DD518>

#### **Title of the publication to which the hyperlink points**

Gender and mathematical anxiety by younger school-age children

#### **Suggested output quality level**

A+

#### **OCA14.2 - Characteristics of the author's contribution**

The author's contribution to the study *Gender and Mathematical Anxiety by Younger School-Age Children* is multifaceted and central to both the research design and its practical application. The author was actively involved in conceptualizing the study, defining research questions, and adapting the internationally recognized mAMAS-E scale to the Slovak educational context, ensuring cultural and linguistic validity. Furthermore, the author coordinated data collection among primary school children, supervised statistical analysis of affective and gender-related variables, and interpreted findings in relation to pedagogical theory and practice. The author also played a key role in translating research results into practical recommendations for classroom teaching, including strategies to foster positive attitudes toward mathematics, reduce anxiety, and support inclusive teaching approaches. Additionally, the author contributed to the integration of the study's outcomes into teacher education courses, emphasizing reflective practice and sensitivity to students' emotional needs. Overall, the author's input reflects a comprehensive engagement with both empirical research and its application in educational contexts, bridging theory and practice to enhance mathematics teaching and learning.

#### **OCA15.2 - Annotation of the output with contextual information concerning the description of creative process and the content of the research/artistic/other activity, etc.**

Štúdia analyzuje výskyt matematickej úzkosti u detí mladšieho školského veku a jej vzťah k pohlaviu. Výskum bol realizovaný na vzorke 257 piatakov z 21 slovenských škôl pomocou štandardizovaného dotazníka mAMAS-E, ktorý hodnotil úroveň úzkosti v matematických situáciách. Tvorivý proces spočíval v adaptácii medzinárodne overeného nástroja na slovenské kultúrne a jazykové prostredie, v precíznom zbere údajov a štatistickej analýze prostredníctvom softvéru R. Výsledky nepreukázali prítomnosť matematickej úzkosti u skúmanej vzorky ani štatisticky významné rozdiely medzi chlapcami a dievčatami. Autori poukazujú na potrebu ďalšieho výskumu zameraného na sociokultúrne faktory ovplyvňujúce vzťah detí k matematike. Štúdia má interdisciplinárny charakter – prepája psychológiu, pedagogiku a štatistiku – a prináša nové poznatky o emocionálnych aspektoch učenia sa matematiky, ktoré môžu slúžiť ako podklad pre didaktické inovácie a preventívne programy v školskom prostredí.

The study explores the occurrence of mathematical anxiety among younger school-age children and its relationship to gender. The research was conducted on a sample of 257 fifth-grade pupils from 21 Slovak schools using the standardized mAMAS-E questionnaire assessing anxiety levels in mathematical contexts. The creative process involved adapting an internationally validated tool to the Slovak linguistic and cultural environment, careful data collection, and statistical analysis using R software. The findings revealed no significant presence of mathematical anxiety among the examined sample and no statistically significant gender differences. The authors highlight the need for further studies addressing socio-cultural determinants of mathematical anxiety. The paper represents an interdisciplinary effort connecting psychology, pedagogy, and data science, offering new insights into the emotional dimension of mathematical learning. It provides valuable implications for educational practice, particularly in designing teaching strategies and preventive interventions that foster positive mathematical experiences among young learners.

#### **OCA16.2 - Annotation of the output in English**

The study *Gender and Mathematical Anxiety by Younger School-Age Children* significantly influences the educational process at both primary and teacher education levels. It offers novel insights into the emotional and social factors affecting mathematics learning, providing empirical evidence that informs the development of didactic strategies and teacher-student interactions. The findings underscore the importance of fostering a positive relationship with mathematics through experiential learning, constructivist methods, and psychologically safe classroom environments that reduce fear of failure. A key contribution of the authors is the adaptation of the internationally recognized mAMAS-E instrument to the Slovak context, thereby extending the national research and pedagogical capacity in measuring affective variables in education. The study's results are integrated into higher education courses for future mathematics teachers and educational psychologists, supporting the development of reflective thinking, inclusive teaching practices, and sensitivity to students' emotional experiences. Overall, the project contributes to the modernization of didactic content, the cultivation of teachers' emotional awareness, and the creation of more equitable, engaging, and supportive learning environments.

#### **OCA18.2 - Characteristics of the output's impact on socio-economic practice**

Výstup *Gender and Mathematical Anxiety by Younger School-Age Children* má významný spoločensko-hospodársky dopad v oblasti vzdelávacej politiky, duševného zdravia a rovnosti príležitostí vo vzdelávaní. Výskum prináša nové empirické poznatky o emocionálnych faktoroch ovplyvňujúcich učenie matematiky u detí mladšieho školského veku, čo umožňuje lepšie porozumieť príčinám nízkej výkonnosti v STEM oblastiach. Zistenie, že matematická úzkosť sa u detí v tomto veku nevyskytuje vo výraznej miere a nie je podmienená pohlavím, má priamy dopad na tvorbu vzdelávacích stratégií zameraných na rovnosť v prístupe k matematickému vzdelávaniu. Výstup podporuje inkluzívne prístupy a prevenciu úzkosti u detí prostredníctvom pozitívnych pedagogických metód, čo má dlhodobý vplyv na rozvoj ľudského kapitálu, najmä v kontexte podpory matematickej gramotnosti a budúcej zamestnatelnosti v technologických profesiách. Tieto poznatky môžu byť využité aj v školských poradenských centrách a v príprave učiteľov, čím sa posilňuje prepojenie výskumu s praxou a prispieva k spoločenskej udržateľnosti vzdelávacích inovácií.

The paper *Gender and Mathematical Anxiety by Younger School-Age Children* has a meaningful socio-economic impact in the areas of education policy, mental health, and gender equality in learning. By providing new empirical evidence about emotional factors influencing mathematical learning in early school-age children, the study enhances understanding of barriers to performance in STEM disciplines. The finding that math anxiety is not significantly present at this age and is not gender-dependent informs the design of educational strategies promoting equal access to mathematical learning. The research supports inclusive teaching approaches and early prevention of learning-related anxiety, which in the long term contributes to the development of human capital and employability in technology-oriented fields. The results can be directly applied in teacher education, school counseling, and policy planning, fostering stronger connections between educational research and classroom practice. This output thus promotes evidence-based educational innovation and supports social sustainability through equitable and emotionally supportive learning environments.

#### OCA19.2 - Characteristics of the output and related activities' impact on the educational process

Výstup *Gender and Mathematical Anxiety by Younger School-Age Children* významne ovplyvňuje vzdelávací proces na úrovni primárneho a učiteľského vzdelávania. Štúdia prináša nové poznatky o emocionálnych a sociálnych faktoroch učenia sa matematiky, ktoré majú priamy dopad na tvorbu didaktických stratégií a prístup učiteľov k žiakom. Zistenia podporujú potrebu rozvíjať pozitívny vzťah detí k matematike prostredníctvom zážitkového učenia, konštruktivistických metód a psychologicky bezpečného prostredia bez strachu z neúspechu. Tvorivý prínos autorov spočíva aj v adaptácii medzinárodného výskumného nástroja (mAMAS-E) do slovenského kontextu, čím sa rozšírila výskumná a pedagogická základňa v oblasti merania afektívnych premenných vo vzdelávaní. Výsledky štúdie sa využívajú vo vysokoškolskom vzdelávaní budúcich učiteľov matematiky a pedagogickej psychológie, kde podporujú rozvoj reflexívneho myslenia a inkluzívnych vyučovacích prístupov. Projekt tím prispieva k modernizácii didaktického obsahu a ku kultivácii citlivosti učiteľov voči emocionálnym aspektom učenia žiakov.

The study *Gender and Mathematical Anxiety by Younger School-Age Children* has a substantial impact on the educational process at both primary and teacher education levels. It provides new insights into the emotional and social dimensions of learning mathematics, directly informing the development of teaching strategies and teacher-student interaction. The findings emphasize the importance of fostering a positive attitude toward mathematics through experiential learning, constructivist approaches, and emotionally safe classroom environments free from fear of failure. The authors' creative contribution lies in the adaptation of the internationally recognized mAMAS-E scale to the Slovak educational context, thereby expanding national research and pedagogical capacity in assessing affective factors in learning. The study's outcomes are applied in university courses for future teachers of mathematics and educational psychology, where they enhance reflective thinking and inclusive teaching competence. This output contributes to the modernization of didactic content, promotes emotional awareness in teaching, and supports the creation of more equitable and engaging learning environments.

### 3rd evaluated output

#### OCA5.3 - Area of assessment

Preschool and Elementary Pedagogy (1st degree), Teacher Education for Primary Schools (integrated 1st and 2nd degree)

#### OCA6.3 - Category of the research/ artistic/other output

scientific output

#### OCA7.3 - Year of publication of the research/artistic/other output

2023

#### OCA8.3 - ID of the record in the Central Registry of Publication Activity (CRPA) or the Central Registry of Artistic Activity (CRAA)

ID: 1119235

### OCA9.3 - Hyperlink to the record in CRPA or CRAA

<https://app.crepc.sk/?fn=detailBiblioForm&sid=DEAC73F7171E81681429125D4860>

### Title of the publication to which the hyperlink points

Changes in motor performance in early school - aged Roma children

### Suggested output quality level

A+

### OCA14.3 - Characteristics of the author's contribution

The authors' contribution lies in the conceptual linkage and comparative analysis of two generations of empirical research conducted over a 20-year interval (2001–2019). The authors systematically digitized and statistically processed data from a sample of 668 Roma children of early school age, enabling the identification of developmental trends in somatic and motor characteristics. The creative contribution is reflected in the development of a methodologically consistent framework for comparing generations, the application of the EUROFIT test battery, and the integration of results into a broader pedagogical, biological, and social context. The study provides new insights into the determinants of healthy development in children from marginalized communities and offers both theoretical and practical recommendations for school physical education and social inclusion.

### OCA15.3 - Annotation of the output with contextual information concerning the description of creative process and the content of the research/artistic/other activity, etc.

Štúdiá sa zameriava na porovnanie somatických a motorických charakteristík rómskych detí mladšieho školského veku v 20-ročnom intervale (2001 – 2019). Autori (M. Merica, M. Belešová, R. Osad'án, P. Petrikán, R. Horváth) realizovali empirický výskum na vzorke 668 detí zo základných škôl v regióne východného Slovenska, pričom využili testy z batérie EUROFIT. Kreatívny proces spočíval v dlhodobom koncepčnom prepojení dvoch generácií výskumov, v digitalizácii a štatistickom spracovaní údajov s cieľom identifikovať vývojové trendy. Výsledky poukázali na významné zlepšenie telesných parametrov, najmä hmotnosti a BMI, a mierne zlepšenie motorických schopností, čo naznačuje posun v životných podmienkach a pohybovej kultúre rómskych detí. Štúdiá predstavuje tvorivý prienik pedagogického, biologického a sociálneho výskumu, ktorý prispieva k poznaniu determinantov zdravého vývinu detí z marginalizovaných komunít a zároveň ponúka teoretické i aplikačné východiská pre školskú telesnú výchovu a sociálnu inklúziu.

The study focuses on comparing the somatic and motor characteristics of Roma children of younger school age over a 20-year interval (2001–2019). The authors (M. Merica, M. Belešová, R. Osad'án, P. Petrikán, R. Horváth) conducted empirical research on a sample of 668 children from primary schools in the eastern Slovakia region, using tests from the EUROFIT battery. The creative process involved a long-term conceptual integration of two generations of research, digitalization, and statistical processing of data to identify developmental trends. The results indicated significant improvements in body parameters, particularly weight and BMI, and a slight improvement in motor abilities, suggesting shifts in the living conditions and physical activity culture of Roma children. The study represents a creative intersection of pedagogical, biological, and social research, contributing to the understanding of determinants of healthy development in children from marginalized communities, while also providing theoretical and practical foundations for school physical education and social inclusion.

### OCA16.3 - Annotation of the output in English

This study examines the somatic and motor characteristics of Roma children of early school age over a 20-year period (2001–2019). A total of 668 children from primary schools in Eastern Slovakia participated in the empirical research, which employed the EUROFIT test battery to assess physical and motor development. The study integrates data from two generations of research, systematically digitized and statistically analyzed to identify developmental trends. Findings indicate a significant improvement in body parameters, particularly weight and BMI, alongside modest enhancements in motor skills, reflecting changes in living conditions and physical activity patterns among Roma children. The study represents a creative intersection of pedagogical, biological, and social research, offering new insights into the determinants of healthy development in children from marginalized communities. Its results provide both theoretical perspectives and practical recommendations for school physical education and social inclusion initiatives. By linking longitudinal data with contemporary social and educational contexts, the study contributes to a deeper understanding of developmental dynamics and informs strategies aimed at supporting the well-being and inclusion of Roma children.

### OCA17.3 - List of maximum 5 most significant citations corresponding to the output

2024 [02/20] / SVK - Červenka, Denis - Ondrejková, Oľga Filipa - Gregor, Tomáš - Kaplánová, Adriana. Vplyv systematickej psychologické prípravy na výkonnosť reprezentantov v športovej streľbe [elektronický dokument] = Impact of systematic psychological preparation on top athletes performance in sport shooting In: Žiak, pohyb, edukácia: vedecký zborník 2024: scientific proceedings 2024. Bratislava: Univerzita Komenského v Bratislave, 2024, s. 37-49 [CD-ROM]. ISBN (online) 978-80-223-5909-2, s. 4

2024 [02/20] / SVK - Ondrejková, Oľga Filipa - Gregor, Tomáš - Červenka, Denis - Harsa, Pavel. Vplyv nepriaznivých skúseností z detstva na biopsycho-sociálne-duchovné aspekty vývoja dieťaťa a dospelujúceho [elektronický dokument] = Impact of adverse childhood experiences on the biopsycho-socio-spiritual aspects of child and adolescent development In: Žiak, pohyb, edukácia: vedecký zborník 2024: scientific proceedings 2024. Bratislava: Univerzita Komenského v Bratislave, 2024, s. 177-188 [CD-ROM]. ISBN (online) 978-80-223-5909-2, s. 187

2024 [02/20] / POL - Póltoranos, Martyna - Perkowski, Radoslaw. Assessment of physical fitness of young rugby players of the club „MKS Ogniwo Sopot" after a year of systematic training [elektronický dokument]. DOI 10.12775/JEHS.2024.61.51862 In: Journal of education, health and sport. Bydgosz: University in Bydgosz, 2024, Roč. 61, 51862, s. [1-16] [online]. ISSN (online) 2391-8306, s. 11

2024 [02/20] / SVK - Skrypko, Anatol - Ševčík, Peter - Skripko, Denis - Skripko, Maxim. Training technologies in conditioning of footballers [elektronický dokument] In: Žiak, pohyb, edukácia: vedecký zborník 2024: scientific proceedings 2024. Bratislava: Univerzita Komenského v Bratislave, 2024, s. 20-29 [CD-ROM]. ISBN (online) 978-80-223-5909-2, s. 21

### OCA18.3 - Characteristics of the output's impact on socio-economic practice

Výsledky štúdie *Changes in Motor Performance in Early School-Aged Roma Children* majú významný spoločensko-hospodársky dopad v oblasti verejného zdravia, vzdelávania a sociálnej inklúzie. Empirické zistenia o somatickom a motorickom vývine rómskych detí poskytujú podklady pre tvorbu efektívnych preventívnych programov v školách, zameraných na podporu pohybovej aktivity, zdravého životného štýlu a vyrovnávanie regionálnych nerovností. Zlepšené telesné ukazovatele a motorická výkonnosť signalizujú pozitívne zmeny v životných podmienkach marginalizovaných komunít, ktoré sú zároveň indikátorom úspešnosti integračných a vzdelávacích politík. Výstup má aj aplikačný význam pre učiteľov telesnej výchovy, regionálne úrady verejného zdravotníctva a neziskové organizácie, ktoré pracujú s deťmi zo sociálne znevýhodneného prostredia. V širšom kontexte prispieva k poznaniu o prepojení socioekonomických faktorov, fyzického rozvoja a školského výkonu detí, čo podporuje interdisciplinárny prístup v pedagogickej, zdravotnej a sociálnej politike.

The results of the study *Changes in Motor Performance in Early School-Aged Roma Children* have significant socio-economic implications in the areas of public health, education, and social inclusion. The empirical findings on the somatic and motor development of Roma children provide a basis for the design of effective preventive programs in schools, aimed at promoting physical activity, a healthy lifestyle, and reducing regional disparities. Improved body indicators and motor performance signal positive changes in the living conditions of marginalized communities, which also serve as indicators of the success of integration and educational policies. The findings also have practical relevance for physical education teachers, regional public health authorities, and non-governmental organizations working with children from socially disadvantaged backgrounds. In a broader context, the study contributes to understanding the interconnections between socio-economic factors, physical development, and school performance in children, supporting an interdisciplinary approach in educational, health, and social policy.

### OCA19.3 - Characteristics of the output and related activities' impact on the educational process

Výstup štúdie *Changes in Motor Performance in Early School-Aged Roma Children* má priamy dopad na vzdelávací proces v oblasti primárneho vzdelávania, pedagogiky telesnej výchovy a inkluzívneho vzdelávania. Výskumné zistenia rozširujú poznatkovú základňu o vývine motorických a somatických schopností detí z rôzneho sociokultúrneho prostredia, čím podporujú individualizovaný a diferencovaný prístup v edukácii. Autori štúdie aplikovali výsledky v pedagogickej praxi prostredníctvom metodických odporúčaní pre učiteľov telesnej výchovy a školských programov zameraných na rozvoj pohybových kompetencií. Výstup zároveň prispieva k rozvoju kompetencií budúcich učiteľov na pedagogických fakultách, keďže ponúka model výskumnej práce, ktorá prepája empirické dáta s pedagogickou praxou a sociálnym kontextom. Sprostredkovaním poznatkov o vývine rómskych detí sa posilňuje aj interkultúrna senzitivita vo vzdelávaní a dôraz na rovnosť príležitostí. Projekt tak podporuje modernizáciu obsahu vzdelávania v oblasti telesnej výchovy, didaktiky a inkluzívnej pedagogiky a prispieva k formovaniu pedagogického výskumu orientovaného na prax.

The output of the study *Changes in Motor Performance in Early School-Aged Roma Children* has a direct impact on the educational process in primary education, physical education pedagogy, and inclusive education. The research findings expand the knowledge base on the development of motor and somatic abilities in children from diverse socio-cultural backgrounds, thereby supporting an individualized and differentiated approach to education. The authors of the study applied the results in pedagogical practice through methodological recommendations for physical education teachers and school programs aimed at developing motor competencies. The findings also contribute to the development of competencies of future teachers at pedagogical faculties, as they provide a model of research that integrates empirical data with pedagogical practice and the social context. By providing insights into the development of Roma children, the study also strengthens intercultural sensitivity in education and emphasizes equal opportunities. The project thus supports the modernization of educational content in physical education, didactics, and inclusive pedagogy and contributes to the formation of practice-oriented educational research.

#### 4th evaluated output

##### OCA5.4 - Area of assessment

Preschool and Elementary Pedagogy (1st degree), Teacher Education for Primary Schools (integrated 1st and 2nd degree)

##### OCA6.4 - Category of the research/ artistic/other output

scientific output

##### OCA7.4 - Year of publication of the research/artistic/other output

2021

##### OCA8.4 - ID of the record in the Central Registry of Publication Activity (CRPA) or the Central Registry of Artistic Activity (CRAA)

ID: 315381

##### OCA9.4 - Hyperlink to the record in CRPA or CRAA

<https://app.crepc.sk/?fn=detailBiblioForm&sid=55621F876DA87463664D036671>

##### Title of the publication to which the hyperlink points

Comparison of physical ability and physical performance of children in primary education

##### Suggested output quality level

A+

##### OCA14.4 - Characteristics of the author's contribution

The authors' contribution lies in the systematic empirical investigation of motor skills and physical fitness of younger school-age children, aiming to compare the performance of pupils from urban and rural areas. They assessed 104 students from the second and fourth grades using nine motor tests and statistically analyzed differences with Student's t-test. The creative and analytical contribution is reflected in identifying differences based on place of residence, age, and gender, as well as in comparing results with existing data from other authors. The study also evaluates somatometric indicators, including body weight, height, and BMI, and interprets them in the context of motor performance. The authors' contribution further lies in synthesizing these findings into a coherent framework, providing evidence-based recommendations for physical education and sports pedagogy, and enhancing understanding of factors influencing physical fitness in primary school children.

##### OCA15.4 - Annotation of the output with contextual information concerning the description of creative process and the content of the research/artistic/other activity, etc.

Autori vo svojom článku pristupujú k problematike telesnej zdatnosti a pohybovej výkonnosti detí v primárnom vzdelávaní na základe diagnostikovania ich pohybových schopností. Cieľom článku je zhodnotiť a porovnať pohybové schopnosti detí mladšieho školského veku na dedine a v meste. Vzorku tvorilo 104 žiakov. Boli to chlapci a dievčatá štvrtého a druhého ročníka na 1. stupni základnej školy. Na základe využitia deviatich motorických testov sme pomocou štatistických ukazovateľov Studentovho t-testu preukázali štatisticky vyššiu výkonnosť detí z mesta v porovnaní s deťmi z dediny. Zároveň testy motoriky preukázali vyššiu výkonnosť detí vo štvrtom ročníku v porovnaní s deťmi na druhom stupni - rovnako aj pri testovaní chlapcov a dievčat. U chlapcov sme celkovo namerali aj vyššiu fyzickú výkonnosť ako u dievčat. Článok prináša aj porovnanie pohybových schopností skúmanej skupiny so súbormi iných autorov. Článok prináša aj vyhodnotenie indexu telesnej hmotnosti (BMI) detí nášho súboru v primárnom vzdelávaní, ako aj vyhodnotenie a porovnanie telesnej výšky a telesnej hmotnosti skúmaného súboru, ako aj porovnanie s nameranými somatometrickými ukazovateľmi iných autorov.

The authors in their article approach the issue of physical ability and physical performance of children in primary education on the basis of diagnosing their motor skills. The aim of the article is to evaluate and compare the motor skills of children of younger school age in the village and in the city. The sample consisted of 104 students. They were boys and girls of the fourth and second year at the 1st stage of primary school. Based on the use of nine motor tests, using statistical indicators of the Student's t-test, we demonstrated statistically higher performance of children from the city, compared to children from the village. At the same time, tests of motor skills showed higher performance of children in the fourth grade compared to children in the second grade - as well as in testing boys and girls. We also measured higher physical performance in boys overall than in girls. The article also brings a comparison of motor skills of the examined group with files by other authors. The article also provides an evaluation of the Body Mass Index (BMI) of children in our group in primary education, as well as an evaluation and comparison of body height and body weight of the examined group, as well as a comparison with measured somatometric indicators of other authors.

#### OCA16.4 - Annotation of the output in English

The authors in their article approach the issue of physical ability and physical performance of children in primary education on the basis of diagnosing their motor skills. The aim of the article is to evaluate and compare the motor skills of children of younger school age in the village and in the city. The sample consisted of 104 students. They were boys and girls of the fourth and second year at the 1st stage of primary school. Based on the use of nine motor tests, using statistical indicators of the Student's t-test, we demonstrated statistically higher performance of children from the city, compared to children from the village. At the same time, tests of motor skills showed higher performance of children in the fourth grade compared to children in the second grade - as well as in testing boys and girls. We also measured higher physical performance in boys overall than in girls. The article also brings a comparison of motor skills of the examined group with files by other authors. The article also provides an evaluation of the Body Mass Index (BMI) of children in our group in primary education, as well as an evaluation and comparison of body height and body weight of the examined group, as well as a comparison with measured somatometric indicators of other authors.

#### OCA17.4 - List of maximum 5 most significant citations corresponding to the output

- [n2] 2022 zz ~ Kaczor, Mateusz - Duda, Henryk - Kajderowicz, Patryk - Rydzik, Lukasz - Ambroży, Tadeusz: Application of teaching intellectualization in training aimed at creating a game environment among young footballers. In: Antropomotoryka. Journal of Kinesiology and Exercise Sciences, 2022, roč. 32, č. 32, s. 15-24
- [n2] 2022 sk ~ Harsa, Pavel - Břeňová, Michaela - Michalec, Jiří - Heidingerová, Jana - Kaplánová, Adriana - Gregor, Tomáš - Schönová, Kateřina: Dopad SARS-COV-2 pandemie na děti s ADHD. In: Žiak, pohyb, edukácia : vedecký zborník 2022. Bratislava : Univerzita Komenského v Bratislave, 2022, S. 79
- [n2] 2022 sk ~ Labudová, Jana - Gregor, Tomáš - Kaplánová, Adriana - Zbončák, Ľubomír: Osobnostné a motivačné vlastnosti výkonnostných pretekárov v synchronizovanom plávaní. In: Žiak, pohyb, edukácia : vedecký zborník 2022. Bratislava : Univerzita Komenského v Bratislave, 2022, S. 245
- [n2] 2022 sk ~ Ružbarská, Ingrid: Manipulačné a lokomočné zručnosti detí pri prechode z predprimárneho na primárny stupeň vzdelávania. In: Štúdie z predškolskej pedagogiky 2022 : nekonferenčný vedecký recenzovaný zborník. Prešov : Slovenský výbor Svetovej organizácie pre predškolskú výchovu, 2022, S. 99
- [n2] 2022 sk ~ Duda, Henryk - Stula, Aleksander - Soroka, Andrzej: Prakseologiczna charakterystyka modelu gry Roberta Lewandowskiego jako efektywnego piłkarza we współczesnym futbolu. In: Žiak, pohyb, edukácia : vedecký zborník 2022. Bratislava : Univerzita Komenského v Bratislave, 2022, S. 63

#### OCA18.4 - Characteristics of the output's impact on socio-economic practice

Výsledky výstupu prinášajú informácie ohľadom telesnej zdatnosti a pohybovej výkonnosti detí v primárnom vzdelávaní. Zistenia výskumu naznačujú fyzické limity skupiny detí, čo môže mať neskoršie dopady na ich možnosti výberu ďalších športových aktivít ako aj na ich zdravie. V spoločensko-hospodárskej praxi tak tieto deti predstavujú skupinu, ktorá bude potrebovať osobitnú podporu a starostlivosť, aby neprišlo k ešte väčšiemu prehĺbovaniu rozdielov v zdatnosti a pohybovej výkonnosti oboch skupín detí. Práve realizovaný výskum predstavuje posun ku skúmanej problematike, keďže vyvracia zaužívanú predstavu o lepšej pohybovej výkonnosti a zdatnosti detí z dedín v porovnaní s mestskými deťmi.

The results of the study provide information regarding the physical fitness and motor performance of children in primary education. The research findings indicate the physical limits of this group of children, which may later affect their options for participating in additional sports activities as well as their overall health. In socio-economic practice, these children represent a group that will require special support and care to prevent further widening of disparities in fitness and motor performance between different groups of children. The conducted research marks a significant advancement in the field, as it challenges the commonly held belief that children from rural areas have better motor performance and physical fitness compared to their urban peers.

#### **OCA19.4 - Characteristics of the output and related activities' impact on the educational process**

Výsledky výskumu naznačujú potrebu diferencovaného prístupu vo výchovno-vzdelávacom procese, ktorý by zohľadňoval rozdielne skúsenosti s pohybovými aktivitami oboch skupín detí. Deti, ktoré sa počas pandémie koronavírusu nezúčastňovali na pohybových aktivitách, vykazovali nižšiu úroveň telesnej zdatnosti, čo sa prejavilo aj na ich fyzických schopnostiach. Vo výchovno-vzdelávacom procese týchto detí by sa mali zohľadniť ich špecifické charakteristiky, čo by mohlo pomôcť odstrániť zistené rozdiely medzi oboma skupinami detí v telesnej zdatnosti a pohybovej aktivite.

The research findings indicate the need for a differentiated approach in the educational process, taking into account the varying experiences with physical activities of the two groups of children. Children who did not participate in physical activities during the coronavirus pandemic showed lower levels of physical fitness, which was also reflected in their physical abilities. In the educational process, the specific characteristics of these children should be considered, which could help eliminate the observed differences between the two groups in terms of physical fitness and activity levels.

### **5th evaluated output**

#### **OCA5.5 - Area of assessment**

Preschool and Elementary Pedagogy (1st degree), Teacher Education for Primary Schools (integrated 1st and 2nd degree)

#### **OCA6.5 - Category of the research/ artistic/other output**

scientific output

#### **OCA7.5 - Year of publication of the research/artistic/other output**

2022

#### **OCA8.5 - ID of the record in the Central Registry of Publication Activity (CRPA) or the Central Registry of Artistic Activity (CRAA)**

ID = 489684

#### **OCA9.5 - Hyperlink to the record in CRPA or CRAA**

<https://app.crepc.sk/?fn=detailBiblioForm&sid=5581560727F955EBA0D15FA790>

#### **OCA14.5 - Characteristics of the author's contribution**

The authors' contribution lies in the systematic investigation of teachers' attitudes toward inclusive education in the context of implementing the new Inclusive Education Strategy in Slovakia. They employed a quantitative approach using Mahát's "Multidimensional Attitudes Toward Inclusive Education Scale (MATIES)" and comprehensively analyzed the cognitive, affective, and behavioral components of attitudes. The creative and analytical contribution is reflected in identifying statistically significant differences among age groups of teachers, highlighting the implications of an aging teaching population. The study provides unique, empirically grounded data on the transformation of traditional schools into inclusive ones and emphasizes the importance of considering teachers' attitudes in planning and implementing educational changes. Furthermore, the authors' contribution includes synthesizing findings into a coherent framework that can serve as a basis for policy development, practical recommendations, and further research in the field of inclusive education.

#### **OCA15.5 - Annotation of the output with contextual information concerning the description of creative process**

## and the content of the research/artistic/other activity, etc.

Štúdia poskytuje komplexný prehľad súčasného stavu inkluzívneho vzdelávania na Slovensku. Postoje učiteľov k inklúzii predstavujú kľúčový determinant úspechu alebo neúspechu integrácie žiakov so ŠVVP do bežných škôl. Hlavným cieľom štúdie bolo preskúmať tieto postoje v kontexte implementácie novej Stratégie inkluzívneho vzdelávania. V kvantitatívnej štúdii bola použitá Mahátova [1] „Multidimenzionálna škála postojov k inkluzívnemu vzdelávaniu (MATIES)“ a pomocou jednorozmerných, dvojrozmerných a viacrozmerných štatistických metód boli analyzované tri zložky postojov – kognitívna, afektívna a behaviorálna. Osobitná pozornosť bola venovaná vekovým špecifikám, vzhľadom na starnutie učiteľskej populácie na Slovensku. Výsledky odhalili štatisticky významné rozdiely v afektívnej a behaviorálnej zložke medzi skúmanými vekovými skupinami. Vzhľadom na absenciu rozsiahleho výskumu postojov učiteľov k transformácii školskej integrácie na inkluzívne vzdelávanie štúdia poskytuje unikátne dáta, ktoré môžu podporiť proces transformácie tradičných škôl na inkluzívne a zdôrazňuje význam zohľadnenia postojov učiteľov pri zavádzaní akýchkoľvek zmien.

The study provides a comprehensive overview of the current state of inclusive education in Slovakia. Teachers' attitudes toward inclusion constitute a key determinant of the success or failure of integrating students with special educational needs (SEN) into mainstream schools. The primary aim of the study was to examine these attitudes in the context of the implementation of the new Inclusive Education Strategy in Slovakia. In this quantitative study, Mahát's [1] *Multidimensional Attitudes Toward Inclusive Education Scale (MATIES)* was employed, and one-dimensional, two-dimensional, and multidimensional statistical analyses were applied to investigate three components of teacher attitudes: cognitive, affective, and behavioral. Special attention was given to age-related specificities due to the aging teaching workforce in Slovakia. The findings revealed statistically significant differences in the affective and behavioral components between the examined age groups. Given the lack of extensive research on teachers' attitudes toward replacing school integration with full inclusive education, this study provides unique data to support the transformation of traditional schools into inclusive environments and emphasizes the importance of considering teachers' attitudes when implementing any educational reforms.

## OCA16.5 - Annotation of the output in English

In the study, an overview of the current situation in the field of inclusive education in Slovakia is presented. Since teachers' attitudes towards inclusive education are among the key determinants of the success or failure of SEN students' inclusion in mainstream schools, the main objective of the study was to investigate them in the context of implementing the new Strategy for Inclusive Education in Slovakia. In this quantitative study, Mahat [1] "The Multidimensional Attitudes Toward Inclusive Education Scale (MATIES)" was used and three components of teachers' attitudes – cognitive, affective, and behavioral – were examined by means of univariate, bivariate, and multivariate methods of statistical analysis. As the aging of the teaching population is an issue in Slovakia, age-related peculiarities were focused on in the study. The findings revealed statistically significant differences in the affective and behavioral components between the two examined age-groups of teachers. Since no extensive study has been focused on teachers' attitudes towards replacing school integration by school inclusion in Slovakia, the proposed study aims to fill the gap and provide unique data useful in the process of changing traditional schools into inclusive ones. The obtained results also point to the importance of considering teachers' attitudes towards any changes to be introduced.

## OCA17.5 - List of maximum 5 most significant citations corresponding to the output

- [n1] 2022 zz ~ Lapsomboonkamol, Suthiluk - Songkram, Noawanit - Thamsuwan, Pattarporn - Songkram, Nutthakorn: The mediating effect of knowledge integration on the relationship between capability and innovative behaviour. In: *Emerging Science Journal*, suppl. roč. 6, 2022, s. 106 -- SCOPUS
- [n1] 2022 zz ~ Devolli, Ardita - Avdiu-Kryeziu, Shqipe: Music as an inclusion tool : can primary school teachers use it effectively? In: *Rast Muzikoloji Dergisi*, roč. 10, č. 3, 2022, s. 346 -- SCOPUS
- [n2] 2022 sk ~ Merica, Marián - Trubanová, Klaudia: Plávanie v primárnej edukácii v meste a na dedine. In: *Žiak, pohyb, edukácia : vedecký zborník 2022*. Bratislava : Univerzita Komenského, 2022, S. 103
- [n2] 2023 zz ~ Polyzopoulou, Konstantia - Tsakiridou, Helen: Attitudes of Greek general education teachers concerning inclusion policy. In: *European Journal of Education Studies*, roč. 10, č. 6, 2023, s. 326
- [n2] 2023 zz ~ Turchyna, Iryna - Milutina, Kateryna - Vasianovych, Igor - Berezan, Valentyna - Kovalenko, Viktoriia: Educacao inclusiva na Ucrania : a utilizacao de tecnologias modernas e inovadoras em tempos de crise (análise da literatura). In: *Revista on line de Política e Gestao Educacional*, roč. 27, č. 2, 2023, art. no. e023034, s. 13

## OCA18.5 - Characteristics of the output's impact on socio-economic practice

Zistenia z príspevku môžu podporiť rozvoj programov zameraných na skvalitnenie inkluzívneho vzdelávania žiakov so ŠVVP do bežných škôl. Zisťovanie postojov učiteľov k inklúzii môže ovplyvniť proces zmien v školskom systéme. Súčasne sa tak môže efektívnejšie podporiť prax zameraná na znižovanie segregácie detí so ŠVVP. Celkový dopad výskumných zistení môže prispieť k dlhodobému rozvoju inkluzívnej politiky a následne integrácii detí so ŠVVP do širšej spoločnosti.

The findings of this study can support the development of programs aimed at improving inclusive education for students with special educational needs (SEN) in mainstream schools. Examining teachers' attitudes toward inclusion can influence the process of reforms within the school system. At the same time, it can more effectively promote practices aimed at reducing the segregation of students with SEN. Overall, the research outcomes may contribute to the long-term development of inclusive policies and, consequently, to the integration of students with SEN into broader society.

#### **OCA19.5 - Characteristics of the output and related activities' impact on the educational process**

Výstup štúdie prináša významný prínos pre vzdelávací proces, najmä v oblasti inkluzívneho vzdelávania. Poskytuje empirické dôkazy o postojoch učiteľov k inklúzii žiakov so ŠVVP, čo umožňuje identifikovať prekážky aj motivačné faktory pri zavádzaní inkluzívnych opatrení. Na základe týchto poznatkov je možné navrhovať ciele metodické odporúčania a vzdelávacie programy pre učiteľov, ktoré zlepšujú ich pripravenosť a kompetencie v inkluzívnom prostredí. Implementácia aktivít vychádzajúcich z výskumných výsledkov môže podporiť diferencovaný prístup vo vyučovaní, zvýšiť efektivitu pedagogickej práce a zlepšiť integráciu žiakov so ŠVVP do bežných tried. Súčasne výstup napomáha budovaniu interkultúrnej citlivosti a zohľadňovaniu individuálnych potrieb žiakov, čím prispieva k rovnosti príležitostí. Dlhodobo môže výstup stimulovať transformáciu tradičných škôl na inkluzívne prostredia, čo podporuje modernizáciu vzdelávacieho procesu, rozvoj pedagogických kompetencií učiteľov a pozitívny vplyv na sociálnu inklúziu detí so ŠVVP.

The study's output makes a significant contribution to the educational process, particularly in the field of inclusive education. It provides empirical evidence on teachers' attitudes toward the inclusion of students with special educational needs (SEN), allowing the identification of both barriers and motivating factors in implementing inclusive measures. Based on these insights, targeted methodological recommendations and training programs for teachers can be developed to enhance their readiness and competencies in inclusive environments. Implementing activities derived from the research findings can support differentiated approaches in teaching, increase pedagogical effectiveness, and improve the integration of students with SEN into mainstream classrooms. Simultaneously, the output fosters intercultural sensitivity and consideration of students' individual needs, promoting equal opportunities. In the long term, the findings can stimulate the transformation of traditional schools into inclusive environments, thereby supporting the modernization of the educational process, the development of teachers' professional competencies, and the positive social inclusion of students with SEN.

**Date of last update**

20.10.2025