

DOCUMENT

Name and surname doc. PaedDr. Peter Mačura, Philosophiae doctor
Document type: Characteristics of the submitted research/ artistic/other output
The name of the university Catholic University in Ružomberok
The seat of the university Hrabovská cesta 1A, 034 01 Ružomberok
The name of the faculty Faculty of Education
The seat of the faculty Hrabovská cesta 1, 034 01 Ružomberok

OCA1. - Surname awarded to the assessed person

Mačura

OCA2. - Name awarded to the assessed person

Peter

OCA3. - Degrees awarded to the assessed person

doc. PaedDr., PhD.

OCA4. - Hyperlink to the entry of the person in the Register of university staff

<https://www.portalvs.sk/regzam/detail/4838>

1st evaluated output

1.

OCA5. - Area of assessment

PhD. Theory and Didactics of Physical and Sports Education

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

scientific output

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

2020

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

ID - 200346

OCA9. - Hyperlink to the record in CRPA or CRAA

[https://app.crepc.sk/?](https://app.crepc.sk/?fn=detailBiblioFormChildGHTMA&sid=F68030BE5EA3121E98289F2B08&seo=CREP%C4%8C-detail-kapitola-/-pr%C3%Adspevok)

[fn=detailBiblioFormChildGHTMA&sid=F68030BE5EA3121E98289F2B08&seo=CREP%C4%8C-detail-kapitola-/-pr%C3%Adspevok](https://app.crepc.sk/?fn=detailBiblioFormChildGHTMA&sid=F68030BE5EA3121E98289F2B08&seo=CREP%C4%8C-detail-kapitola-/-pr%C3%Adspevok)

Title of the publication to which the hyperlink points

Basic motor competencies in the 1st and 2nd grade elementary school children in Slovakia

Justification of the RATP

The submitted article addresses the issue of basic motor competencies of first- and second-grade primary school pupils in Slovakia, which is a current topic given the decline in spontaneous physical activity among children in contemporary European society. The authors build on the concept of motor competencies as functional prerequisites for children's active participation in sport and physical activities. The research is theoretically grounded in the internationally recognized MOBAK 1-2 test system, which enables objective assessment of two domains – object control and self-movement. The article responds to the need for systematic mapping of the motor competence levels of Slovak children and creates space for international comparison of results. Its significance also lies in the identification of gender differences, as the findings indicate a higher level of object control skills in boys and relatively better results of girls in self-movement. At the same time, the results show that higher age does not automatically guarantee better performance across all monitored areas. The theoretical contribution of the study lies in expanding knowledge about the determinants of motor performance in early school age and highlighting the need for more precise consideration of age, gender, and testing period when interpreting results. Its practical significance lies in the possibility of applying the findings to the development and modification of physical and sports education curricula at both national and European levels.

OCA14. - Characteristics of the author's contribution

Author's contribution: 30%. Development of the research project, acquisition of information sources, writing of the research report, creation of graphs.

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

Predkladaný výstup predstavuje odborný vedecký článok zameraný na analýzu úrovne základných motorických kompetencií žiakov 1. a 2. ročníka základných škôl na Slovensku. Tvorivý proces vychádzal z aktuálneho spoločenského kontextu poklesu spontánnej pohybovej aktivity detí a potreby objektívneho hodnotenia ich pohybovej pripravenosti. Autori realizovali empirický výskum s využitím štandardizovanej testovej batérie MOBAK 1-2, ktorá umožňuje hodnotiť kompetencie v oblasti manipulácie s predmetom a seba-pohybu. Súčasťou tvorby bolo spracovanie a štatistické vyhodnotenie dát (n = 307) so zameraním na vekové a rodové rozdiely. Obsah článku zahŕňa teoretické východiská konceptu motorických kompetencií, metodologický rámec výskumu, prezentáciu výsledkov a ich diskusiu v medzinárodnom kontexte. Výstup prináša nové poznatky o úrovni pohybových kompetencií slovenských detí mladšieho školského veku a poskytuje odborný podklad pre optimalizáciu obsahu telesnej a športovej výchovy.

The presented output is a scientific article focused on analysing the level of basic motor competencies among first- and second-grade primary school children in Slovakia. The creative process was grounded in the current societal context of declining spontaneous physical activity in children and the need for objective assessment of their motor readiness. The authors conducted empirical research using the standardized MOBAK 1-2 test battery, which evaluates competencies in object movement and self-movement domains. The development of the study included data collection and statistical analysis (n = 307), with particular emphasis on age- and gender-related differences. The content of the article comprises the theoretical background of the motor competence concept, the methodological framework, presentation of results, and discussion within an international research context. The output contributes new findings regarding the motor competence level of Slovak primary school children and provides a professional basis for optimizing the content of physical and sports education.

OCA16. - Annotation of the output in English

The presented output is a scientific article focused on analysing the level of basic motor competencies among first- and second-grade primary school children in Slovakia. The creative process was grounded in the current societal context of declining spontaneous physical activity in children and the need for objective assessment of their motor readiness. The authors conducted empirical research using the standardized MOBAK 1-2 test battery, which evaluates competencies in object movement and self-movement domains. The development of the study included data collection and statistical analysis (n = 307), with particular emphasis on age- and gender-related differences. The content of the article comprises the theoretical background of the motor competence concept, the methodological framework, presentation of results, and discussion within an international research context. The output contributes new findings regarding the motor competence level of Slovak primary school children and provides a professional basis for optimizing the content of physical and sports education.

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

457169: Hodnotiaci proces v telesnej a športovej výchove, vzdelávacia oblasť Zdravie a pohyb (13. časť) / Antala, Branislav [Autor, 100%].

In: *Didaktika telesnej a športovej výchovy pre vzdelávaciu oblasť Zdravie a pohyb* [textový dokument (print)] : vybrané kapitoly / Antala, Branislav [Autor] ; Balga, Tibor [Autor] ; Šmela, Pavel [Autor] ; Pačesová, Petra [Autor] ; Luptáková, Martina [Autor] ; Luptáková, Gabriela [Autor] ; Popluhárová, Monika [Autor] ; Masaryková, Dana [Recenzent] ; Kraček, Stanislav [Recenzent]. – 1. vyd. – Bratislava (Slovensko) : Slovenská vedecká spoločnosť pre telesnú výchovu a šport, 2021. – ISBN 978-80-8251-006-8, s. 295-313 [1,30 AH] [tlačaná forma]

244783: Pohybové kompetencie v predprimárnom a primárnom vzdelávaní [elektronický dokument] [textový dokument (print)] [monografia (do 2021)] / Masaryková, Dana [Autor, 100%] ; Labudová, Jana [Recenzent] ; Antala, Branislav [Recenzent]. – 1. vyd. – Trnava (Slovensko) : Trnavská univerzita v Trnave. Pedagogická fakulta, 2021. – 85 s. [4,05 AH] [online] [tlačaná forma]. – ISBN 978-80-568-0224-3. – ISBN 978-80-568-0238-0

1414865: Úroveň motorických kompetencií žiactva na 1. stupni základnej školy v meste a na vidieku = Level of motor competences of pupils of the 1st stage of primary school in the city and countryside / Janeček, Tomáš [Autor, 40%] ; Luptáková, Martina [Autor, 30%] ; Procházková, Eva [Autor, 30%]. – [recenzované].

In: *Telesná výchova & šport* [elektronický dokument] [textový dokument (print)] . – Bratislava (Slovensko) : Slovenská vedecká spoločnosť pre telesnú výchovu a šport. – ISSN 1335-2245. – ISSN (online) 2730-017X. – Roč. 35, č. 1 (2025), s. 31-43 [online] [tlačaná forma]

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

Výsledky kolektívneho výskumu základných pohybových kompetencií detí 1. a 2. tried základnej školy umožňujú modifikovať záväzné pedagogické dokumenty Štátny vzdelávací program a Školské vzdelávacie programy jednotlivých škôl v oblasti základných pohybových kompetencií. Kladne sa ovplyvní budúci zdravotný stav obyvateľstva v dospelosti a starobe, čo ušetrí štátne prostriedky na zdravotnú starostlivosť.

The results of collective research on the fundamental movement competencies of children in the 1st and 2nd grades of primary school make it possible to modify the mandatory pedagogical documents—the State Educational Program and the School Educational Programs of individual schools—in the area of fundamental movement competencies. This will positively influence the future health status of the population in adulthood and old age, thereby saving state resources on healthcare.

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

Výstup má priamy dopad na vzdelávací proces v oblasti telesnej a športovej výchovy na primárnom stupni vzdelávania. Identifikáciou úrovne základných motorických kompetencií žiakov 1. a 2. ročníka poskytuje objektívne údaje, ktoré umožňujú učiteľom cielene prispôbiť obsah, metódy a intenzitu vyučovania aktuálnym schopnostiam detí. Zistené vekové a rodové rozdiely podporujú diferenciáciu výučby a individualizovaný prístup v pedagogickej praxi.

Výsledky zároveň vytvárajú odborný podklad pre inovácie školských vzdelávacích programov a pre metodické usmernenia v oblasti rozvoja pohybových kompetencií. Súvisiace aktivity, ako prezentácia výsledkov na odborných fórach a ich implementácia do prípravy budúcich učiteľov, prispievajú k zvyšovaniu kvality pedagogickej prípravy. Výstup podporuje systematické hodnotenie pohybovej výkonnosti žiakov a posilňuje význam včasnej diagnostiky ako nástroja prevencie pohybových deficitov.

Impact of the Output and Related Activities on the Educational Process

The output has a direct impact on the educational process in the field of physical and sports education at the primary level. By identifying the level of basic motor competencies in first- and second-grade pupils, it provides objective data enabling teachers to adjust curriculum content, teaching methods, and intensity according to children's actual abilities. The identified age- and gender-related differences support differentiated instruction and an individualized pedagogical approach.

The findings also create a professional basis for innovation in school educational programs and methodological guidelines focused on developing motor competencies. Related activities, such as presenting the results at professional forums and integrating them into pre-service teacher education, contribute to improving the quality of teacher training. The output promotes systematic assessment of pupils' motor performance and emphasizes the importance of early diagnostics as a preventive tool against motor deficits.

2nd evaluated output

1.

OCA5. - Area of assessment

PhD. Theory and Didactics of Physical and Sports Education

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

scientific output

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

2013

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

ID - 262093

OCA9. - Hyperlink to the record in CRPA or CRAA

[https://app.crepc.sk/?](https://app.crepc.sk/?fn=detailBiblioFormChildA1DMKK&sid=10DD5AAEB5A65C4202FBF840DA&seo=CREP%C4%8C-detail-kniha)

[fn=detailBiblioFormChildA1DMKK&sid=10DD5AAEB5A65C4202FBF840DA&seo=CREP%C4%8C-detail-kniha](https://app.crepc.sk/?fn=detailBiblioFormChildA1DMKK&sid=10DD5AAEB5A65C4202FBF840DA&seo=CREP%C4%8C-detail-kniha)

Title of the publication to which the hyperlink points

Physical factors in basketball shooting

Justification of the RATP

The publication *Physical Factors in Basketball Shooting* presents an original scientific and theoretical work focused on a comprehensive analysis of the physical, biomechanical, and material factors influencing shooting success in basketball. The work systematically integrates knowledge from mechanics, biomechanics, mathematics, and sports science and applies it to a specific game performance – shooting at the basket.

The scientific contribution of the publication lies in its detailed examination of the relationships between the player, the ball, the rim, the backboard, the floor, and the air, including an analysis of ball trajectory, release angle and velocity, rotation, air resistance, and internal ball pressure. The author introduces quantitative models and calculations of optimal shooting parameters, thereby advancing understanding from empirical experience toward precise explanations of the phenomena.

The publication addresses the long-standing lack of systematic physical explanations of shooting success and establishes a theoretical framework for coaching practice, research, and higher education in the field of sports games. Its significance also lies in its interdisciplinary nature, as it connects sports training with the natural sciences.

The work has lasting value as a professional resource for coaches, educators, students, and researchers, and represents a contribution to the development of basketball theory as a scientific discipline.

OCA14. - Characteristics of the author's contribution

Author's contribution: 100%.

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

Publikácia *Physical Factors in Basketball Shooting* predstavuje odborný vedecký výstup zameraný na systematickú analýzu fyzikálnych a biomechanických faktorov ovplyvňujúcich úspešnosť streľby v basketbale. Tvorivý proces vychádzal z dlhoročnej trénerskej a pedagogickej praxe autora, ako aj z interdisciplinárneho štúdia poznatkov z mechaniky, matematiky, biomechaniky a športovej vedy. Impulzom bola snaha nájsť exaktnú odpoveď na otázku, prečo je streľba úspešná alebo neúspešná. Obsah publikácie zahŕňa analýzu vzťahov medzi hráčom, loptou, obručou, doskou, podlahou a prostredím. Podrobne sa venuje trajektórii lopty, optimálnemu uhlu a rýchlosti hodu, rotácii, odporu vzduchu, vnútornému tlaku v lopte, ako aj materiálным vlastnostiam športového vybavenia. Súčasťou tvorivej činnosti bolo modelovanie situácií, matematické výpočty a interpretácia experimentálnych údajov.

Výstup predstavuje originálny teoretický prínos, ktorý prepája športovú prax s prírodovednými disciplínami a vytvára odborný základ pre tréningový proces, výskum a vysokoškolské vzdelávanie v oblasti športových hier.

Annotation of the Output

The publication *Physical Factors in Basketball Shooting* is a scientific output focused on the systematic analysis of physical and biomechanical factors influencing shooting success in basketball. The creative process was grounded in the author's long-term coaching and teaching experience, combined with interdisciplinary study of mechanics, mathematics, biomechanics, and sport sciences. The main motivation was to provide an exact explanation of why a shot is successful or unsuccessful.

The content examines the relationships between the player, the ball, the hoop, the backboard, the floor, and the surrounding environment. It analyzes ball trajectory, optimal release angle and velocity, rotation, air resistance, internal air pressure, and material properties of sports equipment. The creative work included modelling of shooting situations, mathematical calculations, and interpretation of experimental data.

The output represents an original theoretical contribution that connects sports practice with natural sciences and provides a professional basis for coaching practice, research, and higher education in the field of sport games.

OCA16. - Annotation of the output in English

The publication *Physical Factors in Basketball Shooting* is a scientific output focused on the systematic analysis of physical and biomechanical factors influencing shooting success in basketball. The creative process was grounded in the author's long-term coaching and teaching experience, combined with interdisciplinary study of mechanics, mathematics, biomechanics, and sport sciences. The main motivation was to provide an exact explanation of why a shot is successful or unsuccessful. The content examines the relationships between the player, the ball, the hoop, the backboard, the floor, and the surrounding environment. It analyzes ball trajectory, optimal release angle and velocity, rotation, air resistance, internal air pressure, and material properties of sports equipment. The creative work included modelling of shooting situations, mathematical calculations, and interpretation of experimental data.

The output represents an original theoretical contribution that connects sports practice with natural sciences and provides a professional basis for coaching practice, research, and higher education in the field of sport games.

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

TOMISLAV, R., et al. (2015) Impact of fatigue on accuracy and changes in certain kinematic parameters during shooting in basketball. *Hrvat. Športskomed. Vjesn.* 2015; 30: 15-20.

ÖZDALYAN, Firat, et al. (2022) Comparison of the shooting angles in wheelchair basketball and basketball players: shooting angles in wheelchair basketball. *European Journal of Human Movement*, 2022, 48: 35-45.

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

Publikácia *Physical Factors in Basketball Shooting* má významný dopad na športovú prax, vzdelávanie a aplikačnú sféru športového priemyslu. Systematická analýza fyzikálnych a materiálnych faktorov streľby vytvára odborný základ pre efektívnejší tréningový proces, optimalizáciu techniky streľby a racionálne nastavovanie parametrov športového vybavenia.

V tréningovej praxi umožňuje výstup presnejšie pochopiť vplyv uhla hodu, rýchlosti, rotácie lopty či vnútorného tlaku na úspešnosť streľby, čo môže viesť k zvýšeniu športovej výkonnosti a konkurencieschopnosti tímov. Z hospodárskeho hľadiska má význam aj pre výrobcov športového vybavenia, keďže poskytuje teoretické východiská pre konštrukciu lôpt, obručí a hracích povrchov s optimalizovanými vlastnosťami.

Výstup zároveň podporuje kvalitu vysokoškolského vzdelávania trénerov a učiteľov telesnej výchovy, čím nepriamo prispieva k rozvoju športovej infraštruktúry a športovej kultúry v spoločnosti. Prepojenie športovej praxe s prírodovednými disciplínami zvyšuje profesionalizáciu oblasti športových hier a jej uplatnenie v širšom spoločensko-hospodárskom kontexte.

Impact of the Output on Socio-Economic Practice

The publication *Physical Factors in Basketball Shooting* has a significant impact on sports practice, education, and the applied sector of the sports industry. Its systematic analysis of physical and material factors affecting shooting performance provides a professional basis for more effective training processes, optimization of shooting technique, and rational adjustment of equipment parameters.

In coaching practice, the findings enable a deeper understanding of the influence of release angle, velocity, ball rotation, and internal air pressure on shooting success, potentially increasing athletic performance and team competitiveness. From an economic perspective, the publication is also relevant for sports equipment manufacturers, as it offers theoretical foundations for designing balls, hoops, and playing surfaces with optimized characteristics. Furthermore, the output enhances higher education quality in coach and physical education teacher training, indirectly contributing to the development of sports infrastructure and sports culture in society. By linking sports practice with natural sciences, it strengthens the professionalization of sport games and their application within a broader socio-economic context.

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

Racionálne dlhodobé používanie rôzneho náčinia a náradia v tréningu basketbalu, nielen mládeže, ale aj dospelých, sa stalo nevyhnutnou podmienkou prípadného excelentného nadnárodného výkonu v basketbale v období hráčskej dospelosti. Zámerné takto motivované menenie tréningových okolností vyvoláva kladné zmeny vo výkone basketbalistu hlavne v streľbe každého druhu.

The rational long-term use of various equipment and training aids in basketball, not only for youth but also for adults, has become an essential prerequisite for achieving potential excellence in international performance during playing adulthood. Purposefully motivated modification of training conditions in this way induces positive changes in player performance, particularly in all types of shooting.

3rd evaluated output

1.

OCA5. - Area of assessment

PhD. Theory and Didactics of Physical and Sports Education

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

scientific output

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

2015

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

ID - 648629

OCA9. - Hyperlink to the record in CRPA or CRAA

[https://app.crepc.sk/?](https://app.crepc.sk/?fn=detailBiblioFormChildW1E9RM&sid=80A7145A47974828677A0FE5FB&seo=CREP%C4%8C-detail-%C4%8C%C3%A1nok)

[fn=detailBiblioFormChildW1E9RM&sid=80A7145A47974828677A0FE5FB&seo=CREP%C4%8C-detail-%C4%8C%C3%A1nok](https://app.crepc.sk/?fn=detailBiblioFormChildW1E9RM&sid=80A7145A47974828677A0FE5FB&seo=CREP%C4%8C-detail-%C4%8C%C3%A1nok)

Title of the publication to which the hyperlink points

Physical characteristics of female basketball players according to playing position

Justification of the RATP

The submitted scientific article *Physical Characteristics of Female Basketball Players According to Playing Position* represents a significant contribution to understanding the structure of physical fitness and somatic prerequisites of youth female basketball players in relation to their playing positions. The research responds to the current need for objectifying the training process and rationalizing the selection of players for national teams.

The scientific value of the study lies in the systematic comparison of speed, strength, agility, and endurance indicators (3/4 sprint, 10×5 m shuttle test, lane agility drill, vertical jumps) among point guards, forwards, and centers. Despite the absence of statistically significant differences, the study provides important insights into performance profile tendencies across individual positions and highlights the relative homogeneity of performance within the U17 category.

The publication contributes to the deepening of theoretical foundations in sports diagnostics, supports evidence-based decision-making by coaches, and creates space for further research into player specialization. The findings are relevant for talent identification, training load planning, and optimization of a team's game model.

Thus, the study expands the knowledge base of sports games and represents a relevant scientific contribution in the field of basketball theory and methodology.

OCA14. - Characteristics of the author's contribution

Author's contribution: 50%. Responsible for project concept development, manuscript preparation, and language revision of the English draft version.

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

Vedecký článok *Physical Characteristics of Female Basketball Players According to Playing Position* je zameraný na analýzu vybraných somatických a kondičných ukazovateľov slovenských basketbalistiek kategórie U17 vo vzťahu k hráčskym postom . Tvorivý proces vychádzal z potreby objektivizovať rozdiely medzi rozohrávačkami, krídelníkmi a pivotkami a overiť predpoklad existencie štatisticky významných odlišností v rýchlosti, obratnosti, explozívnej sile a aeróbnej kapacite.

Výskum bol realizovaný počas reprezentačného sústredenia za využitia štandardizovaných testov (3/4 sprint, 10 × 5 m shuttle test, lane agility drill, no-step vertical jump, maximum vertical jump) a merania telesného zloženia a VO₂max. Súčasťou tvorivej činnosti bolo spracovanie dát pomocou štatistickej analýzy (ANOVA) a ich interpretácia v kontexte existujúcich domácich a zahraničných štúdií.

Obsah výstupu prináša komplexný profil fyzických charakteristík hráčok podľa postov a poukazuje na relatívnu homogenitu výkonnosti v sledovanej vekovej kategórii. Výsledky predstavujú odborný podklad pre tréningovú diagnostiku, výber hráčok a optimalizáciu herného modelu družstva.

Annotation of the Output

The scientific article *Physical Characteristics of Female Basketball Players According to Playing Position* focuses on the analysis of selected anthropometric and physical performance characteristics of Slovak U17 female basketball players in relation to their playing positions . The creative process was driven by the need to objectively verify differences among guards, forwards, and centers and to test the assumption of statistically significant variations in speed, agility, lower-body power, and aerobic capacity.

The research was conducted during a national team training camp using standardized performance tests (3/4 court sprint, 10 × 5 m shuttle test, lane agility drill, no-step vertical jump, maximum vertical jump) as well as body composition and VO₂max assessments. The creative activity included statistical data processing (ANOVA) and interpretation of findings within the context of existing national and international research.

The output provides a comprehensive physical performance profile of players according to playing position and highlights the relative homogeneity of performance in the examined age category. The findings serve as a professional basis for training diagnostics, player selection, and optimization of team tactical models.

OCA16. - Annotation of the output in English

The scientific article *Physical Characteristics of Female Basketball Players According to Playing Position* focuses on the analysis of selected anthropometric and physical performance characteristics of Slovak U17 female basketball players in relation to their playing positions . The creative process was driven by the need to objectively verify differences among guards, forwards, and centers and to test the assumption of statistically significant variations in speed, agility, lower-body power, and aerobic capacity.

The research was conducted during a national team training camp using standardized performance tests (3/4 court sprint, 10 × 5 m shuttle test, lane agility drill, no-step vertical jump, maximum vertical jump) as well as body composition and VO₂max assessments. The creative activity included statistical data processing (ANOVA) and interpretation of findings within the context of existing national and international research.

The output provides a comprehensive physical performance profile of players according to playing position and highlights the relative homogeneity of performance in the examined age category. The findings serve as a professional basis for training diagnostics, player selection, and optimization of team tactical models.

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

GARCIA-GIL, M., et al. (2018) Anthropometric Parameters, Age, and Agility as Performance Predictors in Elite Female Basketball Players. *Journal of Strength and Conditioning Research*: 32(6), p. 1723-1730. doi: 10.1519/JSC.0000000000002043

PRIYA, S., et al. (2018) Comparison between Handgrip Strength Measurement of Dominant Hand and Non Dominant Hand in Basketball Players. *Indian Journal of Physiotherapy & Occupational Therapy*. 12(4), p. 126-130.

TASKIN, M. (2020) Linear and Direction Reverses Sprint Profile with and Without Ball of Young Basketball Players by Positions. *International Journal of Applied Exercise Physiology*; Mazandaran, 9(3), p. 196-203. DOI:10.26655/UAEP.2020.3.20

OMAR JESÚS SALIDO, A., et al. (2020) Perfil Fisiológico y Rendimiento Deportivo en Jugadoras de Baloncesto Universitario. *European Scientific Journal*, 16(26), ISSN: 1857-7881 (Print) e - ISSN 1857-7431 11

FITRI AGUNG, N., et al. (2019) The psychological skills of basketball athletes: Are there any differences based on the playing position. *Jurnal Keolahragaan*, 7(1), p. 74-82

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

Vedecký článok *Physical Characteristics of Female Basketball Players According to Playing Position* má významný dopad na športovú prax, systém talentovej identifikácie a riadenie tréningového procesu v mládežníckom basketbale. Výsledky poskytujú objektívne údaje o fyzickom profile hráčok podľa postov, čo umožňuje efektívnejšie rozhodovanie pri výbere hráčok do reprezentačných výberov a pri plánovaní ich dlhodobého rozvoja.

Z pohľadu spoločenskej praxe výstup podporuje profesionalizáciu športovej prípravy mládeže a prispieva k zvyšovaniu kvality tréningových programov. Optimalizácia tréningového zaťaženia podľa hernej funkcie môže viesť k zlepšeniu výkonnosti a zníženiu rizika zranení, čo má aj ekonomický rozmer v podobe efektívnejšieho využívania zdrojov športových organizácií.

Poznatky štúdie sú využiteľné v národných športových centrách, kluboch i vo vzdelávaní trénerov. Nepriamo tak prispievajú k rozvoju ženského športu, zvýšeniu konkurencieschopnosti družstiev a k posilneniu športovej infraštruktúry v širšom spoločensko-hospodárskom kontexte.

Impact of the Output on Socio-Economic Practice

The scientific article *Physical Characteristics of Female Basketball Players According to Playing Position* has a significant impact on sports practice, talent identification systems, and the management of training processes in youth basketball. The findings provide objective data on the physical profiles of players according to their playing positions, enabling more effective decision-making in player selection for national teams and long-term athlete development planning.

From a societal perspective, the output supports the professionalization of youth sports preparation and contributes to improving the quality of training programs. Optimization of training loads according to playing roles may enhance performance and reduce injury risk, which also has an economic dimension in terms of more efficient use of sports organization resources.

The study's findings are applicable in national sports centers, clubs, and coach education programs. Indirectly, they contribute to the development of women's sport, increased team competitiveness, and strengthening of sports infrastructure within a broader socio-economic context.

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

Vedecký článok *Physical Characteristics of Female Basketball Players According to Playing Position* významne prispieva k rozvoju vzdelávacieho procesu v oblasti športových hier a trénerstva . Výstup poskytuje študentom a budúcim trénerom konkrétne empirické údaje o fyzických charakteristikách hráčov podľa herných postov, čím podporuje prepojenie teoretických poznatkov s praktickou diagnostikou.

Výsledky štúdie sú využiteľné vo výučbe predmetov zameraných na športovú diagnostiku, metódu tréningu a teóriu basketbalu. Umožňujú rozvíjať analytické myslenie študentov pri interpretácii testových výsledkov, aplikácii štatistických metód (ANOVA) a plánovaní špecifickej prípravy podľa hernej funkcie.

Súvisiace aktivity, ako prezentácia výsledkov na odborných seminároch či ich implementácia do výučbových materiálov, zvyšujú kvalitu vysokoškolského vzdelávania. Výstup podporuje dôkazmi podložený prístup k tréningovej praxi a prispieva k formovaniu odborne pripravených pedagógov a trénerov.

Impact of the Output and Related Activities on the Educational Process

The scientific article *Physical Characteristics of Female Basketball Players According to Playing Position* significantly contributes to the development of the educational process in the field of sport games and coaching . The output provides students and future coaches with concrete empirical data on physical characteristics according to playing positions, strengthening the link between theoretical knowledge and practical diagnostics.

The study's findings can be integrated into courses focused on sports diagnostics, training methodology, and basketball theory. They support the development of students' analytical skills in interpreting performance test results, applying statistical methods (ANOVA), and designing position-specific training programs.

Related activities, such as presenting results at academic seminars and incorporating them into teaching materials, enhance the quality of higher education. The output promotes an evidence-based approach to coaching practice and contributes to the preparation of professionally competent educators and coaches.

4th evaluated output

1.

OCA5. - Area of assessment

PhD. Theory and Didactics of Physical and Sports Education

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

scientific output

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

1924

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

ID - 1152378

OCA9. - Hyperlink to the record in CRPA or CRAA

[https://app.crepc.sk/?](https://app.crepc.sk/?fn=detailBiblioFormChildU1EBD3&sid=462AB66412DC69E3AFAC8FC46E92&seo=CREP%C4%8C-detail-%C4%8C%C3%A1nok)

[fn=detailBiblioFormChildU1EBD3&sid=462AB66412DC69E3AFAC8FC46E92&seo=CREP%C4%8C-detail-%C4%8C%C3%A1nok](https://app.crepc.sk/?fn=detailBiblioFormChildU1EBD3&sid=462AB66412DC69E3AFAC8FC46E92&seo=CREP%C4%8C-detail-%C4%8C%C3%A1nok)

Title of the publication to which the hyperlink points

Basic motor competencies in Slovak children from the 3rd and 4th grade elementary age group

Justification of the RATP

The scientific article ***Basic motor competencies in Slovak children from the 3rd and 4th grade elementary age group*** represents a significant scientific and theoretical contribution to research on motor competencies in children of younger school age. The publication responds to the current need for systematic assessment of the level of basic motor competencies (BMC) within the context of compulsory school education and their importance for lifelong participation in physical activities. The scientific value of the study lies in the application and validation of the MOBAK-3 test battery on a representative sample of 468 pupils from different regions of Slovakia, as well as in the implementation of confirmatory factor analysis to verify the two-factor structure (object movement and self-movement). The study also analyzes the influence of age, gender, and BMI as covariates through structural modeling, thereby deepening the understanding of the determinants of motor performance.

The work has theoretical significance in validating diagnostic instruments within the Slovak context and contributes to the international discussion on the structure and assessment of BMC. The results provide an empirical foundation for curriculum adjustments in physical and sports education, support an evidence-based pedagogical approach, and contribute to the development of motor learning theory and sports education.

OCA14. - Characteristics of the author's contribution

Author's contribution: 50%.

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

Vedecký článok *Basic motor competencies in Slovak children from the 3rd and 4th grade elementary age group* je zameraný na analýzu úrovne základných motorických kompetencií (BMC) žiakov 3. a 4. ročníka základných škôl na Slovensku. Tvorivý proces vychádzal z potreby overiť konštruktívnu validitu testovej batérie MOBAK-3 v slovenskom prostredí a identifikovať determinanty motorickej výkonnosti detí.

Výskum bol realizovaný na vzorke 468 detí z rôznych regiónov Slovenskej republiky. Zber dát prebiehal počas riadneho vyučovania telesnej a športovej výchovy za využitia štandardizovaných administratívnych postupov. Súčasťou tvorivej činnosti bola štatistická analýza údajov vrátane konfirmačnej faktorovej analýzy na potvrdenie dvojfaktorovej štruktúry (object-movement a self-movement) a štruktúrneho modelovania so zapojením kovariátov vek, pohlavie a BMI.

Obsah výstupu prináša komplexný pohľad na úroveň BMC slovenských detí, poukazuje na rodové rozdiely a čiastočný vplyv veku a BMI. Publikácia predstavuje odborný podklad pre optimalizáciu vyučovania telesnej výchovy a pre ďalší výskum v oblasti motorického vývinu detí.

Annotation of the Output

The scientific article *Basic motor competencies in Slovak children from the 3rd and 4th grade elementary age group* focuses on analyzing the level of basic motor competencies (BMC) among third- and fourth-grade primary school children in Slovakia. The creative process was driven by the need to verify the construct validity of the MOBAK-3 test battery in the Slovak context and to identify determinants of children's motor performance.

The study was conducted on a sample of 468 children from different regions of the Slovak Republic. Data collection took place during regular physical education classes using standardized administration procedures. The creative activity included statistical data processing, confirmatory factor analysis to validate the two-factor structure (object-movement and self-movement), and structural equation modeling incorporating covariates such as age, gender, and BMI.

The output provides a comprehensive overview of BMC levels among Slovak children, highlights gender differences, and identifies partial effects of age and BMI. The publication serves as a professional basis for optimizing physical education curricula and for further research in the field of motor development.

OCA16. - Annotation of the output in English

The scientific article *Basic motor competencies in Slovak children from the 3rd and 4th grade elementary age group* focuses on analyzing the level of basic motor competencies (BMC) among third- and fourth-grade primary school children in Slovakia. The creative process was driven by the need to verify the construct validity of the MOBAK-3 test battery in the Slovak context and to identify determinants of children's motor performance.

The study was conducted on a sample of 468 children from different regions of the Slovak Republic. Data collection took place during regular physical education classes using standardized administration procedures. The creative activity included statistical data processing, confirmatory factor analysis to validate the two-factor structure (object-movement and self-movement), and structural equation modeling incorporating covariates such as age, gender, and BMI.

The output provides a comprehensive overview of BMC levels among Slovak children, highlights gender differences, and identifies partial effects of age and BMI. The publication serves as a professional basis for optimizing physical education curricula and for further research in the field of motor development.

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

1345349: Competencia motora e atividade física das crianças do 1.o CEB do concelho de Cascais [elektronický dokument] [iný] / Martins, Maria [Autor, 25%] ; Meira, Alfonso [Autor, 25%] ; Martins, João [Autor, 25%] ; Onofre, Marcos [Autor, 25%]. - 1. vyd. - Lisabon (Portugalsko) : Cascais, 2024. - 21 s. [online]

(**SCOPUS**:2-s2.0-85197243131) 1197508: Motor competencies among athletic population of 9- and 10- year-old children / Falat Leütterová, Daniela [Autor, 50%] ; Ružbarská, Ingrid [Autor, 20%] ; Lukáčová, Tamara [Autor, 30%]. - [recenzované]. - DOI 10.26773/smj.240706. - SCO.

In: *Sport mont* [textový dokument (print)] [elektronický dokument] . - Podgorica (Čierna Hora) : University of Montenegro, Faculty for sport and physical education. - ISSN 1451-7485. - ISSN (online) 2337-0351. - Roč. 22, č. 2 (2024), s. 39-43 [tlačaná forma] [online]

1415157: Vnímanie faktorov ovplyvňujúcich pocity na hodinách telesnej a športovej výchovy chlapcov a dievčat so zdravotným znevýhodnením = Perceptions of factors influencing feelings in physical and sports education classes of boys and girls with disabilities / Švecová, Daša [Autor, 100%]. - [recenzované].

In: *Telesná výchova & šport* [elektronický dokument] [textový dokument (print)] . - Bratislava (Slovensko) : Slovenská vedecká spoločnosť pre telesnú výchovu a šport. - ISSN 1335-2245. - ISSN (online) 2730-017X. - Roč. 35, č. 1 (2025), s. 44-55 [online] [tlačaná forma]

1519569: Strategies for the development of basic motor skills in middle school students post-pandemic in quito = Estrategias para el desarrollo de habilidades motrices básicas en estudiantes de básica media post-pandemia en quito / Garzón Duque, Bryan Alexander [Korešpondenčný autor, 20%] ; Rondal Velasco, Paola de Fátima [Autor, 20%] ; Román Chicaiza, José Luis [Autor, 20%] ; Uyaguari Quichimbo, Rosa Ana [Autor, 20%] ; Tuabanda Valdivieso, Anabel Alexandra [Autor, 20%]. - [recenzované]. - DOI 10.70577/asce.v4i4.574.

In: *Annals scientific evolution* [elektronický dokument] . - Ambato (Ekvádor) : [s.n.]. - ISSN (online) 3073-1178. - Roč. 4, č. 4 (2025), s. 3274-3288 [online]

(**MEDLINE**@:MEDLINE:41223015; **Web of Science Core Collection**:WOS:001631587000010;

Science Citation Index Expanded:WOS:001631587000010; **PubMed**:41223015; **SCOPUS**:2-s2.0-105021423608) 1495087: Basic motor competencies in Italian schoolchildren using the MOBAK-test : normative data for a novel framework / Giuriato, Matteo [Autor, 9%] ; Gatti, Alessandro [Autor, 9%] ; Del Bianco, Marco [Autor, 9%] ; Pirazzi, Agnese [Autor, 9%] ; Cavallo, Caterina [Autor, 9%] ; Balconi, Simone [Autor, 9%] ; Carnevale Pellino, Vittoria [Autor, 9%] ; Herrmann, Christian [Autor, 9%] ; Codella, Roberto [Autor, 9%] ; Vandoni, Matteo [Korešpondenčný autor, 10%] ; Lovecchio, Nicola [Autor, 9%]. - [recenzované]. - DOI 10.1002/ejsc.70084. - WOS CC ; SCO ; SCIE.

In: *European journal of sport science* [textový dokument (print)] [elektronický dokument] . - Weinheim (Nemecko) : John Wiley & Sons. Wiley-VCH. - ISSN 1746-1391. - ISSN (online) 1536-7290. - Roč. 25, č. 12 (2025), art. no. e70084, s. 1-11 [tlačaná forma] [online]

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

Vedecký článok *Basic motor competencies in Slovak children from the 3rd and 4th grade elementary age group* má významný dopad na vzdelávaciu, preventívnu a športovú prax v Slovenskej republike . Výsledky poskytujú objektívne údaje o úrovni základných motorických kompetencií detí mladšieho školského veku, ktoré sú kľúčové pre ich ďalšie zapojenie do organizovaných aj voľnočasových pohybových aktivít.

Z hľadiska spoločenskej praxe výstup podporuje systematické hodnotenie pohybovej pripravenosti detí a umožňuje identifikovať rizikové skupiny so zníženou úrovňou motorických kompetencií, vrátane vplyvu BMI. Tým prispieva k prevencii hypokinézy, obezity a ďalších civilizačných ochorení. Pre hospodársku sféru má význam v oblasti plánovania športových programov, efektívneho využívania zdrojov v školstve a podpory rozvoja športovej infraštruktúry. Výsledky môžu slúžiť ako podklad pre tvorbu národných stratégií podpory pohybovej aktivity detí a mládeže.

Impact of the Output on Socio-Economic Practice

The scientific article *Basic motor competencies in Slovak children from the 3rd and 4th grade elementary age group* has a significant impact on educational, preventive, and sports practice in the Slovak Republic . The findings provide objective data on the level of basic motor competencies in primary school children, which are crucial for their further involvement in organized and leisure-time physical activities.

From a societal perspective, the output supports systematic assessment of children's motor readiness and enables the identification of at-risk groups with lower motor competence levels, including the influence of BMI. This contributes to the prevention of physical inactivity, obesity, and other lifestyle-related diseases.

In the economic sphere, the results are relevant for planning sports programs, efficient allocation of educational resources, and development of sports infrastructure. The findings can serve as a basis for national strategies promoting physical activity among children and youth.

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

Vedecký článok *Basic motor competencies in Slovak children from the 3rd and 4th grade elementary age group* významne ovplyvňuje kvalitu vzdelávacieho procesu v oblasti telesnej a športovej výchovy . Výstup poskytuje empiricky podložené údaje o úrovni základných motorických kompetencií žiakov, čím umožňuje učiteľom cielene prispôbovať obsah a metódy vyučovania aktuálnym schopnostiam detí. Overenie konštruktívnej validity testovej batérie MOBAK-3 v slovenskom prostredí vytvára odborný základ pre systematickú diagnostiku pohybovej pripravenosti v školách. Identifikácia vplyvu pohlavia, veku a BMI podporuje diferencovaný a individualizovaný prístup vo vyučovaní.

Súvisiace aktivity, ako implementácia výsledkov do metodických materiálov a prípravy budúcich učiteľov, prispievajú k modernizácii pedagogickej praxe. Výstup zároveň podporuje dôkazmi podložené rozhodovanie pri tvorbe školských vzdelávacích programov a rozvíja odborné kompetencie pedagógov v oblasti hodnotenia motorického rozvoja detí.

Impact of the Output and Related Activities on the Educational Process

The scientific article *Basic motor competencies in Slovak children from the 3rd and 4th grade elementary age group* significantly enhances the quality of the educational process in physical and sports education . The output provides empirically based data on pupils' basic motor competencies, enabling teachers to adjust curriculum content and teaching methods to children's actual abilities. The validation of the MOBAK-3 test battery in the Slovak context establishes a professional basis for systematic assessment of motor readiness in schools. Identification of the influence of gender, age, and BMI supports differentiated and individualized teaching approaches.

Related activities, including integration of the findings into methodological materials and pre-service teacher education, contribute to the modernization of pedagogical practice. The output promotes evidence-based decision-making in curriculum development and strengthens teachers' professional competencies in assessing children's motor development.

5th evaluated output

1.

OCA5. - Area of assessment

PhD. Theory and Didactics of Physical and Sports Education

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

scientific output

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

2020

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

ID - 251792

OCA9. - Hyperlink to the record in CRPA or CRAA

[https://app.crepc.sk/?](https://app.crepc.sk/?fn=detailBiblioFormChildQ1EE09&sid=8B77F98A6A3600294644F5426B&seo=CREP%C4%8C-detail-kapitola-/-pr%C3%ADspevok)

[fn=detailBiblioFormChildQ1EE09&sid=8B77F98A6A3600294644F5426B&seo=CREP%C4%8C-detail-kapitola-/-pr%C3%ADspevok](https://app.crepc.sk/?fn=detailBiblioFormChildQ1EE09&sid=8B77F98A6A3600294644F5426B&seo=CREP%C4%8C-detail-kapitola-/-pr%C3%ADspevok)

Title of the publication to which the hyperlink points

Hallmarks of the kinematic structure of competitive motor activities in athletic jumping events

Justification of the RATP

The scientific article *Hallmarks of the Kinematic Structure of Competitive Motor Activities in Athletic Jumping Events* presents a theoretical-analytical contribution focused on the comparison of kinematic and dynamic parameters of four athletic jumping disciplines – the long jump, triple jump, high jump, and pole vault.

The study is based on a systematic analysis of the structure of competitive motor performance, with particular emphasis on the relationship between the approach run and take-off as the key phase of performance. Its scientific contribution lies in identifying common principles (the relationship between horizontal and vertical velocity, the importance of the take-off angle, and the trajectory of the body's center of mass), while also precisely defining the specific biomechanical characteristics of each discipline.

The article integrates knowledge from biomechanics, athletics theory, and sport pedagogy, analyzing individual movement phases – approach, take-off, flight, and landing – in terms of their temporal, force-related, and coordination parameters. It emphasizes the importance of optimal transfer of kinetic energy into potential energy and the efficient use of the musculo-tendinous system.

The publication expands theoretical understanding of the structure of jumping performances and provides a professional foundation for rationalizing the training process, talent identification, and methodological guidance in athletics instruction.

OCA14. - Characteristics of the author's contribution

Author's contribution: 20%.

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

Vedecký článok *Hallmarks of the kinematic structure of competitive motor activities in athletic jumping events* je zameraný na komparatívnu analýzu kinematickej štruktúry súťažnej pohybovej činnosti v štyroch atletických skokanských disciplínach – skoku do diaľky, trojskoku, skoku do výšky a skoku o žrdi . Tvorivý proces vychádzal z potreby systematicky porovnať horizontálne a vertikálne skoky z hľadiska väzby rozbehu a odrazu ako rozhodujúcej fázy výkonu.

Autor analyzoval jednotlivé fázy pohybu (rozbeh, odraz, let, dopad) so zameraním na rýchlostné, silové a časové parametre, trajektóriu ťažiska tela a optimálny pomer horizontálnej a vertikálnej zložky rýchlosti. Súčasťou tvorivej činnosti bola syntéza poznatkov z biomechaniky, teórie atletiky a didaktiky športu, ako aj komparácia dostupných empirických údajov.

Obsah výstupu identifikuje spoločné znaky skokanských disciplín a zároveň špecifické biomechanické determinanty výkonu v jednotlivých disciplínach. Publikácia poskytuje teoretický rámec pre efektívnejšie plánovanie tréningového procesu a odbornú výučbu atletiky.

Annotation of the Output

The scientific article *Hallmarks of the kinematic structure of competitive motor activities in athletic jumping events* focuses on a comparative analysis of the kinematic structure of competitive movement in four athletic jumping events – long jump, triple jump, high jump, and pole vault . The creative process was driven by the need to systematically compare horizontal and vertical jumps, particularly in terms of the relationship between approach and take-off as the decisive phase of performance.

The author analyzed individual movement phases (approach, take-off, flight, landing) with emphasis on velocity, force, and temporal parameters, the trajectory of the center of gravity, and the optimal ratio of horizontal and vertical velocity components. The creative activity included synthesizing knowledge from biomechanics, athletics theory, and sport didactics, as well as comparing available empirical data.

The output identifies both common characteristics and specific biomechanical determinants of performance in each event. The publication provides a theoretical framework for more effective training planning and professional instruction in athletics.

OCA16. - Annotation of the output in English

The scientific article *Hallmarks of the kinematic structure of competitive motor activities in athletic jumping events* focuses on a comparative analysis of the kinematic structure of competitive movement in four athletic jumping events – long jump, triple jump, high jump, and pole vault . The creative process was driven by the need to systematically compare horizontal and vertical jumps, particularly in terms of the relationship between approach and take-off as the decisive phase of performance.

The author analyzed individual movement phases (approach, take-off, flight, landing) with emphasis on velocity, force, and temporal parameters, the trajectory of the center of gravity, and the optimal ratio of horizontal and vertical velocity components. The creative activity included synthesizing knowledge from biomechanics, athletics theory, and sport didactics, as well as comparing available empirical data.

The output identifies both common characteristics and specific biomechanical determinants of performance in each event. The publication provides a theoretical framework for more effective training planning and professional instruction in athletics.

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

Vedecký článok *Hallmarks of the kinematic structure of competitive motor activities in athletic jumping events* má významný dopad na športovú prax, systém prípravy atlétov a odborné riadenie tréningového procesu . Identifikácia spoločných a špecifických biomechanických znakov skokanských disciplín umožňuje presnejšie plánovanie tréningového zaťaženia, optimalizáciu techniky a efektívnejší výber talentov.

Z pohľadu spoločenskej praxe výstup prispieva k profesionalizácii atletickej prípravy a k zvyšovaniu športovej výkonnosti na národnej aj medzinárodnej úrovni. Racionalizácia tréningového procesu na základe kinematickej analýzy môže viesť k zníženiu rizika zranení a k efektívnejšiemu využívaniu materiálnych a personálnych zdrojov športových organizácií.

Výsledky sú využiteľné aj v oblasti vzdelávania trénerov a učiteľov telesnej výchovy, čím nepriamo podporujú rozvoj športovej infraštruktúry a kvalitu pohybovej prípravy mládeže. Publikácia tak prispieva k rozvoju atletiky ako súčasťi spoločensko-hospodárskeho systému športu.

Impact of the Output on Socio-Economic Practice

The scientific article *Hallmarks of the kinematic structure of competitive motor activities in athletic jumping events* has a significant impact on sports practice, athlete development systems, and professional training management . By identifying common and specific biomechanical characteristics of jumping events, it enables more precise training planning, technical optimization, and more effective talent identification.

From a societal perspective, the output contributes to the professionalization of athletic preparation and enhances sports performance at national and international levels. Rationalization of the training process based on kinematic analysis may reduce injury risk and improve the efficient use of material and human resources within sports organizations.

The findings are also applicable in coach and physical education teacher education, indirectly supporting the development of sports infrastructure and the quality of youth physical preparation. The publication thus contributes to the advancement of athletics within the broader socio-economic system of sport.

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

Vedecký článok *Hallmarks of the kinematic structure of competitive motor activities in athletic jumping events* významne prispieva k skvalitneniu vzdelávacieho procesu v oblasti atletiky, biomechaniky a teórie športového tréningu . Výstup poskytuje systematický a komparatívny pohľad na štruktúru pohybovej činnosti v skokanských disciplínach, čo umožňuje študentom lepšie pochopiť vzťah medzi rozbehom, odrazom a letovou fázou výkonu.

Publikácia je využiteľná vo výučbe predmetov zameraných na športovú biomechaniku, didaktiku atletiky a analýzu pohybovej činnosti. Podporuje rozvoj analytického myslenia študentov pri interpretácii kinematických a dynamických parametrov výkonu a pri aplikácii teoretických poznatkov do tréningovej praxe.

Súvisiace aktivity, ako prezentácia výsledkov na odborných seminároch a ich implementácia do študijných materiálov, zvyšujú kvalitu prípravy budúcich trénerov a pedagógov. Výstup zároveň podporuje dôkazmi podložený prístup k výučbe a prispieva k prepojeniu teórie s praxou v oblasti športovej edukácie.

Impact of the Output and Related Activities on the Educational Process

The scientific article *Hallmarks of the kinematic structure of competitive motor activities in athletic jumping events* significantly enhances the educational process in athletics, biomechanics, and training theory . The output provides a systematic and comparative analysis of movement structure in jumping events, enabling students to better understand the relationship between approach, take-off, and flight phases.

The publication is applicable in courses focused on sports biomechanics, athletics didactics, and movement analysis. It supports the development of students' analytical thinking in interpreting kinematic and dynamic performance parameters and applying theoretical knowledge to training practice.

Related activities, such as presenting the findings at academic seminars and integrating them into teaching materials, improve the preparation of future coaches and physical education teachers. The output promotes an evidence-based approach to instruction and strengthens the connection between theory and practice in sport education.

Date of last update

23.02.2026