

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

**Name and surname** doc. PaedDr. Blanka Kožík Lehotayová, 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

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|-----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| <b>OCA1. - Surname awarded to the assessed person</b>                                   | Kožík Lehotayová                                                                                      |
| <b>OCA2. - Name awarded to the assessed person</b>                                      | Blanka                                                                                                |
| <b>OCA3. - Degrees awarded to the assessed person</b>                                   | doc. 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/29101">https://www.portalvs.sk/regzam/detail/29101</a> |

### 1st evaluated output

#### OCA5.1 - Area of assessment

Preschool and Elementary Pedagogy (1st and 3rd degree), Teaching for Primary Education (2nd degree), Teacher Education for Primary Schools (integrated 1st and 2nd degree)

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

scientific output

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

2018

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

ID: 82769

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

<https://app.crepc.sk/?fn=detailBiblioForm&sid=2F644A6B0DB31A5AD3979FAB>

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

Teoreticko-výskumná paradigma grafomotoriky v materskej škole

#### Suggested output quality level

A

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

This monograph presents empirical findings regarding the strategies of preservice teachers in developing children's graphomotor skills. The research, conducted through a mixed research design using a questionnaire, interviews and content analysis, yielded original results. The strategies in the teachers of the research sample reveal an interest and effort in the child's progress in the field of graphomotor skills, however, the techniques and practices found, applied especially in the case of the child's difficulties in graphomotor skills, declare a generally ineffective form of support.

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

- [o1] 2019 Gašparová, E., Severini, E., Kostolányová, K. Use of interactive whiteboard in pre-primary education for development of media literacy. In: ICERI 2019 : conference proceedings.
- [o1] Kostrub, D., Severini, E., Ostradický, P. Developing children`s autonomy in pre-primary education from parents perspective. In AD ALTA (textový dokument (print)) (elektronický dokument). Roč. 8, č. 2 (2018), s. 223-229.
- [o2] Magová, M. Analýza oblastí reedukácie u žiakov s dysgrafiou = Analysis of Areas of Re-education for Pupils with Dysgraphia. In: Studia Scientifica Facultatis Paedagogicae [textový dokument (print)] [elektronický dokument] : vedecký recenzovaný časopis. Katolícka univerzita v Ružomberku. VERBUM - vydavateľstvo KU. – ISSN 1336-2232. – Roč. 22, č. 2 (2023), s. 91-100 [tlačená forma] [online]
- [o3] 2019 Kostrub, D. Model of children's autonomy development in pre-primary education. In: The inspiration by qualitative methodology in pedagogical research. Horn : Verlag Ferdinand Berger & Söhne, 2019, s. 145-163
- [o3] 2020 Kostrub, D., Kikušová, S., Ostradický, P., Severini, E., Scherhauferová, M., Šipošová, M., Tománková, M., Tóthová, R. The qualitative methodology in educational context. Siedlce : Akka, 2020, s. 246

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

The monograph presents empirical findings regarding preservice teachers' strategies for developing children's graphomotor skills. The research conducted through qualitative research using questionnaire, interview and content analysis yielded original results. The strategies of the teachers of the research sample reveal an interest and effort in the progress of the child in the field of graphomotor skills and readiness for writing in primary school, but the identified techniques and practices, especially when the child has difficulties in graphomotor skills, declare a generally ineffective form of support. Preparing children for writing in primary school and then mastering writing is a necessary condition for children's comprehensive learning.

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

The model of didactic support in the development of graphomotor skills in the form of teaching texts represents a starting point for adequate preparation of students of the programme of preschool and elementary pedagogy and teaching for primary education, as it is related to the preparation for writing and the actual training of preparatory graphomotor shapes in the first year of primary school. Given the child's success in writing and overall learning in primary school, targeted development of graphomotor skills is essential.

### **2nd evaluated output**

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

Preschool and Elementary Pedagogy (1st and 3rd degree), Teaching for Primary Education (2nd 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**

2020

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

ID: 214976

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

<https://app.crepc.sk/?fn=detailBiblioForm&sid=4B134B232C8D21814FF96DD966>

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

Digital technologies in education of preschool children – preparing for future

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

A

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

The study focuses on identifying the impact of digital technologies and especially digital tools on the development of children's competence and independence. Research findings declare that teachers respect the way children learn and learn primarily through experiential and experiential learning. They also reflect children's interest in using simple digital toys in all educational areas.

#### **OCA17.2 - List of maximum 5 most significant citations corresponding to the output**

- [o1] Kovalchuk, V., Vasylykiv, I., Stasiv, N., Zhyhaylo, O., Moiko, O. Developing professional competence of future primary school teachers using informational technologies /– DOI 10.14571/brajets.v17.nse1.102-113. – ESCI ; WOS CC In: *Cadernos de Educacao Tecnologia e Sociedade* [elektronický dokument] . – Goiás (Brazília) : Federal Institute of Education, Science and Technology of Goiás. – ISSN (online) 2316-9907. – suppl. The global development of innovative technologies and their impact on the educat Roč. 17, č. se 1 (2024), s. 102-113 [online]
- [o1] Khamza, A., Zhanguttin, B., Omarbekova, A., Nurman, S. Digital technologies in education – DOI 10.54919/physics/55.2024.195bw5. – SCO In: *Naukovyj visnyk Užgorodskogo universytetu* [textový dokument (print)] [elektronický dokument] : Serija fizyka. – Užhorod (Ukrajina) : Užgorodskij nacionalnij universitet. – ISSN 2415-8038. – ISSN (online) 2786-6688. – č. 55 (2024), s. 1955-1964 [tlačená forma] [online]

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

The study focuses on identifying the impact of digital technologies and digital aids in particular on children's development of competence and independence. The research findings declare that teachers respect children's way of knowing and learning primarily through experiential and experiential learning. They also reflect children's interest in using simple digital toys in all learning domains.

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

The possibility for the student to know and use digital toys represents one of the alternatives for fulfilling the curriculum objectives. The digital toy as a didactic means is a significant motivating factor for the child and at the same time accepts the concreteness of the target group's thinking - the child of preschool and younger school age.

#### **3rd evaluated output**

##### **OCA5.3 - Area of assessment**

Preschool and Elementary Pedagogy (1st and 3rd degree), Teaching for Primary Education (2nd 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**

2020

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

ID: 162449

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

<https://app.crepc.sk/?fn=detailBiblioForm&sid=C6B245BF6B3D130476B17EF62D>

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

Uses of augmented reality in pre-primary education

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

A+

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

The chapter presents research findings on augmented reality and its use in teaching in pre-primary education examined through a qualitative methodology. The potential that augmented reality represents for a child's learning is applicable in a variety of educational areas. It is important to develop children's graphomotor skills in processing assignments in worksheets and their subsequent use. The visual impact of augmented reality is important for the motivation and learning of preschool children.

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

- [o1] 2019 - Koreňová, L., Krpec, R., Gunčaga, J., Lavicza, Z. Enhancing students' mathematics learning skills with GeoGebra apps. - In: ICERI 2019 : conference proceedings . - Valencia : IATED, 2019 ; S. 10762-10769 ; CPCI-SSH
- [o1] Marin-Marin, J. A., Lopez-Belmonte, J., Pozo-Sanchez, S., Moreno-Guerrero, A. J. Attitudes towards the development of good practices with augmented reality in secondary education teachers in Spain. DOI 10.1007/s10758-023-09671-9. In: Technology, Knowledge and Learning. – Holandsko : Springer Nature. Springer International Publishing AG. – ISSN 2211-1662. – ISSN (online) 2211-1670. – Roč. 28, č. 4 (2023), s. 1443-1459.
- [o2] 2020 - Koreňová, L., Rahmadi, I., Lavicza, Z. Students' utilization of mobile devices with regards to learning mathematics compared in Central Europe and Indonesia. - In: DIVAI 2020 : 13th International Scientific Conference on Distance Learning in Applied Informatics, Štúrovo . - Praha : Wolters Kluwer, 2020 ; S. 373-383 ; CPCI-SSH
- [o2] 2020 - Nevřelová, N., Koreňová, L. Augmented reality in teaching children education. - In: DIVAI 2020 : 13th International Scientific Conference on Distance Learning in Applied Informatics, Štúrovo . - Praha : Wolters Kluwer, 2020 ; S. 457-465 ; CPCI-SSH
- [o3] 2021 - Rivas, Begona - Gértrudix, Felipe - Gértrudix, Manuel : Análisis sistemático sobre el uso de la realidad aumentada en educación infantil. - In: Eductec : Revista Electrónica de Tecnología Educativa, č. 76, 2021 ; s. 53-73

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

The chapter presents research findings on augmented reality and its use in teaching in pre-primary education explored through a qualitative methodology. The potential that augmented reality presents for children's learning is applicable in diverse educational domains. The development of children's graphomotor skills in the processing of assignments in worksheets and their subsequent use is significant. The visual impact of augmented reality is important for the motivation and learning of preschool children.

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

The present chapter can be part of the teaching materials in the preparation of students of the Early Childhood and Elementary Education program. It introduces the concept of using augmented reality applications with an emphasis on didactic possibilities of supporting the teaching process, including the improvement of children's graphomotor skills.

#### **4th evaluated output**

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

Preschool and Elementary Pedagogy (1st and 3rd degree), Teaching for Primary Education (2nd 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**

2020

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

ID: 227818

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

<https://app.crepc.sk/?fn=detailBiblioForm&sid=D57B83470BBFCEC2268E3FD33C>

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

Self-regulatory teaching in interpretations of slovak teachers

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

A

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

The study presents the results of research aimed at identifying and analyzing the positives and negatives of continuous writing in the teaching of primary school students obtained through interviews with teachers. The interpreted categories are interoperable only with bound writing, which is considered suitable for all intact students. The findings declare not only the pedagogical (professional) side of the subject, but also the categories related to the attitudes and values of the research sample teachers.

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

- [o1] Merica, M., Belešová, M., Osad'án, R., Petrikán, P. Horváth, R. Changes in motor performance in early school - aged Roma children. In: AD ALTA [textový dokument (print)] [elektronický dokument] : journal of interdisciplinary research. Hradec Králové Magnanimitas akademické sdružení. ISSN 1804-7890. – ISSN (online) 2464-6733. Roč. 13, č. 2 (2023), s. 181-189 [tlačená forma] [online]
- [o1] Belešová, M., Szentesiová, L., Palkovičová, P. Speech register of female teachers in primary education : a quantitative analysis during teaching of the Slovak language in Slovakia /.DOI 10.15823/p.2025.159.7. – SCO. In: Pedagogika [textový dokument (print)] [elektronický dokument] . – Vilnius (Litva) : Lietuvos edukologijos universitetas. – ISSN 1392-0340. – ISSN (online) 2029-0551. – Roč. 159, č. 3 (2025), s. 150-170 [tlačená forma] [online]
- [o2] Merica, M., Hrubšová, D. Trávenie voľného času v spojení s pohybovými aktivitami pred a počas pandémie Covid 19 u detí na základnej škole / Spending of free time associated with physical activities before and during the Covid-19 pandemic in elementary school children / In: Žiak, pohyb, edukácia [elektronický dokument] : vedecký zborník 2023 / ed. Merica, M., Belešová, M. 1. vyd. Univerzita Komenského v Bratislave, 2023. ISBN 978-80-223-5702-9, s. 102-113 [CD-ROM]

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

The study presents the results of research aimed at identifying and analysing the positives and negatives of continuous writing in the teaching of primary school pupils based on interviews with teachers. The interpreted categories are exclusively related to connected writing, which is considered appropriate for all intact pupils. The findings declare not only the pedagogical (professional) side of the subject matter, but also the categories related to the attitudes and values of the teachers of the research sample.

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

In addition to the above findings, the study raises the question of preserving the form of continuous writing not only from a pedagogical and methodological-didactic point of view, but also from a cultural point of view (if we understand culture in two senses, where the core of both is made up of ideas and values, along with a high degree of self-regulation of the individual). Preparation for the mastery of writing is a necessary condition for future kindergarten teachers to develop graphomotor skills.

#### **5th evaluated output**

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

Preschool and Elementary Pedagogy (1st and 3rd degree), Teaching for Primary Education (2nd 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: 1007718

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

<https://app.crepc.sk/?fn=detailBiblioForm&sid=183355140A0C930102F276250170>

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

Individualization in the teaching of writing

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

A+

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

The study highlights research findings that focus on identifying individualization in the teaching of writing in the first grade of elementary school. The research team consists of elementary school teachers. The identified teachers' strategies emphasize the methodological practices and didactic resources that are considered significant in the teaching of writing. The indicators reveal strategies to support the writing of pupils who have writing difficulties.

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

The study focuses on the didactic aspects of individualization and differentiation applied in the subject of Slovak language and literature, specifically in the teaching of elementary writing in the preparatory period, when pupils in the first year of school prepare to write written forms of graphemes. The research aim was to seek to identify teachers' perspectives of action in the teaching of writing and, in particular, the promotion of writing in the elementary year. The identified principles, practices and techniques of developing graphomotor skills and writing support in the preparatory period represent the core of an explanatory theory of how the teachers of the research sample implement individualization in the teaching of writing in the first year of elementary school in Slovakia.

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

The didactic overlap of the study relates to a topical issue in which the awareness of the importance of developing graphomotor skills and writing support in the targeted and early elimination of pupils' writing difficulties resonates. Already in the preparatory period, when pupils record the elements of written letters in the form of different graphic shapes, some pupils may have significant difficulties and conventional teaching strategies may not be sufficient. If a pupil with difficulties in writing the simple elements of letters represented by graphic shapes is not given adequate individualised support during the preparation for writing graphemes, his chances of more challenging writing of graphemes, words, sentences and the associated overall learning are limited in advance.

**Date of last update**

23.03.2026

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