

Montessori Memo

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The Center for Montessori Studies collaborates across the Montessori community, Association Montessori International and American Montessori Society, and values the institutional collaborations with and among KU Center for Montessori Research, National Center for Montessori in the Public Sector, and Montessori Public Policy Initiative.

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Title: Montessori method in character education: Analysis of the effectiveness of the Montessori method in character education in early childhood education.

Citation: Yulia S., Raharjo T., Fakhruddin F., & Formen A. (2022). Montessori method in character education: Analysis of the effectiveness of the Montessori method in character education in early childhood education. *International Conference on Science, Education, and Technology*, 8(1), 881–889.

<https://proceeding.unnes.ac.id/index.php/ISET/article/view/1854>

Summary/Abstract: Character education for early childhood is intended to instill moral values that are useful in successful learning at the next level of education and become good habits when they are adults. Character that has been formed from an early age will affect the appreciation and practice throughout children's life. In the educational practice of early childhood education, however, the learning methods used are often less focused on developing character education than the development of cognitive academic abilities. As a result, early childhood education produces students who have high cognitive abilities but are not balanced with good character. This study aims to describe and test the effectiveness of Montessori method in character education in early childhood education using descriptive research methods. The objects are teachers at early childhood education institutions involving 112 respondents. The results show that Montessori Method-based learning that emphasizes the importance of independence and self-improvement activities in building life skills to improve students' intellectual abilities has proven effective in early childhood character education.

Title: Montessori education in preschoolers (sic).

Citation: Sattorova , M. S. (2022). Montessori education in preschoolers. *Research and Education*, 1(9), 394–399.

<https://researchedu.org/index.php/re/article/view/1076>

Summary/Abstract: In the classrooms of teachers, there ought to be a balance of direct instruction, guided play, and student-directed play. Children can use their creativity, language, social skills, self-control, and other talents to the fullest extent while playing. The best learning occurs when students are given a wide variety of options for activities and topics that engage them. Montessori education places a special emphasis on assisting children in developing their sensory abilities. An organized, aesthetically beautiful, and well-organized Montessori environment gives kids a sense of security and promotes discovery. Children’s freedom to roam, select, and participate in self-directed activities helps them uncover their passions and potential. The ability to lose yourself in an activity is encouraged in Montessori programs. Having a choice and feeling in control of one’s environment is associated with better performance. Kids who have a consistent family schedule and are considered to be more organized perform better in terms of cognitive, psychological, and social development. To encourage further study and to better inform teachers about whether as well as why the Montessori Method might be helpful, the paper’s objective is to present an overview of the evidence foundation for the method. **Title:** Picturebooks in the primary grades: Representation and the stories shared about who belongs in STEM.

Title: Some aspects of the Maria Montessori method in the education of preschool children.

Citation: Some aspects of the Maria Montessori method in the education of preschool children. *International Journal of Inclusive and Sustainable Education*, 1(6), 169–173.

<http://inter-publishing.com/index.php/IJISE/article/view/797>

Summary/Abstract: The article analyzes the Maria Montessori method (methodology), which is one of the world-famous systems and methods for educating preschool children. The main directions and principles of this method in the development of children of preschool age are considered, as well as the advantages and disadvantages of the Maria Montessori method in child education are shown.

Title: Learning to read with Montessori method.

Citation: Harahap, F. S. (2022). Learning to read with Montessori method. *Jurnal Scientia*, 11(2), 139-146.

<http://seaninstitute.org/infor/index.php/pendidikan/article/view/786>

Summary/Abstract: The ability to read is complex and detailed for early childhood children. In contrast to the ability to speak and listen which can be obtained naturally from their surroundings, the ability to read must be learned with certain methods. Montessori is a children's education method that can optimize children's potential through learning that involves children's sensory and motor aspects in a detailed and fun way. In Montessori, reading are introduced as fun and useful activities, which can help a child understand and appreciate the world, and share ideas and experience with other people. This article is written to explain how early childhood children learn to read by using the Montessori method. This research is a qualitative descriptive research.

Title: Montessori education in Nigeria: Theory and practice.

Citation: Fakokunde, J.B., Okanlawon, A. E., & Yejide Alebiosu, O. (2022). Montessori education in Nigeria: Theory and practice. *Revista Universitară de Sociologie*. 3, 83-90.
http://www.sociologiecraiova.ro/revista/wp-content/uploads/2021/12/RUS_3_2022-83-90.pdf

Summary/Abstract: The study investigated the operation of Montessori schools in the South Western part of Nigeria with due attention to Lagos and Osun State. A total of three hundred (300) teachers were selected from thirty (30) Montessori schools in the two states. Three research questions were answered in the study. A self-developed questionnaire titled “Montessori School Assessment Questionnaire” was used for data collection while the data were analysed using frequency count and percentage aspect of descriptive statistics. The study revealed that the Montessori School curriculum are not in line with the ideal one, the school and classroom environments have a semblance of Montessori schools while the teachers’ roles differ from the stipulations of what a Montessori teacher is expected to do. Premised on these, the researchers recommend that appropriate policy and curriculum should be designed for Montessori schools, Montessori school teachers should be exposed to relevant seminars and workshops.

Title: Usability of Montessori tangible user interfaces to support learners’ retention skills in preschools..

Citation: Chettaoui, N., Atia, A., Bouhlel, M.S., Elmohaiman, D. A., & Ahmed, S. (2022). Usability of Montessori tangible user interfaces to support learners’ retention skills in preschools. *Pers Ubiquit Comput*. 27, 481-494.
<https://doi.org/10.1007/s00779-022-01706-9>

Summary/Abstract: Introducing tangible user interfaces in the educational context is gaining attention in the Human–Computer Interaction research community. Numerous syntheses of research studies highlighted the potential impacts of tangible-based interaction on improving students’ knowledge gains, understanding, and collaboration. However, the existing literature lacks exploring the impacts that physical interaction with a tangible user interface might have on young students’ short-term retention skills and their user experience. This study set out to assess the effectiveness of tangible physical objects in empowering young learners’ short-term retention skills and their usability in an authentic educational context. The experimental study was performed at a primary school with 48 preschool students (aged 4–5) assigned to two groups to evaluate the educational potential of tangible interaction modality compared to a classical Montessori activity relying on non-augmented objects. The analyses were based on students’ responses to post-tests performed after 1 day after the learning session, and the System Usability Scale questionnaire conducted in the teacher’s presence. Results indicate the potential of interacting with the Montessori tangible user interface on supporting preschool students’ knowledge building. The usability questionnaire reveals that tangible physical objects are suitable for young learners’ use. It was found that the properties of the tangible interaction modality engaged young learners in the Montessori activity.

Title: Analyzing the selected Eurofit test batteries of the children with Down syndrome and Autism in the age range of 12-16 and receiving Montessori education.

Citation: Kaya, E. O. & Torun S. (2022). Analyzing the selected Eurofit test batteries of the children with Down syndrome and Autism in the age range of 12-16 and receiving Montessori education. *African Educational Research Journal*, 10(4), 439-446.

<https://www.netjournals.org/pdf/AERJ/2022/4/22-074.pdf>

Summary/Abstract: It is aimed in this study to analyze the effects of the Montessori education method on children with Down syndrome and autism having special training who have received and not received Montessori education through the Eurofit test batteries selected for motor skills and physical fitness. A total of 20 male children with Down syndrome and autism in the age range of 12 to 16 and receiving and not receiving Montessori education at two different special education and rehabilitation centers in Kayseri were included in the study. The treatment group included a total of 10 children, 5 with Down syndrome and 5 with autism, and the control group of 10 children, 5 with Down syndrome and 5 with autism. While the volunteers included in the treatment group received Montessori education, those included in the control group received a traditional education. In our study, when some activity and motor skills of the children with down syndrome and autism in the special rehabilitation school that uses the Montessori education method were analyzed, it was observed that there was an improvement in their physical activities and some motor skills according to the results of plate tapping, standing long jump and sit and reach tests. It is recommended that education programs can be prepared by using Montessori Approach as part of the education programs applied in preschool education institutions and that they can be used more widely together with traditional education programs.

Title: The effect of the Montessori approach in developing the cognitive awareness of kindergarten children.

Citation: Shareef, E. M. & Wahab, S. A. (2022). The effect of the Montessori approach in developing the cognitive awareness of kindergarten children. *College of Basic Education Research Journal*, 18(4), 291-311.

<https://doi.org/10.33899/berj.2022.176439>

Summary/Abstract: The aim of the research is to identify the impact of the Montessori approach in developing the cognitive awareness of kindergarten children. The experimental method was relied on by choosing two random samples of kindergarten children (experimental and control) amounting to (50) boys and girls. There is a statistically significant difference for the experimental group in the pre and post tests and in favor of the post application, meaning that the Montessori approach had a positive impact in developing the cognitive awareness of the research sample. There is also a statistically significant difference for the experimental and control groups in the post-test and in favor of the experimental group, and this indicates the positive impact of the Montessori approach in developing the cognitive awareness of the experimental group. A number of recommendations were presented, including the application of the Montessori approach in all private and governmental Riyadh because of its significant impact on thinking and cognitive abilities in general and the development of cognitive awareness in particular. And a number of proposals, including conducting extensive empirical research to find out the effect of using the Montessori method on many variables such as (social interaction, helping behavior, modifying unwanted behavior).

Title: The Montessori methodology in Ecuadorian initial education.

Citation: Tayo, S. C. V. (2022). The Montessori methodology in Ecuadorian initial education. *Horizontes Revista de Investigacion en Ciencias de la Educacion*. 6(22), 2228-2237.

<https://doi.org/10.33996/revistahorizontes.v6i26.487>

Summary/Abstract: In Ecuador, early education is relatively new and since 2014 with the approval and publication of the Early Education Curriculum organized by axes and areas of development and learning, it seeks the development of skills by age with the application of learning experiences and play work where play and art are a fundamental part of it. This article is based on the review of literature on Montessori experiences in children from 3 to 5 years old in Ecuador; for its development, 25 bibliographic sources on Montessori methodology and practical proposals applied in early education in Ecuador were reviewed; in addition, grade projects and institutional educational projects were analyzed under the approach of the theoretical, scientific and pedagogical bases that support the applicability of this methodology. It is concluded that the Montessori methodology remains active in Ecuadorian early education and it is part of the teaching and learning process directly or indirectly, with the application of materials, organization of the physical space, role of educators and sensory development from experience.

Title: Divergent and convergent thinking across the schoolyears: A dynamic perspective on creativity development.

Citation: Eon Duval, P., Frick, A., & Denervaud, S. (2023). Divergent and convergent thinking across the schoolyears: A dynamic perspective on creativity development. *Journal of Creative Behavior*, 57(2), 186-198.

<https://doi.org/10.1002/jocb.569>

Summary/Abstract: Creative thinking is critical to overcome many daily life situations. As such, there has been a growing interest on how creative thinking develops during childhood. However, little is known about the underlying mechanisms driving its development. Indeed, almost all research has focused on divergent thinking, leaving aside convergent thinking, and did not thoroughly investigate how internal and/or external factors influence their development. Here, 222 children aged from 4 to 12 years old attending either a Montessori or a traditional school performed drawing-based convergent and divergent standardized tasks. In addition, a subset of 41 children were tested using similar tasks for a second session 3 years apart. The results revealed dynamic developmental stages of convergent and divergent thinking. More specifically, a loss of divergent thinking was counterbalanced by a gain of convergent thinking, especially during the fourth-grade slump (8–10 years old). Although Montessori-schooled children showed overall higher creative abilities than traditionally schooled children, no differences were observed in the developmental trajectories of convergent and divergent thinking between the two pedagogies. This suggests that progress and decrease in creative thinking may be mostly due to internal factors such as brain maturation factors than external factors such as peer pressure.

RESEARCH: RELATED

Title: Short investigative research on learning difficulties in primary school years.

Citation: Mogonea, F.R. (2022). Short investigative research on learning difficulties in primary school years. *Annals of the University of Craiova, Psychology - Pedagogy*, 4(22), 135-148.

<http://doi.org/10.52846/AUCPP.2022.2.11>

Summary/Abstract: In accordance with the efforts of the education systems around the world, the Romanian one also strives to create and implement a set of projects that include a generous, comprehensive educational offer, in order to meet the growing and diverse educational needs of a population with increasing and diverse educational necessities. This is how inclusive or integrated pedagogy (education) appeared, as well as the pedagogy of gifted children (the pedagogy of elitism) or the educational alternatives (Waldorf, Montessori, Freinet, Step by Step). With all these efforts to meet the educational needs of a mosaic and constantly changing population, one category of individuals has not been researched and explored enough: it is the category of children with learning difficulties. Research on this category of children has been carried on mainly during the last four decades. The present study aims to address the issue of learning difficulties at the level of primary education, from the perspective of an ameliorative type of research, which proposes a series of effective action methods to reduce the learning difficulties in the Romanian language registered by the students of some classes in the primary school years. These methods can obviously be extended and adapted to other classes and other school subjects.

Title: Measuring social studies critical roles of empowering student's civic competence in overcoming gender issues to enhance sustainable new world.

Citation: Adeduntan, R. I., & Adetayo, J. O. (2022). Measuring social studies critical roles of empowering student's civic competence in overcoming gender issues to enhance sustainable new world.

Interdisciplinary Journal of Education, 5(2), 104–116.

<https://doi.org/10.53449/ije.v5i2.93>

Summary/Abstract: The escalating reports of gender issues, particularly violence against women and girls across Nigeria, through the media are worrisome. This raises further questions on the roles of Social Studies in overcoming these concerns hindering societal peace for sustainable development. The researchers adopted a descriptive design to examine the knowledge and attitudes including social skills standards gained from Social Studies to help realize a new world order on gender issues in the society. The study adopted a quantitative method approach for data collection. The findings revealed high knowledge awareness of gender issues among respondents while attitudes and social skills gained recorded only a moderate level of knowledge awareness. Also, findings showed a statistically significant difference between students' knowledge of gender issues and their social skills for emotional intelligence to deal with gender issues around them.

Title: Educating young people in communicating peacefully through social media.

Citation: Ishak, S. A. (2022). Educating young people in communicating peacefully through social media. *The Journal of Development Communication*, 33(2), 52-56.

<http://jdc.journals.unisel.edu.my/index.php/jdc/article/view/238>

Summary/Abstract: Social media usage has grown exponentially in the contemporary communication landscape. This increase in usage and openness in speech results in public concern about existing practices in social networks. Social media misuse and abuse is a growing challenge in the online space and a primary concern for parents, educators, and social media activists. The consequences include public tension, intolerance, and violence and it has resulted in psychological and emotional upheavals among users. This paper reviews some of the challenges and issues in peace education, and how communicative peace is central to peace education. It also evaluates the idea of communicative competence in strengthening young people's capacity to exploit modern-day communication media to communicate for peace and make an impact in their communities. This paper concludes that teaching and learning to communicate peacefully is not only a universal educational prerequisite but has become very crucial if we are to fulfill our communicative roles and obligations with justice, and above all, peace.

Title: The effect of Problem Based Learning (PBL) Model on students' critical thinking ability in class XI digestive system concept.

Citation: Ratnasari, D., Rahmawati, M., Khaerunnisa, A., & Kamila, A. F. (2022). The effect of Problem Based Learning (PBL) Model on students' critical thinking ability in class XI digestive system concept. *International Journal of Biology Education Towards Sustainable Development*. 2(2).

<https://doi.org/10.53889/ijbetsd.v2i2.156>

Summary/Abstract: This study aimed to determine the effect of the problem-based learning model on students' critical thinking skills in the digestive system concept. The samples in this study were taken using a simple random sampling technique with 28 samples, namely 14 students for the experimental class and 14 other students for the control class. The measured variable is students' critical thinking skills, which are obtained from the pretest-posttest results using the Kolmogorov Smirnov normality test, the One Way Anova homogeneity test, and hypothesis testing for learning outcomes using the Independent Sample T-test. The results of the t-test show a significant influence of the problem-based learning model on students' critical thinking skills, with a significance value of $0.001 < 0.05$. This study concludes that the problem-based learning model has an effect on increasing students' critical thinking skills.

Title: Global citizenship education: A new approach to global citizenship development.

Citation: Saleem A., Deeba F., & Raza M. A. (2022). Global citizenship education: A new approach to global citizenship development. *Perennial Journal of History*, 3(2), 392-409.

<https://doi.org/10.52700/pjh.v3i2.131>

Summary/Abstract: Global citizenship education is a type of civic learning in which students take part in projects that deal with social, political, economic, or environmental problems that affect the whole world. The goal of Global Citizenship Education (GCE) is to give people of all ages the tools they need to take part in building more peaceful, tolerant, inclusive, and safe societies, both locally and globally. As a basic need of citizens, global citizenship education is of paramount importance today. The purpose of the paper is to provide understanding related to global citizenship and global citizenship education. The data was collected using secondary sources such as journals, articles, web sources, etc. Researchers shed light on the major elements, dimensions, and themes of global citizenship education. The major themes of global citizenship education, such as peace education, human rights education, civic education, humanitarian norms, and the psychosocial dimensions of global citizenship, are discussed in this paper. In this paper, it is concluded that global citizenship education enables citizens to change the way they live and to adopt modern education for their betterment. Additionally, it changes their mentality towards different cultures of the world, bringing peace and harmony to the whole world. According to this study, teachers should be educated about global citizenship and provide global citizenship in all fields of education. The current government should provide facilities for Pakistani students in order for them to become global citizens.



Montessori Memo is a resource found via the *Montessori Forward* webpage. A contemporary format for people to learn about Montessori education. *Montessori Forward* is the shared effort of the Center for Montessori Studies, University of Hartford degree programs, and the Montessori Training Center Northeast to sustain a virtual space as well as an intellectual community for researchers and practitioners contributing to Montessori education and research.

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