INTEGRATION OF THE MONTESSORI METHOD IN THE EDUCATIONAL PROCESS OF PRIMARY SCHOOL CHILDREN

HASMIK KONJOYAN

Montessori Educator, PhD student

jasminekonjoyan@gmail.com

DOI: 10.54503/2579-2903-2026.1-34

Abstract

Educational programs implemented in the Republic of Armenia, particularly those involving primary school–age children, are generally based on a traditional, closed educational model. However, classroom experience and student behaviour, especially regarding motivation, pose serious challenges: children often lack interest in learning and prefer using their phones during lessons or other digital devices with screens. We believe that the educational process can be organised so that learning becomes sufficiently engaging for the child to choose it over digital distractions. While it is impossible to revolutionise the educational system immediately, new methodological elements can be introduced into the traditional model. The purpose of this article is to propose an integrated approach, substantiate its effectiveness, and highlight its role in the development of primary school–age children.

Keywords: Prepared environment, role of the teacher, personalised learning, mixed–age groups, practical life skills.

ՄՈՆՏԵՍՈՐԻ ՄԵԹՈԴԻ ԻՆՏԵԳՐՈՒՄԸ ՏԱՐՐԱԿԱՆ ԴՊՐՈՑԻ ԵՐԵԽԱՆԵՐԻ ԿՐԹԱԿԱՆ ԳՈՐԾԸՆԹԱՑՈՒՄ

ՀԱՍՄԻԿ ԿՈՆՋՈՅԱՆ

Մոնտեսորի ուսուցիչ,
կիրառական հոգեբանության ամբիոնի հայցորդ

jasminekonjoyan@gmail.com

Համառոտագիր

Հայաստանի Հանրապետությունում իրականացվող կրթական ծրագրերը, մասնավորապես՝ կրտսեր դպրոցական տարիքի երեխաներին ուղղված, հիմնականում հիմնված են ավանդական, փակ կրթական մոդելի վրա: Սակայն դասարանային փորձը և աշակերտների վարքը, հատկապես՝ մոտիվացիայի տեսանկյունից, ցույց են տալիս լուրջ խնդիրներ. երեխաները հաճախ հետաքրքրված չեն ուսմամբ և դասերի ընթացքում նախընտրում են օգտվել հեռախոսից կամ էկրան ունեցող այլ թվային սարքերից:

Մենք կարծում ենք, որ կրթական գործընթացը կարելի է կազմակերպել այնպես, որ ուսումը դառնա երեխայի համար բավականաչափ հետաքրքիր: Թեև հնարավոր չէ կրթական համակարգը միանգամից արմատապես փոխել, սակայն ավանդական մոդելի շրջանակում հնարավոր է ներմուծել նոր մեթոդաբանական տարրեր:

Սույն հոդվածի նպատակն է՝ առաջարկել ինտեգրված մոտեցում, հիմնավորել դրա արդյունավետությունը և ընդգծել դրա դերը կրտսեր դպրոցական տարիքի երեխաների զարգացման գործընթացում:

Բանալի բառեր՝ պատրաստված միջավայր, ուսուցչի դեր, անհատականացված ուսուցում, խառը տարիքային խմբեր, կենսագործնական հմտություններ:

Introduction

In the modern era, characterised by rapid social change, the comprehensive development of children, enhancing their understanding of knowledge, increasing receptivity, and fostering a harmonious mental and emotional state, has become important. However, the accelerating pace of life, socio-economic pressures, and a global decline in learning motivation create a demand for a new, alternative psychological and pedagogical approach that implies targeted reforms in the educational process.

Whereas decades ago, a child developed within the environment of a "small society", today even preschoolers live within a much larger socio-digital space. This new information environment places significant pressure on children, primarily through the constant flow of information from television and the Internet. These sources often appear more compelling than traditional teaching and can overshadow the knowledge offered by parents and teachers.

A new generation requires a creative, constructive educational approach-one that increases children's motivation to learn while acknowledging the specific characteristics of contemporary childhood. Such an approach can lay the foundation for more effective educational programs and methods that support knowledge acquisition and the development of modern competencies. This would allow the educational process to meet contemporary requirements while remaining engaging and motivating for children.

Before presenting the integrated educational method, it is important to briefly review the Montessori Method, as its core principles provide the methodological basis for our work.

Literature Review

This section addresses historical developments in learning theories that emphasise the holistic mental and spiritual development of the child.

The Roman rhetorician Marcus Fabius Quintilian (1830), in his 12-volume work *Rhetorical Education*, argued nearly 2,000 years ago that coercion in teaching has negative effects and should be excluded. Instead, he recommended

making learning appealing and interesting, considering the learner's personality and characteristics. This approach, he believed, would help prevent negative behaviours.

During the Middle Ages, even emperors expressed interest in educational reform, recognising the importance of cultivating an intelligent, well-rounded, responsible ruling class.

In the 17th century, the Czech educator and founder of scientific pedagogy, John Amos Comnianus (the father of modern education), generated significant interest with his work, *Great Didactics* (1658). He proposed making education accessible to all social classes and introduced a structured system of primary, age-based education. He emphasised native-language instruction, the teaching of natural sciences, and the study of nature itself.

Among Comenius's key contributions were:

- The creation of a preschool education system.
- Division of human development into four six-year stages: childhood, adolescence, youth, and adulthood.
- Emphasising nature, observation, and systematic learning.

We also drew on the ideas of Swiss educator Johann Pestalozzi (1746–1827) (Tröhler, 2013), who identified four key factors essential for a child's development:

1. **Spiritual and physical well-being**—mental and physical health as prerequisites for active learning.
2. **Family environment**—the importance of loving, supportive relationships.
3. **Communication and expressive ability**—skills necessary for emotional and social development.
4. **Ability to participate**—active involvement in learning and in social life.

German educator Friedrich Fröbel (2024) similarly emphasised the importance of natural knowledge, culture, and creativity. He viewed children as part of God's creation, endowed with innate abilities that educators must help reveal. Froebel regarded play as the highest form of child development, essential for understanding the world and cultivating moral values.

English philosopher and educator Robert Owen (Taylor & Francis, 2021) stressed the role of culture; for example, singing, dancing, and aesthetic appreciation are important in developing the human soul. He highlighted the importance of nature, physical fitness, and social interaction in children's education.

The final theoretical foundation for our work is the Montessori Method. Maria Montessori, the first female physician in Italy, created an alternative educational system centred on child-led learning within a carefully prepared environment (Hainstock, 1997). Montessori classrooms, or "Children's Houses," are organised into five sections—practical life, sensorial development, mathematics, language, and cultural studies (geography, botany, zoology, history, art and music) — and rely on self-directed activity, hands-on materials, and teacher observation (2016).

In the Montessori school, the teacher, by personal example and with little

verbal explanation, first guides the child on how to use this or that didactic item. Then, he or she carefully observes and studies the child's actions to discover the child's way of thinking, level of attention, strengths and weaknesses, personal characteristics, and interests. As Montessori herself describes it: "The acquisition of knowledge is not the words spoken during teaching, but in reality the child's experience and actions with the things and objects around him or her" (1986).

In other words, when teaching a child, the focus should be on the child and their actions, the child's interests and level of development or maturity, according to age, rather than just the teacher's interpretation and explanation.

For example, consider the development of speech in children. Every child seems to "absorb" the speech that sounds around him, during the period naturally designated for the acquisition of speech. According to Montessori, a child is born capable of learning any language that sounds in his environment. The first two years of a child's life open up a wide horizon for acquiring all kinds of new things. It is in these "Sensitive Periods" of speech development that the child seems to be able to teach himself to speak, listening to the speech that sounds around him, following the movements of the speaker's mouth, and trying to pronounce similar sounds. Gradually, he discovers that the people, things, and objects around him have their own names (1997).

In the educational institution called "Children's House", each object or subject created for learning, as well as the sequence of placement of objects or teaching aids on the classroom shelves, is not random. Each object or subject also has a planned sequence of use for the child and a method of presenting the material to the child. Once a child has mastered the presentation, there might be an extension to the presented lesson. Let us take an example from a section of the mathematics department. First, a number and its corresponding quantity are presented through didactic aids. Thus, through their combination, a connection is created in the child's mind between the number and the quantity it represents. A new transition is made to simple mathematical operations, namely, the ability to obtain a new number by adding or subtracting the quantities corresponding to those numbers. Through the actions presented in the correct sequence and special teaching aids, the child soon, without difficulty, performs addition of numbers, and later multiplication, understanding the concept of these operations. In this case: "Repeated addition of the same numbers is a multiplication." Maria Montessori called such conditions surrounding the child a "Prepared Environment", where there is no need for constant intervention or direct instructions from an adult. However, the child himself can study it with full attention and a focused mind, using didactic materials that interest him, and draw conclusions or discoveries. According to the Montessori method, work with each item has a direct and indirect aim or task. For example, in arithmetic, the direct aim of teaching "Quantity and Number in the Decimal System" is to create a connection in the child's mind about the quantity corresponding to the numbers one, ten, one hundred, and

one thousand. Moreover, the indirect aim is for the child to imagine that each category of the decimal system has nine level elements, after which a transition is made to the next level or category, for example: 1–9; 10–99; 100–999, etc. Let us give another example from the life skills section: organising a suitcase. This work, which seems so simple at first glance, is a sequence of numerous regulated actions that also includes the control and correction of inaccuracies or errors (2016). This work also pursues two other goals: direct and indirect. The first, direct goal is that, while performing the above–mentioned work, the child develops the following qualities: order of actions, concentration of attention, coordination, independence, and increased self–esteem and self–confidence. The indirect aim is to organise the suitcase.

The use of a large number of didactic aids is aimed precisely at developing concentration and coordination. It is undeniable that thinking accompanied by focused attention provides a person with more information, helping them discover the deeper properties of an object or phenomenon.

Numerous studies in the children's institutions called "Children's House" created by Maria Montessori have shown that children are capable not only of learning to read and write from an early age, but also have the ability to master natural knowledge, such as botany, geography, zoology, music, arithmetic, and even perform simple mathematical operations. It is simply necessary to create favourable conditions for their assimilation – that is, a pre–thought–out and specially arranged environment taking into account the sensitive periods of the child's development, as well as the correct methodological guidance of the educator, which is necessarily based on the child's age characteristics and interests. Thus, according to Montessori, learning is a natural process that develops automatically in a human being from birth, provided there are the necessary conditions and prerequisites. The most important role of the teacher is not in managing the teaching process through "lecturing" or constant direct instruction, but in getting to know the child through an individual approach, numerous observations, and in generating motivation, interest, and love for learning.

Moreover, all this in an environment created specifically for the child, called the "Prepared Environment", where teachers, guiding the students by personal example, act as "providers" of the material being taught, while the main task of teaching is to help the child to explore and complete the tasks themselves, not just memorise the teacher's explanation.

A program for integrating the Montessori method into the educational process of primary school children.

We have developed a program based on the integration of traditional and non–traditional methods. Let us now present the program:

a) Curriculum Alignment

- Blend Montessori activities with national curriculum standards (math, reading, science).

- Use Montessori materials (beads, sandpaper letters, number rods) to support conceptual understanding.

b) Classroom Environment

- Flexible seating and learning stations.
- Open shelves with accessible learning tools.
- Quiet areas for individual concentration.

c) Teaching Practices

- Encourage self-directed projects and inquiry-based learning.
- Foster group collaboration while respecting individual choices.
- Integrate observation as a key assessment tool.

d) Skill Development

- Promote problem-solving and critical thinking through manipulatives and experiments.
- Support socio-emotional growth via peer mentoring and shared responsibility.
- Incorporate daily routines (cleaning, organising) to strengthen independence.

e) Assessment Approach

- Replace or supplement standardised testing with continuous observation.
- Portfolios, self-reflection, and teacher notes track progress holistically.

f) Benefits of Integration

- Increased motivation and engagement.
- Development of independence and self-regulation.
- Enhanced creativity and problem-solving.
- Stronger peer relationships and collaboration.
- Deeper conceptual understanding due to hands-on learning.

The Montessori method, developed by Dr Maria Montessori, is a child-centred educational approach emphasising independence, hands-on learning, and respect for each child's natural development. Integrating Montessori principles into primary school education helps nurture autonomy, creativity, and responsibility while aligning with modern educational standards.

g) Challenges and Considerations

- Need for teacher training in Montessori philosophy.
- Resource-intensive (materials and classroom setup).
- Balancing Montessori freedom with state/national curriculum requirements.
- Possible resistance from traditional educational structures.

h) Conclusion

Integrating Montessori principles into primary school education has many positive impacts: building concentration, coordination, independence, fine motor skills and a deep understanding of the concept. While full implementation requires resources and training, even partial integration—through classroom design,

teaching practices, and assessment methods—can significantly benefit children's academic and personal development.

Research

We conducted a scientific experiment to study the creativity of primary school children (5–11) before and after the application of our integrated method. The Torrens Creativity Assessment Methodology, a modified version of Williams, was used.

E. Torrance's verbal tests for the detection of creative abilities to identify creative abilities. In addition, through this test, we have identified aspects of creative activity such as curiosity, the ability to predict, to put forward hypotheses, and to establish cause-and-effect relationships. During the test, we offered the children the following tasks:

- What would happen if we imagined that there were ropes glued from the sky that reached the ground? What consequences could this have? /It demonstrates curiosity and the ability to establish cause-and-effect relationships, 5 minutes are given/.
- List as many new uses for a matchbox as possible. (This demonstrates flexibility of thought; 10 minutes are given.

Here, we have evaluated the results according to their uniqueness.

5. Research results

Now, let us present the comparative results of the obtained data.

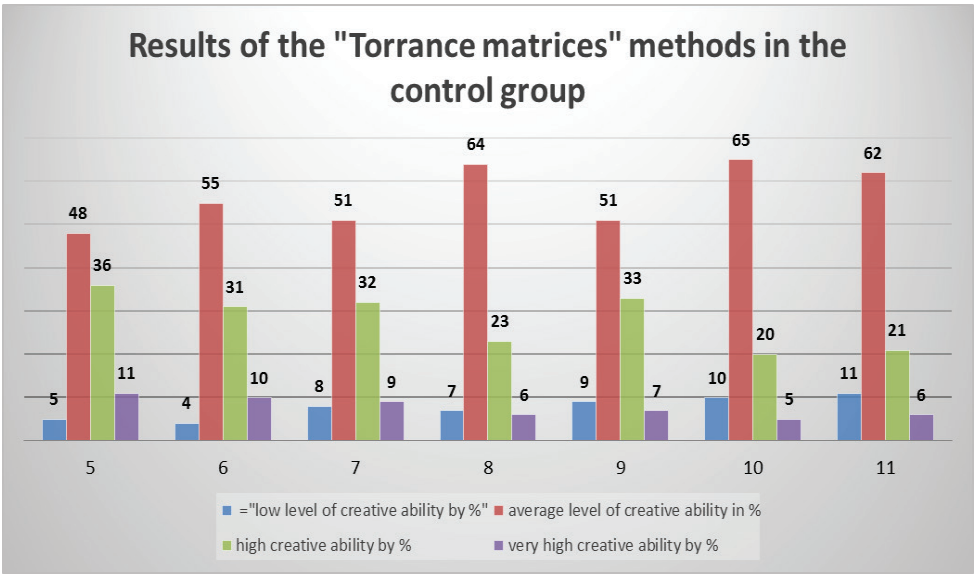

Figure 1. Results of the "Torrance matrices" methods in the control group

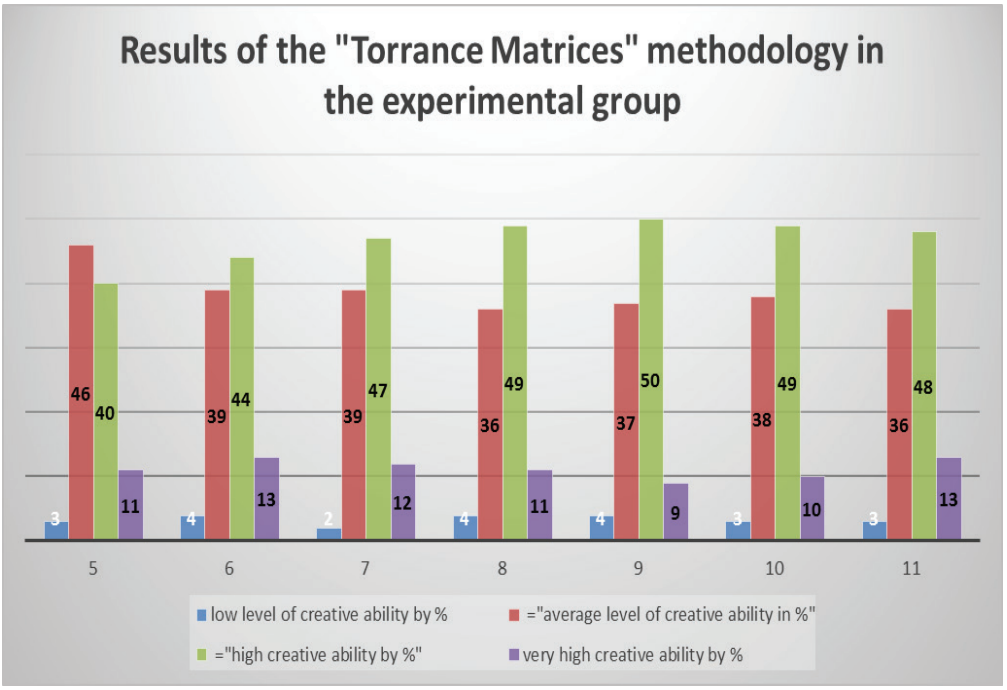

Figure 2. Results of the "Torrance Matrices" methodology in the experimental group

According of E. Torrance's methodology for identifying creative abilities, we see that, unlike intelligence in childhood, the level of creative ability in 5–year–olds is very high, around 36%. We also see a sad picture where the level of creative ability decreases with age, reaching 19%, while the average level increases to 66%.

We explain this phenomenon by the standard application of teaching methods; that is, we find that the modern educational system, by demanding mainly standard approaches from children, negatively affects the child's creativity. Noticing this problem, we propose introducing changes to the teaching process and of the educational methods, and we propose a program, the scientific experiment of which we will present later.

As we can see from the results obtained, the dynamics of the development of creative abilities are almost the same in the results of the preliminary study and in the control group. However, we observe significant differences in the experimental group, where creative abilities not only do not decrease, but on the contrary, increase, which indicates that the «Integrated Psychological–Pedagogical» method developed by us has contributed to the development of creative abilities.

Conclusion

The integration of the Montessori method into primary school education provides meaningful opportunities to transform the learning environment into one that fosters autonomy, curiosity, and creativity. The findings of the conducted study show that traditional teaching methods may unintentionally suppress children's natural creative capacities, while the proposed integrated approach supports and enhances these abilities. By blending Montessori principles with standard curriculum expectations, educators can create a more engaging and developmentally supportive educational process. Although successful implementation requires trained teachers, resources, and structural adjustments, even partial integration can positively influence children's motivation, independence, and holistic development. Therefore, the application of the integrated psychological–pedagogical method is a promising direction for improving the quality of primary education and supporting the formation of well–rounded, creative learners.

References

Comenius, J. A. (1658). . The Orbis Pictus, https://dn790002.ca.archive.org/0/items/orbispictusofjoh00comeiala/orbispictusofjoh00comeiala.pdf

Froebel, F., & Mathis, M. (Eds.). (2024). Where children grow: Wisdom for raising resilient humans from the inventor of kindergarten. Plow.

Hainstock, E. G. (1997). The essential Montessori: An introduction to the woman, the writings, the method, and the movement (Rev. ed.). Plume. ISBN: 978–0452277960

Montessori, M. (1982). The secret of childhood. Ballantine.

Montessori, M. (1986). The discovery of the child. Italy.

Montessori, M. (2016). Protection against the exploitation of children. In G. Schulz–Benesch (Ed.), The child, society and the world: Unpublished speeches and writings. pp. 79–82.

Montessori, M. (2025). The absorbent mind. Zinc read.

Owen, R. (1813–1816). A new view of society, or, Essays on the principle of the formation of the human character [Original dedication of first essay, omitted in subsequent editions]. https://la.utexas.edu/users/hcleaver/368/368OwenNewViewtable.pdf

Owen, R. (2021). The selected works of Robert Owen. Vol. I. Taylor & Francis.

Quintilian, M. F. (1830). *Institutio – Oratoria.* CLF Panckoucke.

Tröhler, D. (2013). Pestalozzi and the educationalization of the world. Palgrave Macmillan.

The article has been submitted for publication: 08.12.2025
Հոդվածը ներկայացվել է տպագրության. 08.12.2025

The article is sent for review: 03.03.2026
Հոդվածն ուղարկվել է գրախոսության.03.03.2026

The article is accepted for publication:17.03.2026
Հոդվածն ընդունվել է տպագրության. 17.03.2026