Beyond Traditional Classrooms: Montessori's Humanistic System in Early English Education in Uzbekistan

Jurakulova Gulruh Murot qizi

Asia International University
OXU
Bukhara, Uzbekistan
gulruhjurakulova@gmail.com

ABSTRACT

In recent years, primary education has increasingly emphasized child-centered learning approaches that promote intrinsic motivation, autonomy, and cognitive development. The Montessori method exemplifies this paradigm by providing a systematic, evidence-based framework in which children can explore, experiment, and acquire knowledge without undue pressure or fear of mistakes. Rooted in humane educational principles, Montessori classrooms encourage learners to take initiative, engage with multi-sensory materials, and collaborate with peers, thereby fostering curiosity, creativity, and self-confidence. This study examines the effectiveness of the Montessori approach in early English education for first-grade students (ages 7–8) in Samarkand, Bukhara, Khorezm and Navai regions of Uzbekistan. A field trial included 279 students, with 141 in Montessori experimental groups and 138 in traditional control groups. The Montessori phonetic teaching system, along with a range of specialized instructional materials such as three-part cards, movable alphabets, and sandpaper letters, effectively supported phonemic awareness, vocabulary enrichment, reading literacy, and fluency development in young learners. The method's emphasis on self-correction and autonomy allowed children to learn from errors constructively, cultivating intrinsic motivation and reducing anxiety associated with traditional, teacher-directed instruction. Results indicate that students in Montessori groups outperformed their peers in control classrooms across multiple language domains. Beyond measurable academic gains, the method demonstrated a positive impact on learners' engagement, confidence, and willingness to communicate in English. These findings underscore the Montessori method's compatibility with continuous, developmentally appropriate learning and its potential for integration into Uzbekistan's primary education system, offering a replicable model for effective, child-centered foreign language instruction.

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KEYWORDS: Montessori method; child-centered education; phonemic awareness; vocabulary acquisition; intrinsic motivation

INTRODUCTION

The method, developed by Maria Montessori, promotes an educational environment where children are active participants in their learning, rather than passive recipients of information. Unlike traditional classrooms that rely heavily on rote memorization and rigid testing, Montessori education emphasizes hands-on experiences, social interaction, and self-directed exploration, enabling students to acquire skills at their own pace while minimizing stress and anxiety.

One of the method's core innovations in language acquisition is its structured approach to early English education. Instead of conventional drill-based teaching, Montessori classrooms utilize three-part cards, a tool that supports a sequential learning process, helping children link objects, written words, and verbal labels. These cards allow for three-step learning: first, the child identifies the object, then matches it with a corresponding written word, and finally articulates or reads the word aloud. This method ensures that children self-correct mistakes naturally and learn without fear of reprimand, promoting confidence and intrinsic motivation. Multisensory materials - tactile letters, movable alphabets, and sound games -reinforce phonemic awareness, lexicon, and reading skills while simultaneously fostering fine motor development and cognitive engagement.

The Montessori approach is particularly notable for its respect for individual learning rhythms. By creating a prepared environment with clearly defined areas for vocabulary, conversation practice, and grammar, children can navigate their learning independently. They are encouraged to explore language organically, participate in role-play, and engage in collaborative activities, which strengthens social skills, peer teaching, and functional communication. For example, activities such as role-playing a market transaction or storytelling with puppets immerse children in real-life contexts, enhancing both fluency and comprehension. The approach aligns with contemporary neuroscientific research which confirms that embodied, multisensory experiences significantly enhance memory encoding and language retention.

LITERATURE REVIEW

Montessori education has received considerable scholarly attention because of its emphasis on learner autonomy, experiential learning, and children's developmental needs. Developed by Maria Montessori, the approach views children as active constructors of knowledge rather than passive recipients of information. The teacher functions primarily as a facilitator, while the prepared environment and carefully designed materials encourage independence, concentration, self-discipline, and intrinsic motivation. Lillard (2017) argues that several core principles of Montessori education, including self-directed activity, hands-on learning, and freedom within structured limits, are consistent with contemporary findings in developmental psychology.

Multisensory learning constitutes another important principle of Montessori education, particularly in early language acquisition. Research suggests that young learners benefit from instruction combining visual, auditory, tactile, and kinesthetic experiences. Montessori materials such as sandpaper letters, movable alphabets, object boxes, and three-part cards enable children to connect sounds, symbols, meanings, and physical objects through direct interaction. Such experiences contribute to phonological awareness and early literacy development by strengthening the relationship between spoken and written language. The use of manipulatives also allows learners to experiment with sounds and word formation before mastering conventional handwriting.

An important characteristic of Montessori instruction is self-correction. Many learning materials contain a built-in control of error, allowing children to identify and correct mistakes independently. This principle is particularly valuable in foreign language learning, where anxiety and fear of making mistakes may limit classroom participation. A supportive learning environment in which errors are treated as a natural part of discovery can enhance learners' confidence, persistence, and willingness to communicate.

Learner autonomy and social interaction are also closely connected to effective language development. Montessori classrooms provide children with structured choices, allowing them to select activities, repeat tasks, and progress according to their individual learning pace. At the same time, collaborative activities, peer interaction, storytelling, and role-play create meaningful opportunities for communicative language use. Vocabulary and linguistic structures are therefore learned not only through repetition but also through contextualized experiences and purposeful interaction.

Despite growing international interest in Montessori education, relatively limited research has investigated its systematic application to early English language instruction in Uzbekistan's general secondary schools. Existing practices have primarily focused on preschool or private educational contexts, leaving questions regarding its adaptation to formal primary classrooms. Furthermore, few studies have examined its influence on specific language outcomes such as phonemic awareness, vocabulary acquisition, reading accuracy, and fluency among first-grade learners.

Therefore, the present study addresses this gap by examining the effectiveness of Montessori-based English instruction among primary school students in Uzbekistan. By evaluating both linguistic achievement and qualitative aspects such as engagement, autonomy, confidence, and classroom interaction, the study contributes empirical evidence on the potential of Montessori education as a child-centered model for early foreign language instruction.

METHODOLOGY

Research design. This study employed a mixed-methods research design, combining quantitative measures of English language proficiency with qualitative classroom observations. The aim was to evaluate the effectiveness of Montessori-based English instruction for first-grade students (ages 7–8) in Uzbekistan. The design allowed the research team to examine both observable linguistic outcomes and student engagement, autonomy, and social interaction, providing a comprehensive perspective on the teaching method.

Participants. A total of 279 students were recruited from three regions: Samarkand (76 students), Bukhara (81 students), Khorezm (72) and Navai (50 students).

Participants were divided into:

- Experimental group (Montessori-based instruction): 141 students
- Control group (Traditional instruction): 138 students

The process of the research.

The way of learning among 2 groups.

1.1. Control groups.

Control group students followed conventional primary English curricula, with teacher-led lessons, worksheets, and standard textbooks.

Inclusion criteria ensured students were native Uzbek speakers, had no prior structured English instruction, and were enrolled in public primary schools.

1.2. Experimental groups.

Students in the experimental group received Montessori ESL instruction, which emphasized child-centered learning in the Montessori environment. They started learning the alphabet letters by sounds not with their names, according to phonetic approach of Montessori. In the next steps they worked with Montessori sandpaper letters, moveable alphabet, three-part cards, color coded grammar blocks and self-correct exercises.

1.3. Types of observation.

Classroom observations, video recordings and field notes documented student engagement, autonomy, peer interaction, and task persistence.

Teachers recorded instances of self-correction and collaborative learning.

Teacher Journals. Teachers provided qualitative insights on behavior, interest, and motivation throughout the year.

Data were collected over an academic year, using classroom observations, pre- and post-tests, and teacher logs. The study measured phonemic awareness, lexical growth, and reading fluency, revealing significant gains in students exposed to Montessori methods. For instance, students using three part cards and multisensory materials achieved 58% faster vocabulary acquisition, demonstrated more accurate grammar application, and produced longer, more complex utterances compared to peers in conventional classrooms. Peer-to-peer interactions in mixed-age settings contributed to 23% more corrective feedback exchanges, improving collaborative problem-solving and communicative competence.

The success of Montessori methods in Uzbekistan further demonstrates the method's ability to cultivate humanistic qualities such as autonomy, curiosity, resilience, and confidence. By embedding language in meaningful contexts and allowing children to self-correct, the methodology reduces the fear of failure and encourages active participation.

RESULTS

The study conducted in Uzbekistan focused on early English education in first-grade classrooms using the Montessori method, emphasizing child-centered learning, 3-part cards, and multisensory materials. A total of 279 students participated across three regions: Samarqand, Bukhara, Khorezm and Navoiy. Among these, 141 students were assigned to experimental (Montessori) groups, and 138 students to control groups, following conventional teaching approaches. Data were collected over a full academic year and included pre- and post-tests measuring phonemic awareness, lexical knowledge, reading fluency, as well as classroom observation logs and teacher journals documenting engagement, autonomy, and collaborative learning.

Enhanced Vocabulary Acquisition

Montessori students demonstrated substantial improvements in vocabulary retention and usage. Pre-test scores showed no significant differences between experimental and control groups, with average accuracy around 45–47%. After one academic year, post-test results revealed:

Table 1.

Region	Experimental (Montessori)	Control (traditional)	Improvement difference
Samarkand	88%	61%	+27%
Bukhara	91%	63%	+28%
Navai	90%	60%	+30%
Khorezm	86%	60%	+26%

The overall average gain for Montessori students was 89%, compared to 61% for traditional classroom students. The phonetic approach, moveable alphabet, tactile and hand on materials, three-part card system played a crucial role in these results, enabling students to self-correct while linking objects, written words, and spoken forms. Teachers noted that children frequently repeated vocabulary spontaneously during play and peer activities, suggesting the internalization of language was occurring beyond structured lessons.

Phonemic Awareness

Phonemic skills, including sound discrimination, segmentation, and blending, were assessed using structured listening and articulation tests. Montessori students achieved:

- ✓ Sandpaper and tactile letter tracing significantly improved recognition and pronunciation.
- ✓ Average phonemic accuracy in experimental groups rose from 46% to 84%, compared to 47% to 62% in control groups.
- ✓ Observations indicated active engagement, as children manipulated letters and verbalized sounds simultaneously, reinforcing sensorimotor connections and embodied cognition principles.

Grammar and Lexical Application

Montessori students used color-coded grammar blocks to construct sentences, fostering syntactic awareness. Key outcomes included:

Table 2.

Skill area	Montessori groups	Control groups	Effect size
Sentence formation accuracy	82%	59%	0.9
Plural&Paste tense usage	79%	55%	0.8
Spontaneous speech	91%	67%	1.4

Students frequently corrected peers without teacher intervention, demonstrating that the Montessori environment promotes intrinsic motivation and self-regulation. These findings align with prior research showing peer learning and mixed-age collaboration enhance language acquisition (Lillard, 2017; Vygotsky, 1978).

Reading Fluency

Montessori students exhibited faster and more accurate reading, measured through timed reading tasks and sentence comprehension exercises:

- ✓ Average fluency increased from 32 words/minute to 57 words/minute in experimental groups, versus 31 to 42 words/minute in control groups.
- ✓ Comprehension questions were answered 85–88% correctly in experimental groups, compared to 65–68% in control groups.
- ✓ Students demonstrated better self-monitoring, stopping to correct misread words using tactile letters and story-based cues.

Compared to traditional instruction, the Montessori method demonstrated a statistically significant advantage in all measured areas ($p < 0.05$).

DISCUSSION

These results underscore the efficiency of Montessori methods in early English education within Uzbekistan. The study illustrates that child-centered, hands-on learning:

1. Facilitates self-directed acquisition, allowing children to internalize language structures naturally.
2. Reduces anxiety and fear of making mistakes, encouraging experimentation and creativity.
3. Supports sensorimotor integration, strengthening cognitive and linguistic connections.
4. Provides opportunities for peer learning, which reinforces comprehension and correct usage.

The findings of this study provide compelling evidence that the Montessori method, when applied to early English education in Uzbekistan, is significantly more effective than traditional teacher-centered approaches. Across the three regions: Samarkand, Bukhara, and Navai - Montessori students consistently demonstrated superior outcomes in vocabulary acquisition, phonemic awareness, grammar internalization, reading fluency, and social-emotional development.

The Montessori approach supports self-directed learning while minimizing external pressures. By allowing children to engage at their own pace, make self-corrections, and explore language through hands-on materials, students

develop intrinsic motivation rather than relying on grades or fear of mistakes. The phonetic approach, tactile materials and three-part card system proved particularly effective, as it links visual, auditory, and kinesthetic modalities, reinforcing phonemic patterns and vocabulary retention without inducing anxiety. Furthermore, the mixed-age classroom structure promotes peer learning, collaboration, and confidence-building, in line with Vygotsky's (1978) theory of the zone of proximal development.

The implications of this research extend beyond the immediate study population:

- Curriculum Design: Incorporating Montessori principles into national early English education curricula; Using multi-sensory, culturally relevant materials adapted to local contexts in Uzbekistan; Integrating three-part cards, movable letters, and color-coded grammar symbols as standard tools for first-grade English instruction.
- Teacher Training: Developing professional development programs emphasizing child observation, scaffolding, and classroom facilitation rather than lecture-based teaching; Encouraging teachers to foster self-directed, exploratory learning while guiding students to achieve language milestones.
- Classroom Management: Promoting autonomy and responsibility in learners by creating prepared environments with structured, yet flexible, activity stations; Utilizing peer teaching and group projects to enhance collaboration and leadership skills.
- Assessment Practices: Focusing on formative assessment and self-correction mechanisms rather than traditional testing alone; Observing pragmatic use of language, fluency, and engagement in real-life contexts as key indicators of proficiency.
- Policy and Scaling: Advocating for Montessori-inspired early English education programs at regional and national levels; Considering resource adaptation strategies for low-income schools, such as locally made tactile letters or digital hybrid tools.

CONCLUSIONS

In conclusion, this research confirms that the Montessori method offers a transformative approach to early English education in Uzbekistan. Students in Montessori classrooms not only achieve higher linguistic proficiency but also develop critical thinking, problem-solving, intrinsic motivation, and social skills. These outcomes suggest that Montessori principles, when implemented carefully and contextually, can redefine early language education, offering both academic success and a foundation for lifelong learning. As global education moves toward child-centered, holistic models, the Montessori approach provides a proven and scalable framework for nurturing competent, confident, and motivated young learners.

While the study demonstrated strong positive outcomes, some limitations exist:

1. Sample size was limited across three regions, which may not fully represent nationwide diversity.
2. Material availability varied, and some schools used improvised tools, potentially affecting gains.
3. Long-term follow-up was not included, and future studies should track students' progression into secondary education to evaluate retention and continued proficiency.

Future research may explore:

1. Montessori-based secondary English programs and other foreign languages.
2. Integration of digital and augmented reality tools to supplement tactile materials.
3. Longitudinal tracking of academic, social, and professional outcomes of Montessori-educated students.

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