International Journal of Environmental Sciences
ISSN: 2229-7359
Vol. 11 No. 17s, 2025
https://www.theaspd.com/ijes.php

Adapting Montessori Education In Saudi Classrooms

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Abstract—*This study examined how teachers have adapted Montessori education in Saudi classrooms to align with Saudi sociocultural practices. Data were gathered from semistructured interviews and on-site observations of two Saudi instructors in two Montessori classrooms in Saudi Arabia, using a qualitative multicase study approach. NVivo software was used to analyze the data thematically. According to the study's findings, the teachers most effectively incorporated Saudi sociocultural norms into circle time, classroom activities, and the daily classroom routine. The sociocultural theory shed light on how the teachers' experiences, backgrounds, and beliefs influenced how they adapted Saudi sociocultural practices. Recommendations are made for higher education programs and the Saudi Ministry of Education. Future research might compare and contrast Montessori education in Saudi Arabia and a Western nation to illustrate cultural influences on the Montessori method.*

Index Terms—*Kingdom of Saudi Arabia, Ministry of Education, Montessori, Saudi sociocultural practices.*

I. Introduction

The Montessori method and philosophy of education were developed by the Italian physician Dr. Maria Montessori, who became interested in pedagogy after working with children who had learning disabilities [1]. She thought that proper education should be given to those children [2]. By observing young children in a classroom setting, Montessori developed both her theory and practice [1]. Montessori schools are now present in many nations worldwide.

The lack of published literature discussing Montessori in the Saudi context is the primary reason I included Montessori education in my research. Because various Montessori educational concepts, methods, and principles align with the goals of Islamic education psychology, Saudi educators incorporate the Montessori method with Islamic practices [3]. In line with Saudi Vision 2030, this study may help implement child-centered strategies such as increasing kindergarten enrollment from 17% to 95% [4].

The study's objective was to investigate how Saudi educators have modified Montessori instruction to conform to Saudi sociocultural norms. My research was guided by the sociocultural theory put forth by Rogoff, which helped me to understand how the cultural practices and background of the teachers shaped their methods in their Montessori classrooms and how the cultural practices and environments of Saudi Arabia relate to the development of strategies to mold teachers' reasoning, thinking, and problem-solving [5]. The intricate, in-depth examination of a social phenomenon is made easier by qualitative case study approaches [6] [7]. As demonstrated in this study, qualitative methods also facilitate data collecting through observation and interviewing [8]. This study was unique in aiming to examine teachers' practices and attitudes in this environment, as there is a dearth of literature examining the use of Montessori methods by Saudi instructors.

II. Significance of the Study

There is a lack of published literature in English or Arabic that clearly describes the implementation and adaptation of the Montessori method in the Saudi context or the role of teachers in such classrooms. Montessori education is named after Dr. Maria Montessori, the creator of the philosophy and method. The study aimed to fill the gap in the literature surrounding teachers' adaptation of Montessori education in Arabic countries, particularly Saudi Arabia.

III. Literature Review

A. Montessori Background

Dr. Maria Montessori was born in 1870 in Italy, and pursued medicine at the University of Rome, becoming one of the first two female doctors in Italy [1]. Montessori received her Doctor of Medicine and Doctor of Surgery in 1896. She worked in pediatric clinics in 1895, which sparked her interest in helping children with mental problems. In 1898, Montessori shifted her focus to education and pedagogy, believing that children with learning disabilities should receive the right education [1]. In 1904, she became a professor of anthropology at the University of Rome [2]. Dr. Montessori opened her first school in 1907 for nondisabled children. Later she put her philosophy into

words, and in 1909 she wrote about what she perceived as a crisis in education, more convinced than ever that pedagogy must join with medicine [3]. Her method involves detailed observation of each child's development without age-based activities. She passed away in 1952 while preparing for a trip to Ghana [2].

B. Montessori Classrooms

Montessori classrooms are multi-age settings where children of different ages work together, fostering deeper understanding and stronger relationships between teachers and students. The classrooms do not have multiple teachers and only include non-teaching assessments to encourage independence. Montessori's approach focuses on individuality, diverse needs, and creating hands-on materials based on children's interests. The classrooms have five areas: practical life, sensorial, mathematics, language, and cultural subjects [9]. Teachers are expected to observe children and prepare the environment to be calm and nurturing.

C. Montessori in Saudi Arabia

Montessori schools in Saudi Arabia can be adapted to international standards, incorporating cultural and religious practices [10]. "Montessori schools might be aligned with the Saudi context, as it would allow for a combination between the Montessori method and Islamic methods to maximize building character education in early childhood" [3] (p. 44). However, barriers exist, such as the Saudi Ministry of Education limiting Montessori to private schools for children aged 0-6, and not all Montessori schools applying the method correctly. Additionally, there are currently no international Montessori teacher training centers in Saudi Arabia, which could help increase the adaptation of Montessori education in the country.

D. Research Question

The following overarching question guided the research: How have teachers in Montessori classrooms in Saudi Arabia adapted Montessori education to align with Saudi sociocultural practices?

IV. Methodology

A. Case Study Design

Interviews, observation, and documentation are the most popular methods used in qualitative case study research [8]. In my case study, I conducted interviews and observations to collect data related to the teachers' adaptation to Montessori education and their activities aligned with Arabic culture in two classrooms in Saudi Arabia. The study used a descriptive, qualitative multicase design. Thematic analysis was used to identify codes and themes within the data. The study used nonprobability sampling, which allows for a small sample size and focuses on individual cases rather than generalizations [11] [12]. This method allowed for a more in-depth understanding of how teachers aligned with Saudi culture in their Montessori classrooms and how their cultural backgrounds and community involvement shaped their adaptation and perceptions. The study aimed to provide in-depth information on the teachers' experiences and perspectives related to Montessori education in Saudi Arabia

B. Theoretical Framework

This study was guided by Rogoff's sociocultural theory, which holds that different policies and programs are socially and culturally constructed and that the cultural community is where individuals learn and develop their culture [5] [13]. Rogoff's theory supported my study's aim to evaluate how teachers have adapted Montessori education to align with Saudi sociocultural practices. The theory also helped me to understand the effect of teachers' backgrounds, cultures, and perceptions on how they adapted Saudi practices in their Montessori classrooms.

C. Research Sample

The study was conducted at a Montessori school in Dhahran, Saudi Arabia. The school principal was certified by the North American Montessori Center (NAMC) for 0-3 and 3-6 programs. The two teachers selected for the study were the only Arabic teachers in the school. Both teachers were trained in Montessori education, applied the NAMC curriculum, and included Arabic culture in their classrooms. All teachers were women, as required by the Saudi kindergarten regulations.

D. Data Collection

Semistructured interviews and observations were used to gather data on teachers' experiences and perceptions of implementing Montessori in their classrooms.

1) Interviews

The interviews were one-on-one and in person, conducted pre-observation and post-observation. The interviews allowed for a deeper understanding of the teachers' backgrounds and perceptions of Saudi culture. The interviews were audio-recorded and each lasted 50 minutes to 1 hour. The pre-observation interviews explored the teachers' backgrounds and life experiences, their participation in cultural and religious events and the Montessori program, and general information about their classrooms, students, and daily routines. The post-observation interviews supplemented the first interviews and observations, capturing specific classroom cases and allowing for additional information sharing.

2) Observations

The observations helped me gain a comprehensive understanding of the classroom settings. I observed the teachers working with children aged 3-6 over 8 days, three to four times, from 7:50 a.m. to 12:30 p.m. The observation lasted approximately 35 hours. I observed how the teachers adapted Montessori practices and presented Saudi practices in their classrooms, highlighting verbal and oral activities, interactions, and materials related to Saudi sociocultural principles.

E. Data Analysis

I used thematic analysis to identify, analyze, and interpret patterns in the interview and observation data. An inductive approach was used to code the data, allowing for a deeper understanding of the participants' experiences. The study followed Braun and Clarke's six phases of data analysis: familiarity with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and writing up findings [14].

F. Trustworthiness

Trustworthiness is the quality of an inquiry that allows interpretations and findings to be trusted [15]. Cultivating trustworthiness involves establishing credibility, transferability, dependability, and confirmability. The study achieved credibility by collecting data from two different sources, ensuring consistency between observations and interviews. Transferability was achieved by providing details about teachers' backgrounds, practices, and classroom settings, as well as the contexts in which they adapted Montessori practices with children.

G. Ethical Considerations

Ethical research involves obtaining IRB approval and participant consent, as well as ensuring participants have the right to leave the study at any time [8]. The school principal also signed a letter of agreement to conduct the study at her school. All the participants were involved voluntarily. Confidentiality and validity were ensured through sharing techniques and maintaining a secure place for information. Thus, the hard copy data were stored in a locked desk and the transformed data on a secured laptop.

V. Findings for Teacher 1

This section presents the findings from the first case: Ms. Amna, the teacher in Classroom A.

A. Teacher 1 Overview

Ms. Amna, the Saudi teacher in Classroom A, was trained in Montessori education by the school principal. She taught children aged 3-6. Her classroom had 16 students, mostly Arabs from Saudi Arabia and other Arab countries. All the children were from middle-class families. The classroom's materials, space, and furniture were based on NAMC Montessori standards.

B. Theme 1: Supporting Children's Identity by Integrating Saudi Culture in School Activities

Ms. Amna thought it was crucial to incorporate Saudi culture into the curriculum and school for the children to comprehend who they were. She said that "with the cultural currents that are taking place in this world, [we] want to clarify the nature of this child … and this child's instinct." Furthermore, the school culture encouraged the improvement of classroom practices and incorporation of Saudi sociocultural practices into school activities [5]. Ms. Amna explained, "Promoting the Arabic language was from the first year … this year we are doing more events and more competitions and trying to involve them [to understand] more the greatness of the Arabic language, so they feel it."

C. Theme 2: Teaching about Saudi Arabia in Classroom Activities

1) Subtheme 1: Including Saudi Knowledge in Circle Time and Classroom Centers

In her classroom during circle time, Ms. Amna used visuals and songs encouraging children's nationality and identity. For example, she led children in singing the national song of Saudi Arabia and explained the Hijri calendar. She required students to remain silent during the culture circle period, a practice influenced by traditional Saudi schools [5]. Ms. Amna also used Arabic and cultural classroom resources during circle time, such as Arabic stories and the Saudi natural environment. She added some Saudi materials in the practical life center (e.g., Dallah and Fingan for water pouring) and included Arabic language resources such as letter bags and Montessori sandpaper letters and numbers in the language center.

2) Subtheme 2: Using Formal Arabic when Speaking

Ms. Amna believed it was crucial to speak in formal Arabic with the students at all times in the classroom. Thus, Ms. Amna tried to broaden the children's vocabulary by teaching them new Arabic words and urging them to use formal Arabic rather than slang. For example, during circle time, a child used the English word "monkey," and she said, "I want an Arabic word." The child then said "gerd," which means monkey in Arabic.

D. Theme 3: Improving Saudi Social Practices in Daily Routine Based on Saudi and Montessori School Culture

1) Subtheme 1: Teaching Gender Segregation

In the school's inner yard, teachers and students met for circle time every morning, with girls sitting on the left and boys on the right, behind a U-shaped line. Ms. Amna promoted gender segregation during circle time and endorsed the notion of gender inequalities in the curriculum, discussing differences in gender appearance and clothing.

Ms. Amna emphasized that her intention was not to separate or create distinctions between sexes, but to provide students with future strategies for interacting with other genders, which is a feature of Saudi and Islamic culture [5]. The school culture also encouraged gender segregation by providing separate restrooms for boys and girls [5]. For example, bathroom cards were blue for boys and pink for girls, and students were required to carry the card corresponding to their gender when using the restroom.

2) Subtheme 2: Promoting Discussions to Help Children Improve their Social Skills

In traditional societies, socialization refers to the processes and strategies used to transform a child into an adult, where adults serve as children's primary connection to community life [16]. As part of socialization, teachers at this school set aside specific times for students to express themselves and interact, such as Show and Tell circle time, where each child took charge of the group and introduced a topic [5]. This sociocultural practice in Saudi Arabia allowed for normal conversations, despite Ms. Amna's advice for quieter conversations.

VI. Findings for Teacher 2

This section presents the findings from the second case: Ms. Ona, the Arabic teacher in Classroom B.

A. Teacher 2 Overview

Ms. Ona was from Saudi Arabia and had 12 years of experience teaching in a children's club. She was trained in Montessori education by the school principal. Classroom B had 17 students aged 3-6, all from middle-class families and from Saudi Arabia, except one child who was from another Arab country. The classroom's materials, space, and furniture were similar to those in Classroom A and also based on NAMC Montessori classroom standards.

B. Theme 1: Incorporating Islamic and Saudi Education to Support Children's Identity

Ms. Ona emphasized the importance of teaching children about their Islamic and cultural identity, as they identified as both Saudi and Muslim. She believed that teaching children about their identity from an early age promoted a sense of nationalism and belonging to the homeland. These beliefs were influenced by her experience teaching in the children's club [17]. She was dissatisfied that some 10-year-olds lacked a fundamental understanding of Arabic and was inspired to incorporate Islamic rituals into her classroom. By incorporating Saudi sociocultural concepts into her curricula and classroom instruction, she aimed to promote a sense of belonging and understanding among the children.

C. Theme 2: Including Saudi and Islamic Knowledge in Classroom Activities

1) Subtheme 1: Enhancing Cultural and Islamic Knowledge in Culture Circle Time

The rules for culture circle time and Quran circle time were the same. Ms. Ona ensured that the children remained in the circle and behaved appropriately. She demonstrated proper sitting technique by crossing her legs and wrapping

her arms around her chest. She also had authority over the children's freedom to sit, speak, and leave the classroom during circle time. Ms. Ona clarified that the Saudi school culture served as the rationale for regulating the children during circle time [5].

In addition, Ms. Ona was responsible for teaching during circle time using the Arabic language. She began by discussing basic information about the unit, aiming to increase children's understanding of Saudi Arabia. She introduced subjects related to Saudi Arabia, such as the desert world and palm trees, and brought real palm tree leaves to discuss them. During one circle time, she presented a picture of a camel and highlighted its significance by pointing to its hump. She made a connection between the camel's characteristics and God's name (the merciful), and explained that God had mercy on the camel by creating eyelashes to save his eyes from the dust.

2) Subtheme 3: Promoting Arabic Speaking

Ms. Ona used Montessori classroom supplies, such as 3D wooden shapes, metal insets, and sandpaper, to teach Arabic letters and numbers. She encouraged speaking in formal Arabic and gave examples like Salem using the Arabic phrase "Bear, bicycle" and the English word "chicken" in a one-on-one session. Ms. Ona's approach aimed to promote accurate communication between children and understanding of their native language. Her advocacy for teaching Arabic early was influenced by her prior teaching experience [17].

D. Theme 3: Enhancing Saudi Socio-Behavioral Practices Based on Saudi and Montessori School Culture

1) Subtheme 1: Adaptability in Enhancing Gender Segregation

Ms. Ona observed her students in the inner yard during morning circles, with girls and boys sitting on different sides without guidance. She believed gender segregation was a collective decision by the Saudi teachers, who applied the rule without specific direction from the principal. Ms. Ona was lenient in her application of this rule, avoiding differentiation in treatment or making anyone feel superior. For example, during mealtime, boys and girls sat together, avoiding the perception of superiority or inferiority.

2) Subtheme 2: Dedicating Time to Promote Public Discussion

Teachers at the school were encouraged to concentrate on improving students' social skills, since social communication abilities are valued in Saudi society. According to Khalifa, "In traditional societies, socialization is often viewed as the processes and strategies that the community uses to change the child, who is comparatively peripheral, into the adult who is the child's primary link to community social life" [16] (p. 125). In this sense, Ms. Ona's practice of encouraging social discussion activities was influenced by the school culture. She conducted circle time twice a week to allow the children to talk and share their emotions [5].

VII. Discussion of Cross-Case Analysis

A. Introduction

This study used cross-case analysis to synthesize themes and identify similarities and differences between the two teachers [18]. NVivo software was used to code the data, and the "Framework Matrix" button was used to compare themes and codes for situations. I then went over each situation by reading the codes one at a time, outlining the findings for more generalized explanations. The results were checked and edited using a "memos" file stored in NVivo. The analysis addressed school culture, Montessori adaptation, Saudi sociocultural practices, and classroom and school regulations. The results show how the Montessori approach was adapted in these Saudi classrooms.

B. Adapting Montessori to Saudi School Culture

The principal of the school, who was NAMC-certified, provided Montessori training to all Saudi teachers. Both Ms. Ona and Ms. Amna had worked at the school for 3 years. Both teachers agreed that fostering children's Saudi identity required incorporating Saudi culture into the classroom. They believed in helping children improve their Arabic language proficiency and promoting cultural understanding through classroom activities. Ms. Amna and Ms. Ona taught and interacted with students in Arabic to improve their language proficiency. Both teachers encouraged gender segregation to allow children to communicate and engage with one another while recognizing their differences from the other sex. Ms. Ona and Ms. Amna also encouraged social talks in the classroom to teach social communication skills that are crucial in Saudi society. They enthusiastically engaged with students and shared their interests. As an Islamic instructor, Ms. Amna believed that the school culture had a great influence on encouraging the teaching of Saudi culture through school activities; Ms. Ona believed that Islam supported the implementation of Saudi culture in daily classroom activities.

C. Discussion of the Study's Key Findings

The study found that both teachers supported cultural integration in the classroom and instructional strategies that strengthened students' Saudi identity. Teachers most frequently introduced Saudi culture, social standards, and knowledge of the country during circle time, focusing on incorporating them into the children's everyday routine. They also urged students to sit properly in circle time, based on both the specific school culture and broader Saudi school culture, which enforced respect for the teacher as the classroom leader. Both Ms. Amna and Ms. Ona avoided using slang or other languages in the classroom and spoke to the children in formal Arabic. The rise of private schools in Saudi Arabia that teach English and place less emphasis on Arabic had not changed the opinions of these educators. They both expressed the value of Arabic and the need to expand children's vocabulary to strengthen their Arabic identity. The teachers also introduced Saudi societal norms such as gender segregation into the classroom because they were all Saudi and worked at a Saudi school. They did not pressure but encouraged students to sit on the side corresponding to their gender, instilling the idea that gender distinctions indicate differences in interactions and interactions. The teachers' opinions regarding gender segregation were influenced by both culture and religion. The collectivistic culture of Saudi Arabia, which emphasizes obligation and community, influenced the Montessori system in this school [3] [19]. Teachers used activities like show-and-tell lessons and circle time to develop communication skills and allow students to express their emotions. The school culture also influenced the methods teachers used to integrate Saudi culture into their classrooms.

VIII. Recommendations

A. Recommendations for University Programs

Montessori's theory and method are mentioned less often in early childhood education programs compared with other philosophers such as Piaget and Vygotsky [3]. I recommend more focus on Montessori education for preservice early childhood teachers. The reason is that Montessori connected her theory with the classroom implications, which might help preservice teachers to have a deeper understanding of the theory and adapt some practices to their future students.

B. Recommendations for the Ministry of Education

I recommend that the Saudi Ministry of Education allow early childhood Montessori schools for children aged 0-6 and 6-9, ensuring consistent classroom rules and routines for first graders, and allow public Montessori schools to make the method available to Saudi children regardless of socioeconomic status. I also recommend opening internationally certified Montessori centers and more training centers affiliated with the Association Montessori International (AMI).

C. Recommendations for Further Research

Teaching children independence enables them to make more independent decisions throughout their lives. In Saudi culture, children's obedience to adults is seen as a sign of respect. However, Vision 2030 promotes independence and allowing younger generations to make more decisions on their own. More research is needed to determine if educators prefer teaching children to be self-sufficient or relying on their parents as they grow older. To demonstrate cultural influences on implementing the Montessori method, future studies could also compare and contrast the approach in Saudi Arabia with that in a Western country.

IX. Conclusion

This study examined how two teachers adapted Montessori education in Saudi classrooms to align with Saudi sociocultural practices. A qualitative multicase research methodology was used to collect data from semistructured interviews and on-site observations of the two teachers. The data were coded using NVivo software and subjected to thematic analysis. The findings indicate that both teachers integrated Saudi sociocultural norms into regular classroom routines, including circle time and other class activities. The sociocultural theory clarified how the teachers' origins, experiences, and beliefs shaped their adaptation to Saudi sociocultural customs. Recommendations were made for the Saudi Ministry of Education, teacher education programs, and future research.

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