Montessori Education and Practice:
A Review of the Literature, 2007–2009

By Janet H. Bagby and Natalie A. Jones

This literature review, a continuation of the first one published in Montessori Life (Bagby, 2007), identifies articles published in non-Montessori professional periodicals that included information about Maria Montessori and/or the Montessori method of education. While conducting the current search, we discovered 12 articles published prior to 2007 that were not annotated in the original review. Those articles are included in this review, along with the ones published within the last 3 years.

Since 2006, there have been an additional 25 articles published that meet criteria stated above; this suggests an increase in Montessori-related research in the United States and the international community. As with the original review, nearly half of these articles were published in educational periodicals. The remaining articles appeared in publications representing various disciplines (i.e., medicine, religion, and gerontology).


This two-year study examined creativity development in first through fifth graders in four Parisian schools. Two sites used traditional pedagogy and two used alternative pedagogies, specifically Freinet and Montessori. Overall, students who attended a Montessori or Freinet setting performed higher on creativity tests, and Montessori school students achieved higher levels of creativity over the 2-year study period than students in the other three schools.


An early childhood Montessori casa in New Zealand was the setting for this qualitative study exploring everyday spirituality, which “recognizes the extraordinary in the ordinary.” The authors capture the key narratives and actions of the preschoolers on the first day back from a two-week break, illustrating the spiritual elements in the Montessori environment.


Through analysis of Erikson’s work, Capps explains the origins of melancholia and describes humor as an antidote to melancholia. While undergoing psychoanalysis with Anna Freud, publishing early articles, and teaching school, Erikson also studied the Montessori method.


Through classroom observations, Cossentino explored the “rituals” of a Montessori classroom. She explains the traditional techniques (rituals) used in Montessori pedagogy and describes how these techniques reflect broader Montessori principles, such as independence. Cossentino emphasizes the importance of rituals as related to educational experiences.


In this quantitative study, researchers compared the achievement of two groups of Milwaukee high school students—one group having attended a Montessori

Maria Montessori envisioned her educational philosophy as a pathway to a peaceful world. Within this perspective, Duckworth focused on Montessori’s pedagogy while profiling five Montessori schools in Washington DC, Thailand, and India. The featured schools incorporate a sense of “international-mindedness”—tolerating diversity to cultivate harmony between countries.


In this article, the origins and value of play are explored. Farné credits Montessori with creating “one of the most important pedagogical innovations” with her manipulative learning activities. He also discusses the influence of Montessori’s method, as well as Piaget’s and Dewey’s philosophies of learning by doing, on the development of children’s museums. “Pedagogy of Play” stresses the responsibility of education to provide enriching environments to cultivate the natural discovery of play in children.


In this detailed narrative, Foschi describes the circumstances that led Montessori to become a pedagogical expert and develop the Montessori method. He chronicles Montessori’s challenges and triumphs with the Children’s House and elaborates on her diverse expertise in psychology, education, science, and medicine.


Max, a 3-year-old Montessori student who has severe temper tantrums, repetitive language habits, and limited social skills was the focus of this case study. Four doctors give their diagnostic impressions and discuss concerns with Max’s lifestyle, primarily his watching five hours of television a day. Each doctor provides suggestions for how they would proceed with the case.


The authors present a case study of a 22-month-old boy with Wolf-Hirschhorn Syndrome—a rare genetic condition affecting many physical and mental traits. They conducted a systematic analysis of the physical and developmental characteristics of the condition to better define the syndrome. Researchers observed the boy interacting with a therapist in a Montessori environment.


This article addresses the conflict between No Child Left Behind (NCLB) and Montessori’s educational method. Since NCLB requires high-stakes testing, many public Montessori schools now incorporate timed workbook activities and tests. Comparisons of achievement data for public school Montessori and non-Montessori students for one district are discussed.


Montessori’s quote “Help me to do it myself” provided the theme for these German researchers’ evaluation of teacher interventions during “students’ independence-oriented solution processes.” Based on the results of the study, a framework for conceptualizing teacher interventions is included.


This quantitative study examined cognitive/academic and social/behavioral skills in students attending Montessori vs. non-Montessori schools. Participants were 59 Montessori students and 53 non-Montessori students, in 5- and 12-year-old age groups. The data indicated significant advantages among Montessori students in both age groups.


Residents with dementia in Taiwanese care facilities received varied combinations of acupressure and Montessori-based activities in research measuring agitation. The Montessori activities included scooping, pouring, squeezing, fine motor skills, environ-
mental care, and personal care. The researchers reported positive effects and a significant decrease in the agitated behaviors with the treatment groups using the interventions.


This study compared curricular programs and their effectiveness in teaching geography to fourth-grade students in Manila. Public, private, and Montessori schools were included in the study. In addition, the researchers compared the basic education curriculum of the Philippines and the Montessori education method. Results compared the basic education curricular programs and their effectiveness in metropolitan schools in Metro Manila, graphic education in selected elementary schools in the Philippines.

McCusker and Van Doren examined the relationship between parenting style (authoritative, permissive, or authoritarian), aggressive play, and aggressive language in boys attending a suburban New Jersey Montessori school. Researchers surveyed the parents and observed the 31 children during playtime with gender-neutral toys. The data show no significant correlations between parenting style, aggressive acts, and/or language in preschool boys.


Researchers observed buttoning ability in children aged 36–83 months, focusing on age and sex differences. The study used a buttoning/unbuttoning tool derived from a Montessori material that consisted of a front piece of a shirt with five buttons on a wooden frame. Unbuttoning and buttoning time decreased with age, and girls unbuttoned significantly faster than boys at age 3.


In this historical paper, Pankhurst proposed basic requirements for educating young women in Ethiopia. She asserted that the Montessori method best captured these essential skills in a classroom and recommended teachers apply them to their curriculum. The areas of interest included Practical Life, speech, language (English and Amharic in Ethiopia), drawing, art, music, history, geography, science, physical education, reading, and mathematics.


This quantitative study examined affective characteristics in 290 middle school students in Montessori and non-Montessori environments. Results showed that Montessori students reported higher social-emotional scores (e.g., intrinsic motivation, flow experience) than the non-Montessori students during school-related tasks. All students performed relatively the same when engaged in nonacademic activities.


This study, which focused on how middle school students view their learning environments, peers, and teachers, was conducted with the same participants as in the preceding article description. Compared to students in non-Montessori schools, Montessori students had more positive perceptions of their teachers and learning environments. In addition, Montessori students were more likely to call their classmates their friends while at school.


Rule and Kyle describe a southern magnet school’s transition to racial integration while also implementing a new Montessori curriculum. The school used several forms of community-building strategies, including high parental involvement and faculty-bonding exercises, to facilitate the
transition. These strategies helped create a supportive climate in which parents, teachers, and students had positive, open communication.


In this study, object boxes provided a tactile experience for students learning about the human eye. Using the Montessori theory of hands-on learning, the object boxes were designed for science activities. The results indicated that students were more enthusiastic and retention was greater when using Montessori-type methods in science classes. The article includes instructions for creating manipulatives to teach elementary students the form and function of the human eye.


These authors reviewed the history of mathematics education as related to early childhood education during the past century. Pioneers in the field, such as Froebel, Montessori, and Piaget, are credited with the early math educational movement in the United States. The article concludes with recommendations for revising current mathematical education practices.


This study explored how the use of Montessori activities in the treatment of nursing home residents with dementia may increase their voluntary interaction with visitors. Pre- and post-data showed that residents, when engaged in Montessori-based activities, exhibited a 40% increase in involvement with the visitors and a 69% decrease in passive engagement.


The article summarizes several studies that successfully used Montessori-Based Dementia Programming (MBDP) to engage persons with dementia in meaningful activities with others. Personnel trained in MBDP included staff members, family members, volunteers, and persons in the early stages of dementia in nursing homes, assisted living facilities, and adult day-care programs.


The authors conducted an experimental study with public school kindergartners, evaluating the effects of fine motor skill activities on attention span. Montessori’s belief that fine motor activity leads to increased attention spans in young children provided the theoretical construct for this research. The researchers reported that girls’ attention spans increased when engaged in fine motor activities.


This author critiques Montessori’s progressive pedagogy, focusing primarily on her classroom writing methods. Stewart-Steinberg discusses constitutive absence and graphic presence, two of Montessori’s key writing concepts. Also included is a discussion of the use of the Montessori method by the fascist regime.


In this opinion article, the author discusses three articles, each presenting a distinct learning experience and environment—music in Canada, U.S. citizens in Costa Rica, and children in a Montessori classroom. Cossentino’s “Big Work” article provides the Montessori perspective. The author seems most focused on how diverse learning methods can connect or combine, resulting in a more holistic knowledge base.

Tzuo, P. (2007). The tension between teacher control and children’s freedom in a child-centered classroom:

According to this author, Piaget, Vygotsky, Dewey, and Montessori shared similar views related to child-centered education. With that as the theoretical stage, the relation between teacher control and children’s freedom in a classroom is explored. This author concludes that high teacher control and high child freedom are not mutually exclusive and can coexist in a child-centered classroom.


This author advocates for the use of the Montessori teaching method as a means of establishing an efficient educational system to serve all students, including those with special needs. Vettiveloo believes the curriculum could be useful for developing nations, such as Malaysia, where government legislation does not state specific requirements for special education.


A keyword search of this journal’s published articles between 1995 and 2005 identified the following six approaches to early childhood education as appearing most frequently: Bank Street, High/Scope, Montessori, Waldorf, Reggio Emilia, and Head Start. Of the six, Head Start was the highest ranking, and Waldorf appeared the fewest number of times. A description of each approach is included.


This comprehensive case study examines the history of the American Montessori movement over the last 100 years. The authors gather data from interviews with Montessori practitioners and leaders as well as from archival data. They also relate current developments, such as the recent increase of Montessori students in the United States and the “splintering” of the American Montessori movement.


This article begins with a brief history of progressive education in Great Britain. After reviewing the current educational policy, Willis describes a new governmental initiative to reinvest in child-centered learning, particularly in the early years. A discussion of the pioneers in progressive education, such as Rousseau, Pestalozzi, Froebel, Steiner, and Montessori is also included.


Children’s natural inclination to play combined with digital technology is the focus of this article. The authors describe several companies that have developed programs that integrate academics with technology. One program, the New Media Thinking Project, created software that incorporates digital Montessori materials.

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A literature review or narrative review is a type of review article. A literature review is a scholarly paper that presents the current knowledge including substantive findings as well as theoretical and methodological contributions to a particular topic. Literature reviews are secondary sources and do not report new or original experimental work. Most often associated with academic-oriented literature, such reviews are found in academic journals and are not to be confused with book reviews, which may Here, a review of the literature has been conducted with the following objectives: (1) to summarise the properties, nomenclature and sources of microplastics; (2) to discuss the routes by which microplastics enter the marine environment; (3) to evaluate the methods by which microplastics are detected in the marine environment; (4) to assess spatial and temporal trends of microplastic abundance; and (5) to discuss. Whilst the societal benefits of plastic are far-reaching (Andrady and Neal, 2009), this valuable commodity has been the subject of increasing environmental concern. Primarily, the durability of plastic that makes it such an attractive material to use also makes it highly resistant to degradation, thus disposing of plastic waste is problematic (Barnes et al., 2009; Sivan, 2011). Areas Covered In This Review: This review covers world patent applications filed during the 2007 - 2009 period for small molecule approaches; non-small molecule approaches are not within the scope of this review. What The Reader Will Gain: The reader will be provided with a background of the biology of CAs as well as the recent research findings that have validated the crucial prosurvival role of CAs in hypoxic tumors. The review will highlight small molecule molecular methods that modulate CAs as an anti-cancer therapeutic strategy. Take Home Message: Much of what has been reported in the pat