Literature Review, 2014–2017

by Janet Bagby, PhD, and Rachel Renbarger

Editors' note: The first half of the bibliography is printed here; the second half will appear in our next issue.

This annotated bibliography is the fourth in a series published in *Montessori Life*, with the first reviewing articles published during the 10-year time span of 1996–2006 (Bagby, 2007), the second covering 2007–2009 (Bagby & Jones, 2010), and the third 2010–2013 (Bagby, Wells, Edmondson & Thompson, 2014). As with the previous reviews, the included articles were published in non-Montessori professional periodicals that included information about Maria Montessori and/or the Montessori Method. We have also included 4 articles that were published in 2013 that were not annotated in the previous review.

There are 91 articles in this review, an increase over the previous 3 reviews, which continues to indicate strong interest in Montessori in the U.S. and internationally. For comparison, the 1996–2006 bibliography reviewed 54 articles, the 2007–2009 bibliography 37 articles, and the 2010–2013 bibliography 83 articles.

Almost 80% of these articles were published in educational periodicals, with the remaining articles appearing in publications representing a variety of disciplines, such as anthropology, economics, and philosophy. As with the previous reviews, a significant number of articles focused on the use of Montessori materials/methods with individuals with dementia.

Abdelhamid, A., Bunn, D., Copley, M., Cowap, V., Dickinson, A., Howe, A., Killett, A., Lee, J., Li, F., Poland, F., Potter, J., Richardson, K., Smithard, D., Fox, C., & Hooper, L. (2016). Effectiveness of interventions to indirectly support food and drink intake in people with dementia: Systematic review. *BMC Geriatrics, 16*(26), 1–21.

In this review, 43 studies were examined to determine which interventions effectively improved malnutrition and dehydration in patients with dementia. Due to the small sample sizes and short duration of the studies, no clear results indicated which interventions worked. However, interventions

with promise included those that involved caregivers, positive stimulation (i.e., music, exercise), Montessori activities, and interventions with multiple components.

Ahmadpour, N., & Mujembari, A. K. (2015). The impact of Montessori teaching method on IQ levels of 5-year-old children. *Procedia—Social and Behavioral Sciences, 205*, 122–127.

This study investigated the impact of the Montessori approach on 5-year-olds in Iran. The researchers compared 40 students in a Montessori kindergarten and 40 students in a traditional kindergarten. Both groups of children were randomly selected. Results indicated that the children in the Montessori kindergarten had higher IQ and social maturity scores as compared to students in the traditional education system.

Andrusca, A., & Negura, E. (2014). Education—Part of sustainable development. *Knowledge Horizons–Economics, 6*(2), 170–173.

This conceptual article by Romanian authors discussed the importance of education in building a strong economy. They argued that alternative education systems, specifically Montessori and Waldorf, can help build a better economy because creativity and independence are core elements of the curricula.

Ansari, A., & Winsler, A. (2014). Montessori public school pre-K programs and the school readiness of low-income black and Latino children. *Journal of Educational Psychology, 106*(4), 1066–1079.

This study examined the school readiness gains of black and Latino children from low-income families using data from the Miami School Readiness Project (n=13,745). The students attended programs using either a Montessori or High-Scope curriculum. The students made gains in all areas regardless of which program they attended. However, Latino children benefited the most from the Montessori program, improving from high risk of school failure before to scoring above the national average after participating in the program.

Badiei, M., & Sulaiman, T. (2014). The difference between Montessori curriculum and Malaysia National Preschool curriculum on developmental skills of preschool children in Kuala Lumpur. *British Journal of Education, Society & Behavioral Science, 4*(10), 1372–1385.

This study's aim was to examine Montessori early childhood education effectiveness in Malaysia. The researchers used a comparative research design to examine developmental skills of two groups of preschoolers: one taught using the Montessori Method, one taught under the Malaysia National Curriculum. Results indicated that Montessori students performed better in cognitive, social, and language skills; there were no differences on physical development.

Bahmaee, A. B., Saadatmand, Z., & Yarmohammadian, M. H. (2016). Principle elements of curriculum in the preschool pattern of Montessori. *International Education Studies, 9*(1), 148–153.

These authors described the life of Maria Montessori and then highlighted the theoretical ideas of the Montessori Method. They analyzed how current research and practice view the core components of preschool curriculum and concluded with Montessori's strategies for supporting children's independence and social-emotional skills.

Baligadoo, P. D. (2014). Peace profile: Maria Montessori—Peace through education. *Peace Review, 26*(3), 427–433.

This article focused on Maria Montessori's life and peace and education efforts. Included were highlights of her life, such as her doctor of medicine degree and her work with children from poor families.

Bărbieru, I. T. C. (2016). The role of the educator in a Montessori classroom. *Romanian Journal for Multidimensional Education/Revista Romaneasca Pentru Educatie Multidimensionala, 8*(1), 107–123.

In this Romanian study, the author observed in 3 Montessori early childhood classrooms for approximately a month. The purpose of the study was to understand the role of the Montessori teacher and the use of positive discipline. Benefits of the Montessori approach include the teacher facilitating learning in a "passive" manner and allowing the students to explore.

Bhatia, P. (2014). Mind over matter: Contributing factors to self-efficacy in Montessori teachers. *National Teacher Education Journal, 7*(3), 45–52.

The purpose of this study was to identify what impacts the self-efficacy of beginning Montessori teachers. Surveys on self-efficacy were given to 35 pre-service teachers before and during their internships in a Montessori classroom. Findings indicated that contributors to self-efficacy included previous mastery experience with this type of teaching along with positive emotional states associated with this setting. The author included implications for teacher training programs.

Bhatia, P., Davis, A., & Shamas-Brandt, E. (2015). Educational gymnastics: The effectiveness of Montessori Practical Life activities in developing fine motor skills in kindergartners. *Early Education and Development, 26*(4), 594–607.

These authors examined the impact of Montessori Practical Life activities on the fine motor development and hand dominance of kindergarten students. This quasi-experimental study included 50 5-year-old children in 4 Montessori schools and 50 in a traditional kindergarten. Results indicated that, after controlling for pretest scores and gender, Montessori students on the posttest had higher scores for accuracy, speed, and use of the dominant hand.

Bourgeois, M. S., Brush, J., Elliot, G., & Kelly, A. (2015). Join the revolution: How Montessori for aging and dementia can change long-term care culture. *Seminars in Speech and Language, 36*(3), 209–214.

The study discussed DementiAbility Methods: The Montessori Way, a person-centered care model that highlights individuals' abilities, needs, interests, and strengths while creating an environment where they are able to be more involved with their lives. The authors discussed how this approach, through engagement with facility workers and evaluation, brings about a change in the culture of long-term-care environments.

Candler, C., Mulder, A., & Nall, K. (2014). Embedding video-based modeling handwriting instruction in a Montessori preschool phonics program. *Journal of Occupational Therapy, Schools & Early Intervention, 7*(2), 151–160.

This article described a video-based handwriting program that was implemented in one of two Montessori preschool classrooms for 16 weeks. The children who used this handwriting program showed improvement in legibility of their writing compared to those who did not view the program. Implications for early intervention, Montessori phonics curricula, and video-based modeling were included.
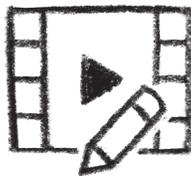
Carnes, N. (2015). We in our turmoil: Theological anthropology through Maria Montessori and the lives of children. *The Journal of Religion, 95*(3), 318–336.

This essay discussed two main ideas: that Maria Montessori is someone who is worthy of theological study and that "reflection on children ought to be central to theological anthropology." The author also argues that Montessori advanced a new way of conceptualizing original sin through her work with children.

Carson, B. (2016). Amazing muses of science: An interdisciplinary project creates awareness of female scientists. *Science and Children, 53*(6), 36–40.

The article featured a project at a Montessori classroom, where elementary students researched scientists and wrote a play that highlighted the scientists' discoveries, making sure to include works by female scientists as well. The article included guidelines so that other teachers could utilize this project in their classrooms. Carson also included connections to the Common Core State Standards along with a link for assessment tools.

Carter, M. A., & Ellis, C. (2016). Work "with" me: Learning prosocial behaviours. *Australasian Journal of Early Childhood, 41*(4), 106–114.

This study investigated 33 Montessori educators' beliefs regarding early childhood social development and practices used to encourage social development. Educators responded that teachers should promote positive relationships, being respectful, and learn social limits and behaviors. Teachers also emphasized such characteristics as respect, courtesy, and self-discipline.

Cascella, M. (2015). Maria Montessori (1870–1952): Women's emancipation, pedagogy, and extra verbal communication. *Revista médica de Chile, 143*(5), 658–662.

This article described Maria Montessori's life, education, and experience working with children. It also talked about her contribution to women's emancipation during her time as a representative of Italy in the

Women's Congress, in Berlin. Cascella also discussed Montessori's time spent as a prisoner, in India, where she made the discovery that children use an innate and universal language, which she called "extra verbal communication."

Christensen, O., & Gast, K. (2015). Addressing classism in Early Childhood education: How social-class-sensitive pedagogy and the Montessori Method can work together. *Advances in Early Education and Day Care, 19,* 113–135.

This article discussed how to better serve the needs of children, emphasizing that Early Childhood educators should support and encourage inclusion of social class diversity in classrooms. The authors described the theory behind the Montessori Method and how inclusive classrooms are models for Early Childhood educators.

Cook, S. (2017). Through the eyes of a child: Pianistic paths for the smallest learners. *American Music Teacher, 66*(6), 10–13.

Cook described musical activities that he taught at a Montessori school in California. He listed the concepts of keyboard topography, rhythm, note recognition, terminology, and physicality along with concrete ideas for assisting elementary students with these tasks. The author also provided a suggested reading list and his answers to related questions.

Cuma, F. İ. (2013). Project-based learning in teaching with the DAF Montessori Method. *Procedia—Social and Behavioral Sciences, 70,* 1901–1910.

This author from a Turkish university explored project-based foreign language learning with the use of the Montessori Method. The author noted that independence, trust, and willingness to cooperate are some of the characteristics highlighted

by the program. In conclusion, the author recommended the use of the Montessori Method, which emphasizes a creative and active student-centered philosophy, in teaching foreign languages.

Dahunsi, T. O. (2014). Montessori education in Nigeria. *IOSR Journal of Research & Method in Education, 4*(1), 57–60.

This article described the state of Montessori education in Nigeria. While the awareness of the Montessori Method has exploded in recent years in the country, the author argued that for a Montessori system to be accepted in Nigeria, the government would have to be more involved in multiple ways, such as providing schools with the proper materials.

DeLuca, C., & Hughes, S. (2014). Assessment in early primary education: An empirical study of five school contexts. *Journal of Research in Childhood Education, 28*(4), 441–460.

This qualitative study examined 12 teachers' assessment approaches of their kindergarten through second-grade students. Data were collected from 5 different types of education systems: public, independent, Froebel, Waldorf, and Montessori. The authors recommended future research to explore the relationship between teaching and assessment of early education students.

De Serio, B. (2016). The profile of the Montessori assistant: Historical paths and new education projects. *Studi Sulla Formazione, 19*(1), 171–185.

This author discussed the role of the teacher defined as the "Montessori assistant" and first educated at the Montessori Assistant Training College, founded in 1949. This professional was trained to aid in the birthing process and to understand how a child's psychology impacts his or her education. De Serio also described how this role can be implemented in modern Montessori classrooms.

Dhiksha J., & Suresh A. (2016). Self-esteem and academic anxiety of high

school students with Montessori and traditional method of education. *Indian Journal of Health & Wellbeing, 7*(5), 543–545.

This study examined how 60 students in Montessori and 64 students in non-Montessori programs differed in self-esteem and anxiety. Using the Rosenberg Self-Esteem Scale and Academic Anxiety Scale for Children, the researchers' findings indicated that the Montessori students had higher self-esteem and lower academic anxiety as compared to the other students.

Durakoglu, A. (2014). Environmental education in the context of child's interaction with nature according to Maria Montessori. *Anthropologist, 18*(2), 309–313.

This paper discussed the contribution Maria Montessori made to society and education through her practice and theory. The first section focused on child–nature interaction and how it is implemented in a Montessori school, and the second section examined the idea behind environmental education and its application in the framework of Montessori education.

Elkin, M., Sullivan, A., & Bers, M. U. (2014). Implementing a robotics curriculum in an Early Childhood Montessori classroom. *Journal of Information Technology Education: Innovations in Practice, 13,* 153–169.

This study utilized a case study design to illustrate how robotics can be used in a Montessori Early Childhood classroom. Data for the study included surveys, interviews,

and personal reflections, and results included recommended criteria for implementing robotics effectively within the Montessori framework in an early education setting.

Elkind, D. (2016). Touchscreens and young children: Benefits and risks. *YC: Young Children, 71*(1), 90–93.

In this column, Elkind discussed the developmental appropriateness of touchscreen technology for preschoolers. Similar to child-size furniture and small cutlery introduced by Maria Montessori, touchscreens allow children easier access to the tools of the adult world. However, while these tools may make things easier for children, they do not necessarily accelerate development or knowledge.

Feldman, D. (2014). Poetry in question: The interrogative lyric of Yeats's major poems. *Partial Answers: Journal of Literature and the History of Ideas, 12*(1), 87–105.

This article analyzed the theme of existence in the poem "Among School Children," by W. B. Yeats. The poet reflected on his visit to a Montessori school in Dublin in which he saw the students learning a variety of skills.

Freeman, S., Dalli, C., & Pickering, A. (2016). Montessori early childhood education in NZ: Rediscovering the spirit of reflection and inquiry through recent policy changes. *Australasian Journal of Early Childhood, 41*(2), 69–76.

This article focused on the growth of Montessori education in New Zealand, especially regarding how discourse on the quality of early childhood education impacted changes in policy in the country. These policies focused on qualities such as classroom practices and teaching criteria. The article ended with a discussion on how to examine the impact of Montessori along with possible new directions on implementing the Montessori Method in New Zealand schools.

Frierson, P. R. (2014). Maria Montessori's epistemology. *British Journal for the History of Philosophy, 22*(4), 767–791.

In this conceptual paper, Frierson discussed Maria Montessori's epistemology, including the general structure of her belief that learning comes through the senses and interests. Montessori's emphasis on young children and unconscious cognitive processes were also presented. The author concluded by discussing the applications of Montessori's epistemic framework.

Frierson, P. R. (2015). Maria Montessori's philosophy of experimental psychology. *The Journal of the International Society for the History of Philosophy of Science, 5*(2), 240–268.

This article discussed Montessori's philosophy on experimental psychology. The author explained her objections to experimental psychology, addressed how Montessori's model addressed her objections, and argued that Montessori's philosophy on experimental psychology is still relevant today.

Frierson, P. R. (2016). Making room for children's autonomy: Maria Montessori's case for seeing children's incapacity for autonomy as an external failing. *Journal of Philosophy of Education, 50*(3), 332–350.

Frierson argued that today's children are made incapable of autonomy as they are seldom put into situations in which they can exercise their innate ability for autonomy. In contrast, the Montessori Method allows children to have responsibility. The author concluded with implications for children and adults within the Montessori model.

Frierson, P. R. (2016). The virtue epistemology of Maria Montessori. *Australasian Journal of Philosophy, 94*(1), 79–98.

In this paper, Frierson recommended using Montessori principles to enrich contemporary philosophical theories of knowledge with the 4 major intellectual virtues: sensory acuity, physical dexterity, intellectual love, and intellectual humility. He also described how Montessori's approach to the virtues provides alternative perspectives to current perspectives.

Ginns, P., Hu, F., Byrne, E., & Bobis, J. (2016). Learning by tracing worked examples. *Applied Cognitive Psychology, 30*(2), 160–169.

Based on Montessori's pedagogy using Sandpaper Letters, this study investigated the role fine-motor activity plays in learning by reducing cognitive load. The authors hypothesized that students who traced an index finger over the written instructions for math problems would experience a reduction in cognitive load and perform better on transfer problems than students who did not. Students who traced did perform better on geometry and order of operations tests; however, the hypothesis on decreased cognitive load was not supported.

Grant, E. (2015). The Pink Tower meets the ivory tower: Adapting Montessori teaching methods for law school. *Arkansas Law Review, 68*(3), 603–667.

The author began by discussing the history of the Montessori Method and how it is used in today's education. She then described how to use the Montessori Method in law school instruction. The author suggested the changes that could be made to the current curriculum, a professor's mindset, and the design of law schools to create professional lifelong learners.

Greenwolfe, M. L. (2015). The maiden voyage of a kinematics robot. *The Physics Teacher, 53*(4), 205–209.

Apparatuses used in a Montessori classroom are designed to make mistakes directly observable. This article described how the
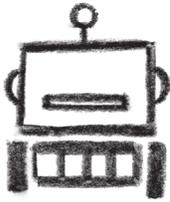
idea of immediate feedback and the freedom to explore in a structured environment inspired the development of a robot that facilitates inquiry learning and increases students' understanding of graphs.

Hitzig, S. L., & Sheppard, C. L. (2017). Implementing Montessori Methods for dementia: A scoping review. *Gerontologist, 57*(5), e94–e114.

This review included 25 publications regarding Montessori-based programming for dementia care. The authors found that there are multiple ways in which Montessori methods were implemented in various settings, making it difficult to determine which practices are the most effective for this population. The authors included issues in implementing Montessori methods.

Hoort, J. (2017). The case for sacred writing: Lessons from a Montessori classroom. *Michigan Reading Journal, 49*(2), 39–40.

Hoort described the importance of daily writing in the classroom, where both teacher and student write thoughts in their journals. She acknowledged the challenges of including the writing time but also shares the benefits for all students, regardless of whether they are in a Montessori or non-Montessori classroom.

Howlett, J. (2017). The formation, development, and contribution of the New Ideals in Education conferences, 1914–1937. *History of Education, 46*(4), 459–479.

Howlett described the New Ideals in Education conferences that began with the Montessori Conference of 1914 and contributed to educational policy in the United Kingdom. The author also described the historical context surrounding the conferences, such as World War I, and summarized the influence of these conferences on education.

Hunt, L., & Yoshida-Ehrmann, E. (2016). Linking schools of thought to schools of practice. *Gifted Child Today, 39*(3), 164–172.

This article described Project Linking Learning, an after-school program for gifted elementary students. Similar to the work done by Maria Montessori, the program supports students in an urban setting who may experience stressful living conditions, such as poverty. The authors also discussed how the project aligns with progressive educational schools of thought, including the Montessori Method.

Ide, K. (2017). Rethinking the concept of sustainability: Hiroshima as a subject of peace education. *Educational Philosophy & Theory, 49*(5), 521–530.

This article discussed peace education via the historical event of Hiroshima. The author referenced educators Arata Osada and Maria Montessori, who both asserted that children can promote peace through their stories of humanity, and explained Nel Noddings's care theory. Ide concluded that testimonies about events such as Hiroshima can be transformed by reading them through the care theory lens.

Ilgar, S. (2013). The perceptions and support of parents and guardians whose children attend Montessori programs. *Anthropologist, 16*(1–2), 241–249.

The focus of the study was to explore the relationship of parents' perspectives of Montessori education and their support of Montessori education, at home, in International Montessori Schools, in Pennsylvania. The investigators examined the correlation between the families' perspective and support of Montessori education to child and family background information.

Ivanova, T. (2014). The place of the teacher in the system of pedagogy of Maria Montessori and the contemporary system of education. *Management & Education / Upravlenie I Obrazovanie, 10*(3), 26–32.

The author outlined the tenets of the individualistic pedagogy introduced by Maria Montessori, then analyzed the role and purpose of the individual educator within the Montessori Method, concluding that the Montessori teacher is more of a facilitator. Ivanova also described how the Montessori teacher differs from the non-Montessori teacher in terms of professional role and organization of the education system.

Jonker, L. (2015). Experiencing God: The history and philosophy of "children and worship." *Christian Education Journal, 12*(2), 298–313.

Jonker traced the history of the development of the Children and Worship educational curriculum, which is based on the Montessori Method. In this curriculum, children are provided the opportunity

to freely explore in a structured environment to learn worship according to their own individual needs. She also discussed the general structure of the Children and Worship approach, which uses, "nonverbal and verbal experiences to teach children priorities in worship."

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