

# A Review of 'Doctor Maria Montessori's Handbook'

By Dr. Maria Tecla Artemisia Montessori

Janet Surum<sup>1</sup>, Elvis Omondi Kauka<sup>2</sup>

<sup>1</sup>Tutor of Educational Psychology, EAPM & PF Department, University of Kabianga, Kenya

<sup>2</sup>Lecturer of Philosophy of Education, Department of Educational Foundations, Masinde Muliro University of Science and Technology, Kenya

## I. INTRODUCTION

Maria Tecla Artemesia Montessori was born of Alessandro Montessori and Renilde Stoppani in 1870 in the town of Chiaravalle, Italy. Both parents were well educated; Alessandro was an accountant while Renilde is described an avid reader. After her Secondary Education she was admitted to the medical school of the University of Rome in 1890, becoming the first woman to join a medical school in Italy. She qualified as a doctor in July 1896. Dr Montessori worked as a researcher at the psychiatric clinic of the University of Rome, as a volunteer in 1987, a stint that led her to develop a deep interest in the needs of children with learning disabilities. In 1901 Montessori developed her studies of educational philosophy and anthropology, and subsequently lectured and taught students at different levels and age. In 1902 she enrolled for the philosophy degree course at the University of Rome where she studied theoretical and moral philosophy, history of philosophy, and psychology, but did not graduate. She also pursued independent study in anthropology and educational philosophy, conducted observations and experimental research in elementary schools. Later on, she applied them to her Casa dei Bambini (The children's house), a novelty learning centre she established for children in 1907. By 1909, Doctor Montessori gave her first training course in her new approach to around 100 students which was followed by massive Montessori movements in Europe, India, U.S.A and later on, all over the world.

She also trained, alongside his son Mario, the Indian populace on the Montessori method. In 1949 UNESCO awarded her the Nobel Peace Prize and three years on, in 1952, she passed on. As a doctor, an academic and a teacher, Montessori authored over 30 pamphlets, books and articles to communicate her ideas. The first of her literary corpus was *Il Metodo della Pedagogia Scientifica applicato all'educazione infantile nelle Case dei Bambini*, first published in 1909 and revised severally after that. The first English version appeared in 1912 titled 'The Montessori Method: Scientific Pedagogy as Applied to Child Education in the Children's Houses'. This review, however, delves into 'Dr. Montessori's Own Handbook' (Published in 1914). The book was written in

response to numerous questions posed by American teachers and parents in regard to the Montessori Method. Moreover, the purpose of the book was to recommend to teachers and learners the didactic materials needed for a Montessori class but more so, to explain how to exploit the holistic formation of the child. This review has been done after many years, in 2019, in commemoration of her first visit to England (1919) where she lectured and trained people on her method. It was from England that Montessori Philosophy got a meaningful pedestal for internationalisation.

## II. OUTLINE OF THE BOOK

### 2.1. General outline

'Dr. Maria Montessori's Handbook' is divided into eleven chapters, containing the author's introductory remarks, an exposition on the learning environment for a Montessori child, (also known as "The children's house" or 'Casa dei Bambini'), Method of teaching for Education of the senses and, didactic material for the preparation for writing and arithmetic. She then delves into motor education, followed by sense education, language education, and an exposition on freedom. The book ends with discussions on Freedom, Writing, Reading of Music, Arithmetic and most importantly moral factors in the education of the child.

### 2.2. Chapter Exposition

#### 2.2.1. Montessori's Introductory Remarks

In the Introductory notes, Maria Montessori seeks to give a background to what she calls a "Handbook" or simply an Educational Manual for the child. She does this by recognising both the roles and limitations of Science in Educational enterprise. She observes that in 'recent years' there has been a generally better life for the child evidenced by reduced mortality rate and improved Physical fitness (p.5). However, Montessori posits that science limits the education of the child to the level of physical activities. While order is necessary for Education, the child needs more than the being physically fit, eating healthy or having enough sleep(p.6): Since the child is also a spiritual being; Education according to Montessori is both a corporeal activity and incorporeal

process; it must tap into the "inner life of the child" as well (pp.4-6)

### 2.2.2 The Children's House

In this section Montessori gives a detailed and clear prescription of how the learning environment of the child should be. She calls this environment, a 'Children's house', not a classroom, but a simulated natural home.. The house should contain several rooms (*Room of Intellectual Work*, *Parlor*, *Dining-room*, *Gymnasium*, *bathroom*, *Dressing-room*) and an adjacent garden that provides access to open air activities and at the same time protecting children from rain and sun. Special significance is attached to the 'Room of Intellectual Work' also known as the 'central room' .. It should be a well-equipped room with varieties of didactic materials fitted and adapted to the child's intellectual and social development (p.9). A Montessori room, in a nutshell, is expected to be wholly didactic, with the aim of executing a competency-based curriculum. Besides, it is mandatory that the room is equipped with light furniture for easy relocation. These furniture should be painted in light colours to facilitate washing and to foster implicit learning of colours. Some of the furniture typical of a children's house include ; small wooden chairs, armchairs and sofas, small wooden rectangular tables to accommodate space, a very long cupboard with large doors which should be "...low enough so that a small child can set on the top of it small objects such as mats, flowers..."(p.10).The general function of the cupboard is to store the didactic materials. The walls of the clubhouse should be round, fixed with blackboards at a low level, so that the children can write or draw on them. The other rooms are the Parlour, Dining room, Dressing room. A Children's *parlour* must be fitted with furnishings and be attractive. It should incorporate among others things, a piano, other musical instruments, possibly harps of small dimensions, made especially for children. In this "club room" the teacher may sometimes entertain the children with stories, which will attract a circle of interested listeners"(p.11). *The dining-room* should consist of tables, low cupboards within reach of all the children, "who can themselves put in their place and take away the crockery, spoons, knives and forks" while in the *Dressing-room* each child has his little cupboard or shelf, washstands, consisting of tables with small basins, soap and nail-brush, little sinks with water-taps. They should be able to sweep the rooms, dust and wash the furniture, polish the brasses, lay and clear away the table. Finally, other crucial equipment in a children's house would be toys and Pedometer: Montessori suggests all manner of toys be availed in the Children's house for role play and responsibility training. The Pedometer is used to measure children. Montessori illustrates this implement on page 10.

### 2.2.3. Montessori's method, Motor Education and Sense Education

Montessori asserts that her method of teaching follows the pattern of natural physiological and psychical development of

the child which may be divided into three parts namely; Motor education, Sensory education and Language. She further surmises that Motor education is taught by default through the child's activities of taking care of the environment while Sensory and Language education is taught using didactic materials listed in p.13. Regarding motor education, which she variably calls Muscular Education, Montessori advises against keeping the child immobile. It is in motion that the child learns to maintain order and coordination. The adult should be a constant guide in instilling the stillness and steadiness of motion. Muscular education involves, the primary movements of everyday life (walking, rising, sitting, handling objects), the care of the person which among others incorporates dressing, management of the household, gardening, manual work, gymnastic exercises and rhythmic movements. Concerning sensory education, the use of wooden cylinders, prisms and rods are elucidated in (pp. 18-21). The child is taught how to do things, fix them and fill in the gaps. Further, Montessori outlines critical areas in sense education, namely *initiation into the sense of touch, initiation into visual sense, and acoustic sense.*

In Montessori's view, *Initiation into the sense of touch* requires that the teacher guides the child's fingertips through a surface board with different tactility, primarily rough and smooth. This must be done gently with the teacher as the protagonist, and later on, the child takes up. The next step is attempting the sensing of different degrees of roughness and smoothness like sandpapers, wool and velvet. With time the child learns not just to touch with fingertips but also to grip and feel the tactility of different objects on different parts of the skin. This is further accentuated when the child is blindfolded to ensure focus on one sense, of touch, and when the child is exposed to actual life surfaces like a visitor's dress and other generalised touches.

*Initiation into Visual sense* is divided into chromatic sense and shape recognition. Chromatic sense is the visual sense of colour. The sense of touch should graduate gradually and intermittently into visual sense. To graduate into visual sense, Montessori posits that the teacher introduces not only solids of different texture, shapes but this time around also, of different colours starting with brighter colours. Several coloured solids are arranged and exploited for comparative purposes, repeatedly. At the end of the process, Montessori asserts "Finally, the child himself will love to mix the sixty-four colours and then to arrange them in eight rows of pretty shades of colour with astonishing skill" (p.27), leading to an efficient colour memory. Recognition of shapes follows immediately and involves exposing the child to objects of different shapes, starting with basic ones like triangle, rectangle, circles and hexagons. The teaching of didactic material turns to the same didactic material of the senses. The children are intuitively conscious of the level of difficulty of the three sets of materials to teach size, thickness and length, with their preferences biased towards the pink cubes. Didactic materials give a clear idea of numbers(p.59).

Finally, alongside recognising the need of isolation, by which Montessori implies excluding senses that are not at a particular time under tutelage the education in senses should follow a schema. First, Recognition of *identities* (the pairing of similar objects and the insertion of solid forms into places which fit them), Secondly, Recognition of *contrasts* (the presentation of the extremes of a series of objects) and lastly Discrimination between objects very *similar* to one another. In *Initiation into acoustic sense*, acoustic training refers to the training of the auditory senses. It involves the use of specially arranged bells that are struck to produce intonations. It trains the child hearing ability and musical skills.

#### 2.2.4. Language

The handbook elucidates the necessity of language in the education of the child and the way it should be taught and learnt. She opines that attentiveness and discriminating between sounds lead to eloquence in language. She also recommends that the teacher should enunciate the sounds at a slow pace and speak syllabically. Training on the clarity and precision of speech is a function of teaching the terminologies pertaining to the senses, for example, large and small. This entails the teacher naming the object in terms of the size and dimension. Test for recognition by making the child identify the difference in the dimension and shape and consequently pronounce the word that represents the dimension or shape. The mandate of the teacher is to correct the instances of incorrect recognitions through Phonic skills.

#### 2.2.5 Implications

The implication of this kind of learning is to implore on the cognitive abilities of the child such as comparison, reasoning, forming judgements and discrimination. The observation abilities of the child are quickened and broadened. This ability distinguishes the child and places them at a better position to creativity (making discoveries). Montessori explains that allowing a child to discover inspires them and builds creation. The emphasis on creativity and discovery learning is the essence of the Montessori approach whose predilection is on the holistic development of the child.

#### 2.2.5. Freedom

Her golden rule in education that she adapts from the Bible is; 'Do unto others what you want to be done unto you. This rule should be applied in all our dealings with children. She describes children as being the greater than all because of their innocence. Children should be tolerated and not treated as miniature beings. Dr Montessori postulates that children learn through imitation. If we are kind, they will be kind. We, therefore, should be models of the kind of world that is desired. This golden rule fosters the spirit of freedom and esteem among children because the teacher acts as a guide or facilitator offering help when needed but not creating dependency on the part of the child. Montessori emphasises that the teacher should endeavour to make the child more curious and foster the enthusiasm to learn.

#### 2.2.6. Writing

Writing is a skill that the child has long been prepared in, through prior hand movements and acquisition of language and knowledge of the world. Children with the kind of prior guidance are in a class of their own even intellectually. When they have learnt cognitions such as differentiating, classifying, attending and observing they have it easy writing up and performing initial mathematical operations. Montessori describes this as not just a natural occurrence that unprepared children can learn, rather, a prerequisite exposure to the world of language, knowledge and acceptance. The ideas of differentiation, classification and graduation form the ground wall of all calculations. A child who has comprehended writing and arithmetic can move to understand more complex innate acquisitions.

### III. ANALYSIS

#### 3.1. Assumptions

*The scientific premise to education as an assumption for orderliness in the education of the child:* Whether Education is purely scientific or holistic it must follow orders. Montessori assumes that disorderliness in child upbringing has before led to diseases and death. As such, its antithesis, or order, is the antidote and the remedy against the 'culture of death' in education. Order as such is provided by science. The overemphasis on scientific order, however, might not necessarily be in congruence with the fluidity and flexibility of human nature. It also contradicts the spirit of creativity. Further, the concept of order is *prima facie*, a philosophical concept in the domain of logic borrowed and used in all disciplines.

*The linguistic premise of Education:* According to Montessori, language and knowledge of the world is crucial to learning, and that attentiveness and discriminating between sounds lead to eloquence in language. The teacher should enunciate the sounds at a slow pace and speak syllabically. Training on the clarity and precision of speech is a function of teaching the terminologies pertaining to the senses is an empirical positivistic assumption that works well with realist views on education.

*Cognitive Basis of child Education:* Montessori assumes that a four-year-old who has acquired the language and knowledge of the world has been allowed the freedom to be intellectually independent already. Further, she states that children who have attained these cognitions have it easy writing up and performing initial mathematical operations. Montessori describes this as not a natural occurrence that unprepared children can learn. Instead, prerequisite exposure to the world of language, knowledge and acceptance (p. 45).

#### 3.2. Concepts

To comprehend Montessori with utmost clarity, a few of the concepts are worth exploring; *Inner Life:* She asserts that the "Inner life" is the "real human life". The predicate "Real

Human life" insinuates idealistic, spiritual anthropology in which humans are *composite substantial*s having spirit as form and body as matter.

*Mother of Humanity*: Mother of humanity is a mother of the holistic child. Humanity is thus for Montessori both corporeal and incorporeal being and not some simple scientific machine. She opines 'The mother who has given her child bath ...has not yet fulfilled the mission of Mother of Humanity(p. 6)

*Club House*: The Children's House is a unique name. The definite article 'the' signifies a house that is unique. This uniqueness is partially based on its didactic nature and also by the fact that it is a *club*, meaning it is a social house, or rather a socialisation centre. The socialisation in the clubhouse is however deliberate, designated and scientific. Montessori anticipates that after the session of Montessori Experience, the child will be a miniature.

*Freedom*; She adopts a functional concept of freedom, which is freedom as a means, as a service to educational relations between the teacher and the child. The child is an individual with a mind and the need to explore their environment but with appropriate guidance. The concept contrasts with John Locke's tabula rasa philosophy. Drawing from Behaviorists principles of reinforcement, the educator should be patient when a child is slow and express gratification at their successes. The role of the educator should always be to 'Wait while observing.'(p.39 ) and not always reach out to help now and then. The role of the teacher here is that of 'scaffolding'as described in Leo Vygotsky's theory of social constructivism, where learning is a socially mediated activity.

*Tolerance*; Montessori quotes that if we could say: 'We are respectful and courteous in our dealings with children, we treat them as we should like to be treated ourselves.' Then we would have mastered a great educational principle. Children should therefore not be treated as miniature adults but as beings who have feelings too. Concerning *motor education*; Motor is the training of muscular skills and motion. It means that the development of the psychomotor domain in children is key to writing. This builds on a major assumption of Montessori's work on order; Education must follow an order. When the child is not exposed to this, it places the child under 'immense strain. 'Montessori points to the education of the chromatic sense as the lever which catapults the child in the direction of developing and possessing a firm, bold and beautiful handwriting. In learning to fill specified lengths of strokes like in the case of plants, animals and landscape images, the child learns to use the hands to perform general actions and to confine themselves within limits(p. 43).

### 3.3. Implication of silence

Montessori writes of the importance of the lesson of silence in the practice of education as that which has a practical effect on matters discipline in the education of children(p.34). This involves the teacher themselves modelling silence ranging from the control of body movements to the control of

respiratory movements. The children are taught to appreciate the sounds that would have gone unnoticed in the 'noise'. The world of the noises oppresses the spirit. Montessori describes the effect in the words of Dante, (trans.Longfellow), 'It was that hour when mariners feel longing, and hearts grow tender.'(p.35). The result is self-driven and spontaneous learning. In describing the lesson of silence, she speaks of it as entailing whispering. Silence returns the children's ken of sounds. In essence, the purpose of this kind of approach is to educate the child to appreciate the value of silence to a person's spirit and developing the social part of the spirit(p.35). The emphasis on the grace of silence promotes calmness. The trait is desirable to all people. Any slight disturbance takes away the power of silence. In learning alphabetical symbols, the teacher first role plays the movement of how they expect the child to perform. Montessori underpins the logic underlying this approach as the essential preparation for not only reading but writing too. The exercises on the movable alphabets bestows the child with the ability to write *entire* words. This phenomenon occurs unexpectedly. Following this, knowledge of reading is also essential for the reading of musical notes.

### 3.4. Points of View

Montessori proceeds from realist perspective by emphasising the empirics. She offers Berkelian, Aristotelian and Positivistic grounds and their subsequent prioritisation of senses and physical world. The door to the physical world is the sense and motor perception while language is the channel of communication of what is perceived and conceived; This view, and which is present in Montessori's Handbook is summarised in the statement "Esse est percipere"( to be is to be perceived'). The adaptation of " The Children's house" and "The Method" to a natural family set up is a typical training as per Rousseauian Philosophy of Education and according to Froebelian theory of Kindergarten. *Room of Intellectual work*: This concept is related to the cognitive dimension as the ultimate guide to holistic education. In this room, the child learns not only *That* but also *How*. She also adopts various psychological dispositions in the course of the book.

## IV. CONCLUSION

Montessori's handbook is sui generis as it illustrates a written practical guide to different lessons that are to be included in her kind of curriculum.). Montessori censures the schools of today that try to give culture to minds not yet prepared for an education(p. 62). In her panorama, a rational education stems right away from a child's early years before they enter an institution of learning . Positive mental hygiene for children entails exercise before entry into the world of school and not sheer force into an order of work. This approach polices children morally too(p. 62). She firmly describes it as a kind that is not only organised but has positive effects on the child on the part of promoting spontaneous discipline and obedience. An organised learning environment is a tenet of the field of psychology too. It is regarded as fundamental to

learning. Addedly, Montessori's demonstration of a practical Children's House corroborates with the heuristic teaching approaches where learners are involved in seeking and finding information and discovering meaning. Jerome Brunner in his Discovery Learning Model vouches for the need for active learning. Such an explicitly described educational framework is not without a drawback. It requires much time and devoted planning for it to launch efficaciously. Strict attention and a satisfactory understanding of the tenets underlying this approach is salient. An overview of most Montessori's kindergartens in Kenya betrays a parsimonious comprehension of the minutia of the approach. The tendencies in children which some adults regard as evil are usually attempts by the child to coordinate movements and collect impressions, any attempts to stop children from all these leads to rebellion. Montessori's perspective is underpinned by Erik Erikson's psychosocial theory which strongly illuminates the epigenetic principles with the stages of Trust versus Mistrust and Autonomy versus Shame and Doubts expounding the concept; the latter explains the effects of the child being denied movement to be that of developing dependence. A child who is allowed to explore develops a sense of independence as he gains self-care skills, motor and language abilities. The crux of Montessori's argument is that her approach is meant to cultivate and protect the inner activities of the child(p. 63). She compares the need for education as a need more profound than the need for bread. Education is a need for the nourishment of man's inner life, and the higher functions through the satisfaction of man's psychic needs. This abstraction can be compared to Sigmund Freud's tenets in the psychoanalytic theory that unconscious thoughts, memories and feelings motivate our behaviour. In summary, therefore, Montessori concludes that the results of work

depend upon the organisation of work and liberty. The child should be left free, but an organised work set up is indispensable in the actual achievement of an education. Moreover, if the work is done without freedom it still wouldn't achieve its core mandate. Giving unto children what they deserve is a case of rendering unto Caesar what belongs to Caesar and unto God what belongs to Him. Although Montessori's approach borrows from the field of psychology and Philosophical anthropology in general, it adopts the tenets of social learning extensively by Albert Bandura that underscores the indispensable role of modelling and imitation in learning. In the learning of silence, language and knowledge of the world the child is expected to pay attention, retain and produce the behaviour of the teacher coupled with environmental factors.

#### ACKNOWLEDGEMENT

We appreciate the efforts of all teachers who dedicate their lives, time and resources on nurturing children and to those Educators whose passion is to see the child grow into an authentic human being. We also appreciate Doctor Bilha Muthoni of the University of Kabianga for esteemed guidance during our review of 'Doctor Maria Montessori's Handbook'.

#### BIBLIOGRAPHY

- [1]. Lillard, A Lillard, A (2017). *Montessori: The Science Behind the Genius*. New York, New York: Oxford University Press. pp. 351–376. ISBN 978-0-19-998152-6.
- [2]. Lopata, C., Wallace, N.V, and Finn, K. V. (2005). "Comparison of Academic Achievement Between Montessori and Traditional Education Programs", *Journal of Research in Childhood Education* 20/1, pp. 5–13