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Introduction

Today Maria Montessori (1870 – 1952) is considered one of the pioneers of early childhood pedagogy. Having qualified as a medical doctor she started her professional life working with young children, many of whom had learning difficulties and were living in an asylum.
Observing these children’s growing capacity to engage in activities which enhanced their senses and manipulative skills led Montessori to the conclusion that their treatment should focus on their education rather than medication. This prompted her to study educational anthropology and pedagogy alongside the works of Rousseau, Pestalozzi, Froebel and two French doctors Itard and Seguin. She applied her learning when she was given an opportunity to set up a nursery for children of working parents living in San Lorenzo district of Rome. The birth of The Children’s House, Casa dei Bambini, in 1907 prompted further study of children and their capacity to engage with activities specifically prepared for them in an environment which offered freedom of movement and choice. This was in utter contrast to the education regime of the day where children were expected to receive their instruction whilst sitting motionless, often with their hand behind their backs or on their laps.

In the first nursery she observed deep levels of concentration and joy in repetitions which led to high levels of manipulative competence and capacity for respectful behaviours between the children – which she characterised as ‘cohesion of the social unit.’ The Montessori approach evolved from these observations and gave rise to development of didactic materials in five key areas of learning which remain the foundation of the Montessori early childhood curriculum. These early discoveries about the nature of children’s learning also inspired Montessori’s writing and teaching of adults.

Working with children in the first Children’s House, Montessori came to the conclusion that the first six years of life are the most important time in the child’s life and that great attention should be paid to their education. She described this stage of the child’s development as the Absorbent Mind – a time of unlimited possibilities when the child absorbs and internalises experiences, events, sensory stimulation with great energy and enthusiasm. She recognised the enormous potential within each child which needed to be nurtured and nourished in the home and in the nursery.

Much of what she has written about the Secret of Childhood (title published in 1936) has since been confirmed by neuroscience; however her most significant contribution in this area are “Sensitive Periods”. Montessori described them as windows of opportunity to acquire a specific skill or attribute which make us uniquely human such as language, refinement of the senses or movement. She believed that if these sensitive periods are not encouraged and promoted as they occur by the environment and adults within it, the child loses the capacity to acquire them naturally. Montessori gives as an example the acquisition of language which can become so laborious the older we get, yet is totally easier in early life.

According to Montessori, one of the important sensitive periods is that for order. For example, many babies respond well to routines which enable them to anticipate events such as feeding, bathing or a cuddle before bedtime – they offer security and predictability which nourish the whole baby and support their attachment relationships. As the child matures, the nurture routines become the child’s first steps towards independence from the adult. And at this stage children need time to practise eating on their own, washing hands, putting on their coat and shoes, using the toilet. Gradually they come to appreciate an order in their surroundings. Finding their toys and books in the same place empowers them to make decisions about what to do, when and for how long. Choosing activities that interest them also means they are more likely to stay on task and therefore their concentration grows alongside their exploration and involvement.

Working with children from chaotic backgrounds has demonstrated to Montessori practitioners the value of order in the nursery environment – these boys and girls thrive in its predictability and consistency. It is not only such children that benefit from the order in Montessori learning environments; all children flourish in every aspect of their development when making decisions for themselves. In Montessori settings this freedom leads to naturally evolving self-regulation and awareness of the needs of others.
The Montessori early years curriculum traditionally comprises of the following areas – practical life or activities of everyday living, sensorial activities which include shapes and puzzles, language and literacy, numeracy and arithmetic and cultural activities which relate to learning about nature, geography and history and also include simple exploratory activities with magnets, electricity, light and water. In today’s classrooms you would also find an easel, open ended art and craft activities, area for role play, basket with musical instruments and reading area with a wide selection of books and access to outdoor learning environment. The use of technology in Montessori nurseries remains a contentious issue, however the recently developed electronic systems for recording of observations and children’s progress have introduced iPads into many nurseries and so have given access to resources such as Google Earth which enhance the children’s learning about our planet.

Whilst most of these areas of learning can be found in all nurseries and reflect the Early Years Foundation Stage, the practical life area remains unique to Montessori. It is beloved by all children from the youngest to the oldest and extends to primary classroom where children undertake practical tasks which contribute to maintenance of the classroom or teach them practical skills such a repair of a puncture, knitting or pottery. This area is also the starting point of Montessori education helping children to acquire skills which lead to independence such as pouring, threading, cutting or learning how to set a place at the table, watering plants or buttoning their coats. They refine their manipulative skills and are beneficial in preparation for writing because they give opportunities to practice pincer grip, flexibility of the wrist, lightness of touch as well as eye hand co-ordination. They also introduce children to the routines of the classroom such as the use of a mat which identifies their work space, or how to carry and tuck in a chair so that it does not endanger others in the classroom.

They learn to select activities which are ready for use on open shelving and how to put them back after use ready for another child. This very simple routine is modelled as soon as the child enters nursery and supports the child’s freedom to choose an activity whilst demonstrating that the freedom also carries responsibility – the need to return the item to where it was found. It of course takes time for the children to remember what to do and needs to be guided with kindness and consistency.

The sensorial activities help the children to organise and classify the many sensory impressions they gather from the moment of birth. They are designed to focus on a specific sense – such as touch or colour. The activities scaffold the child’s learning in small manageable steps, for example, starting with matching and pairing of the three tablets in primary colours before learning their names and comparing them to objects in the environment. Then moving on to the second activity which includes 11 pairs of colour tablets including the primary, secondary and other hues such as pink, grey and brown as well as white and black. And finally the child can explore a third activity where small variations in shade of a colour, such as red or blue or green are organised in sequence with the child concentrating on the small differences. The sensorial activities were called by Montessori the keys to the universe as they prepare children for work in the other areas such as geography where the child uses his/her knowledge of colours to identify continents in a puzzle map of the world by both their shape and colour. They also include various activities with solid and flat shapes preparing the child for geometry and for mathematics by sorting and sequencing cubes and prisms and rods of varying lengths. Manipulation of the sensorial activities offers opportunities to develop muscular memory – Montessori called it the stereognostic sense. For her, these activities provided perfect examples of “the hand being an instrument of man intelligence” endorsing today’s recognition of the child being an active learner.
The area of **knowledge of the world** offers first hand experiences of nature and natural objects and care for garden and pets whilst the world is introduced by looking at the solar system and our planet with all its continents and people and animals. Respect for all life is modelled and fostered whilst promoting the idea that the child is a citizen of the world.

Montessori believed passionately that by fostering respect and cooperation from the youngest age we are educating children towards peace – for her world peace lay in the hands of educators not politicians. **She saw the child as an agent of change.**

Montessori advocated for outdoor learning and for her the garden was a natural extension of the indoor environment. She encouraged teachers and children “to take the indoor environment out and the outdoor environment in” – a free-flow of ideas and activities which the children are free to explore.

Numbers, letter sounds and shapes

The way children are introduced to **numbers** still remains unique to the Montessori approach and builds on the skills gained in the sensorial area. Children always count objects and learn the number names prior to being introduced to the written symbol and then they practice using the two together. The decimals system is introduced early with the help of the Golden Beads where units are represented by a single bead, whilst tens are sticks with ten beads threaded on them and the hundred is a square with 100 beads (10 x 10 connected sticks) and a thousand is a cube of 1000 beads. The Dienes blocks familiar to many primary teachers are a variation on the golden beads.

Montessori has always introduced **letter sounds and shapes** simultaneously, using the sand paper letters in a multisensory approach. Children use their knowledge of letter sounds to build words using letter shapes (this can be replicated using magnetic letters) in preparation for both reading and writing.
Montessori’s legacy lies in her pedagogy which is based on the relationship between the child, the environment and the teacher. Like in the Reggio approach, where the environment is ‘the third teacher’, the Montessori favourable environment, carefully prepared to meet the individual child’s needs and interest, is the teacher’s main task. Each activity is presented in a box, on a trays or in a basket. It should be complete and ready for use. The activities are organised in sequence from the simplest one to more complex, they need to be pristine and appealing to the child. They should “speak to the child”. Montessori believed that the child has the capacity to explore and get involved by him/herself having seen the activity presented by a teacher or more able peer. Having the freedom to choose, children respond to this type of environment according to their natural interest and sensitive periods. It is the teachers’ role to observe and reflect on individual children’s progress and ensure that the environment provokes the child’s interest.

In Montessori’s pedagogical tool box we find tools such as colour coding for parts of speech, isolation of stimuli and control of error which demonstrates opportunities for problem solving whilst figuring out how something works or should be done. The organisation of the classroom offers continuous provision with a wide choice of activities from all areas of learning during the entire morning and afternoon session. Freedom with responsibility is part and parcel on daily life in a Montessori setting.

Montessori’s legacy

Some words of advice to teachers

Environment

The teacher must not content herself with merely providing her school with an attractive environment; she must continuously think about this environment, because a large part of the result depends on it. The teacher, therefore, must:

- keep the didactic developmental material in perfect order. If this is not the case, the children will not take an interest in it and if they do not, the material becomes useless, as the entire Montessori method is based on the spontaneous activity of the child which is aroused precisely by the interest the child takes in the material.

- make sure that every object used by the children has a place of its own that is easily accessible to them. Thus, the black and coloured pencils, the paper, the pen, the ink, etc., must be placed in such a way that the children can take them in an orderly fashion without the help of the teacher. The order in which the objects are kept teaches order to the children.
“There should be exercises of practical life for all the children progressing according to age from simple to difficult to complex.”

- Every teacher must study to decide which exercises of practical life are interesting and possible in her environment and make a list of them; because whereas the other material is already determined, the exercises of practical life are not. These vary according to the environment but always remain a very important part of the work for they substitute the formal gymnastics of the other educational methods. So they must be interesting and sufficiently challenging.

- The exercises of practical life should be done when they are necessary, regardless of the time, and not according to a fixed schedule. For example, the children should wash their hands when they are dirty, sweep the floor when there is something to sweep, etc. Many will object that, if allowed, the children will do nothing but exercises of practical life and drawing. This is not true and if it does happen, it is only because the teacher has not been able to present her material in an interesting way or because the exercises she has given to the children are either too easy or too difficult. The teacher should not correct this by forbidding the exercises or by allowing them only during a certain time of the day, but she must allow the children to complete those tasks that they are attracted to also during the whole day, if they wish to do so; she must merely make the other work so interesting that the children do not want to dedicate themselves exclusively to one thing. Still, the teacher should not panic if the children throw themselves wholeheartedly into a certain task: that is what we call an explosion and this continuous dedication to a specific exercise, if concentrated and thus spontaneous, always leads to excellent results. The teacher should know very well how to present the exercise of practical life to the children: remembering that she must teach it with absolute clarity in every detail, but then leave the child free to master it; she should not correct the child even if he does it wrong. What is important is that he does it by himself, without a word, without the help, without a look from the teacher.

- She must give her lesson, plant the seed and then disappear; observing and waiting, but not touching.

Intervention of the teacher

Many teachers interfere in order to restrain, advise or praise the children when they should not, and instead refrain from intervening when it is necessary. The teacher should never intervene in an action when the impulse prompting it is good, neither with her approval nor with her help nor with a lesson or correction. She can destroy the good impulse of the children by intervening; or at least her intervention will cause the real “ego” of the child to withdraw within himself as a snail into its shell. I shall give an example to illustrate this fact:

A child tries to wash a small table: not knowing how to do it, he does it wrong. The teacher uses this opportunity to teach him how to do it right. The child loses interest; looking about, he scrubs the table top once or twice and then leaves it. If the teacher had waited, the child himself might have discovered how to scrub the table and he would have improved his action. In any case, the teacher should have chosen another moment to give him a lesson: waiting for an opportunity when she would not run the risk of destroying a good impulse.

The teacher should intervene before, not after, the disorder has occurred.
Today there are over 22,000 Montessori schools worldwide. The majority support children’s learning in the early years catering for children between 3 and 6 years of age. There are many Montessori primary schools in the United States of America, Sweden, Germany, Austria, and Holland. On parents’ request, Montessori secondary schools have been established in the United States, Sweden, Germany and Holland. The majority of these schools are privately owned with the exception of Holland and Norway where they are funded by the government. In all these countries the Montessori primary and secondary schools must demonstrate that the children attending have the opportunity to meet the requirements of their primary and secondary curricula.

In the UK the majority of Montessori schools offer provision for 2 - 4 year olds and growing number are offering care and education from birth to the time when children enter reception classes in September having reached their fourth birthday. In England, Montessori nurseries have demonstrated that children attending are working comfortably towards meeting the early learning goals. “The Guide to the EYFS in Montessori Settings” (MSA. 2012) explains how Montessori schools work with the EYFS. Montessori St. Nicholas charity has worked with several state primary schools in establishing Montessori Foundation Units and together they were able to demonstrate the suitability of Montessori pedagogy in the 21 century.

Further reading

