

## Work Cycles Graphs

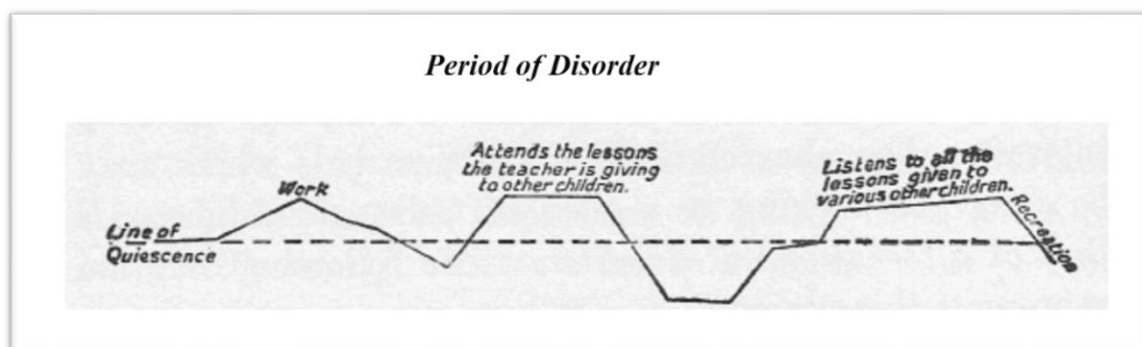
After Montessori's extensive research through observations conducted over several decades, she deduced that the development of a child follows a set of *stages of independence*. Montessori developed a series of graphs, which correspond to four stages of growth towards independence. These graphs are designed to assist teachers when observing children in the classroom. They help teachers understand more about how to interact with the child and what adjustments may need to be made in order to allow the child to reach what Montessori called '*The Phenomenon of Obedience*'. They work alongside the three-hour work cycle and allow teachers to understand the developmental level of the child whilst allowing them to make adjustments to the classroom environment and to their individual practices. Montessori states that, "Observation actually represents the evolution of spiritual order in the child." (122: 1965) She goes on to explain that observation should occur frequently and allows teachers to understand the whole child.

In this paper, we will understand and explain the features of each of these graphs, followed by the implications they may have on the teacher and the environment. Following that, we will present two '*curves of work*' graphs, which are based upon my observations of two different children during the three-hour work cycle.

The curves of work are as follows;

### The State of Disorder

During this stage, the child may seem to be unfocussed on his work. He may spend lots of time wandering around the room without taking any regard towards his own behavior or work ethic. The child may interfere with other children's work and may cause arguments and engage in disagreements. During this stage the child may seem uncoordinated and may lack the understanding that materials must be put away carefully and as they found them. Children who are in this stage tend to ignore or simply not notice the careful organisation and orderly fashion of the room. The graph below helps explain this stage.



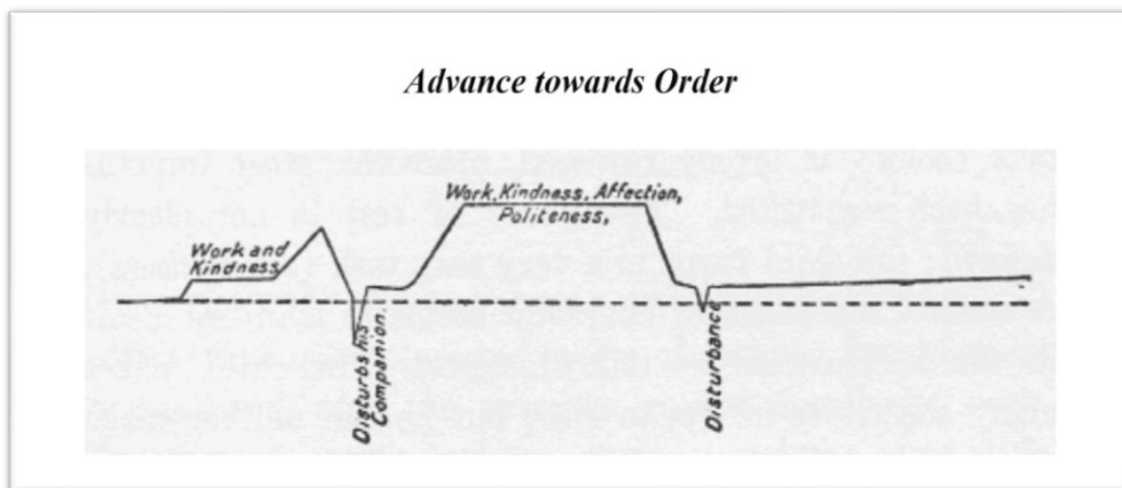
During this stage, teachers can identify and implement certain steps to assist the child, such as;

- Intervening if the child is seen to be disturbing others in the room.
- Ensure the presentations and lessons accommodate repetition to allow the child to achieve mastery.
- Ensure the environment is manipulated to attract the attention of the children.

### **The Onset of Concentration (Advance Towards Order)**

During this stage, the children tend to repeat activities and move towards prolonged periods of concentration. The repetition can continue with a variety of activities. The child starts to move around the room with a clear direction in mind. Due to the focus and sustained concentration, the child starts to feel calm and content. The child experiences a period of self-absorbed work where the happenings around her seem unimportant or non-existent.

During the slump in the graph, or as Montessori called it ‘*A Period of false fatigue*’, the child tends to lose concentration temporarily. They may see themselves going on an *intelligent walk* around the room or feeling tired. It is crucial that the director does not intervene at this point. The child will have an opportunity to redirect his or her attention to a new, more challenging task. The child will find a new level of concentration where higher-level thinking occurs and subsequently, a level of calm and serenity follows. The environment plays a big part on the attention span of the child as he finds his way out of the area of false fatigue. In the advanced Montessori method, Montessori explains it very simply, “The external stimulus which first presents itself, should be verily the breast and milk of the spirit, and only then shall we behold that surprising phenomenon of a little face concentrated in an intensity of attention.” (121: 1991). The graph below helps explain this stage.

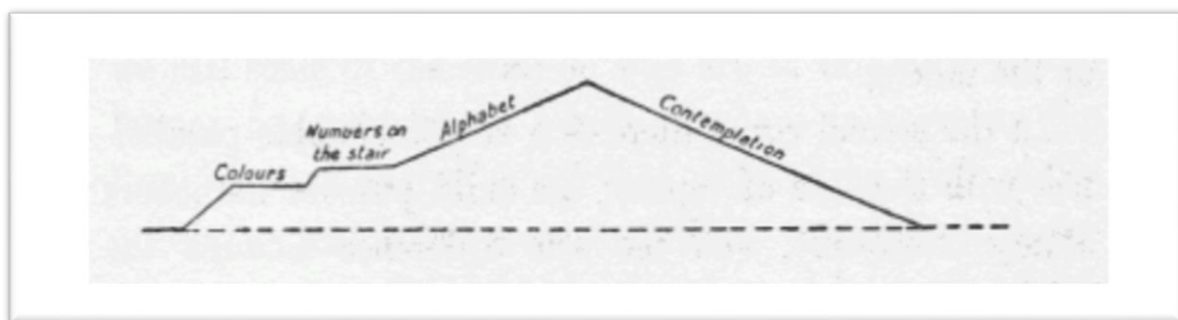


During this stage, teachers can identify and implement certain steps to assist the child, such as;

- Not interrupting a child who is concentrating.
- Careful observations to identify interests and to be duly noted.
- Introducing more interesting and challenging materials.
- Children are continuously challenged and lessons are tailored to meet the specific needs of the child.

### **Disappearance of Unrest/Onset of Contemplation**

During this stage, the slump in the graph or the period of false fatigue disappears and is replaced by prolonged strenuous work. These periods of strenuous work are often followed by deep contemplation. Work has now become a habit to the child. The child begins to explore their work in more depth and discoveries are made. The child begins observing their learning and reaches, what Montessori called 'a level of obedience.' The graph below helps explain this stage.

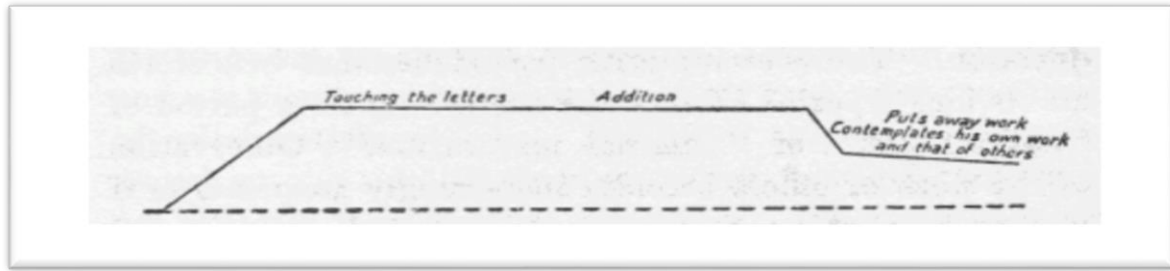


During this stage, teachers can identify and implement certain steps to assist the child, such as;

- Observing patterns and areas of interest, noting areas of the curriculum that have not been attended to.
- The child is not interrupted during times of sustained concentration.
- More interesting and abstract ways of thinking are introduced.
- Big picture thinking can be introduced, which allows children to concentrate for sustained periods.

### **Phenomenon of Obedience**

Discipline has now become a habit. Periods of concentration are now continuous and children have reached a period Montessori referred to as 'normalization'. The child is now at his own mercy. It is at this stage that thinking is more abstract and can occur on a continuous basis. The child can now understand the consequences of his actions and can follow inductions whilst considering his peers or coworkers. These periods of deep concentration allow for deep thinking, realisation and periods of sustained discovery. The graph below helps explain this stage.



During this stage, teachers can identify and implement certain steps to assist the child such as;

- Careful observations and note taking.
- Challenging topics and presentations that allow the child to *'Think Big'*.

The following timelines of observation were conducted at Inner Sydney Montessori School and were recorded in a Cycle 3 classroom during a three-hour work cycle. The observational notes explain the actions of the children in question, and the graphs which follow depict the concentration levels. These graphs will then be interpreted and matched alongside Montessori's theories to further understand the implications for the child and the teacher in question.

**Date of observation – 11.10.17**

**Stage 3 - Inner Sydney Montessori School**

**Gender Female (Child x)**

**Age – 10**

8.30 – Chatting with friend about book.

8.45 – Made a table in her maths book.

9.00 – Walking around room collecting data.

9.15 – Continued collecting data for her survey.

9.30 – Survey continued within the classroom.

9.45 – Left room to ask another class about favorite foods. Looked distracted and bored.

10.00 – Still absent from room in another class.

10.15 – Returned from another class and informed teacher about her findings.

10.30 – Teacher presented a maths material. Child was very focused.

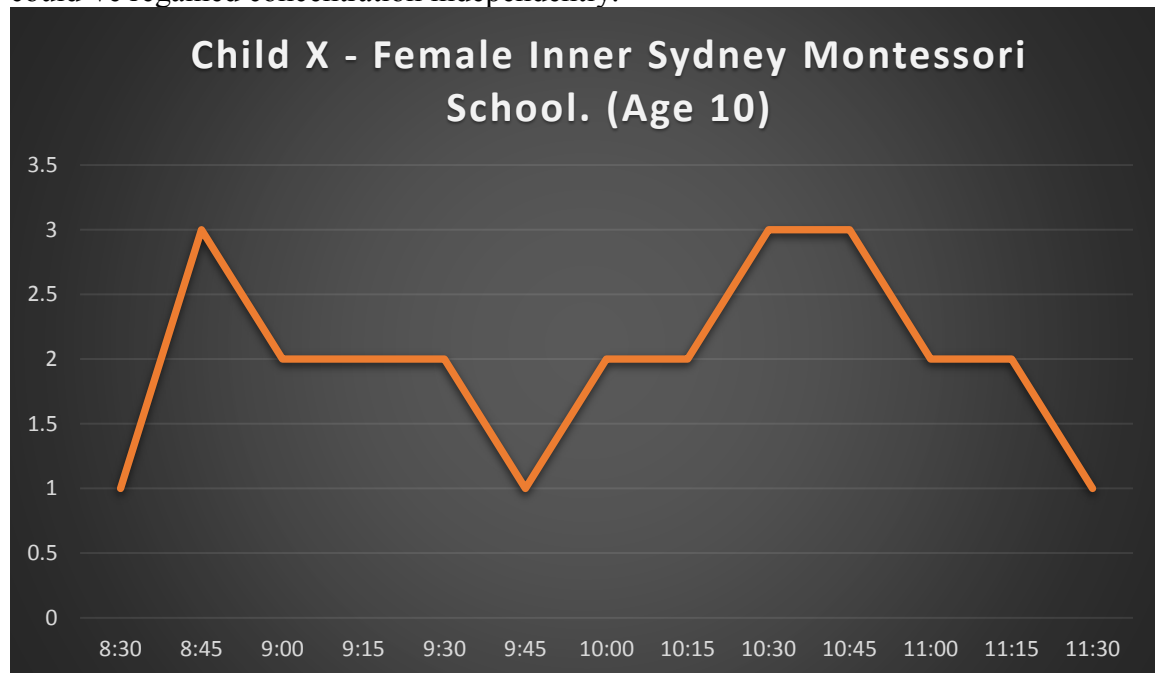
10.45 – One-on-one Mathematics presentation continued.

11.00 – Continued to work on maths independently

11.15 – Teacher returned to make sure student was implementing the materials correctly.

11.30 – Preparing for lunchtime.

From the observational notes and the following graph, we can deduce that Child X is at the stage of *Onset of concentration*. During her questionnaire, she became slightly fatigued and somewhat bored of her own research. After this period of fatigue, she was assisted by the teacher to regain a level of attention, where more difficult and interesting work was presented. Child X seemed to focus very well when work that was more difficult was presented to her on a one-to-one basis. The child was not allowed to regain her own levels of concentration due to a presentation by her teacher. It would have been interesting to see if she could've regained concentration independently.



**Date of observation – 12.10.17**

**Stage 3 - Inner Sydney Montessori School**

**Gender Male (Child Y)**

**Age – 9**

8.30 – Talking to another child about a book he is holding.

8.45 – Reading his own book whilst standing.

9.00 – Walking around room, looking at other children’s books.

9.15 – Sat at a table and started to write his own story whilst talking across the room.

9.30 – Focused on writing his own story independently and in silence.

9.45 – Teacher presented a lesson on sentence analysis. Good focus.

10.00 – Reverted to his story once teacher had left. Continued writing.

10.15 – Continued writing and illustrating his own story.

10.30 – Told his story to another child. Informed him of the storyline.

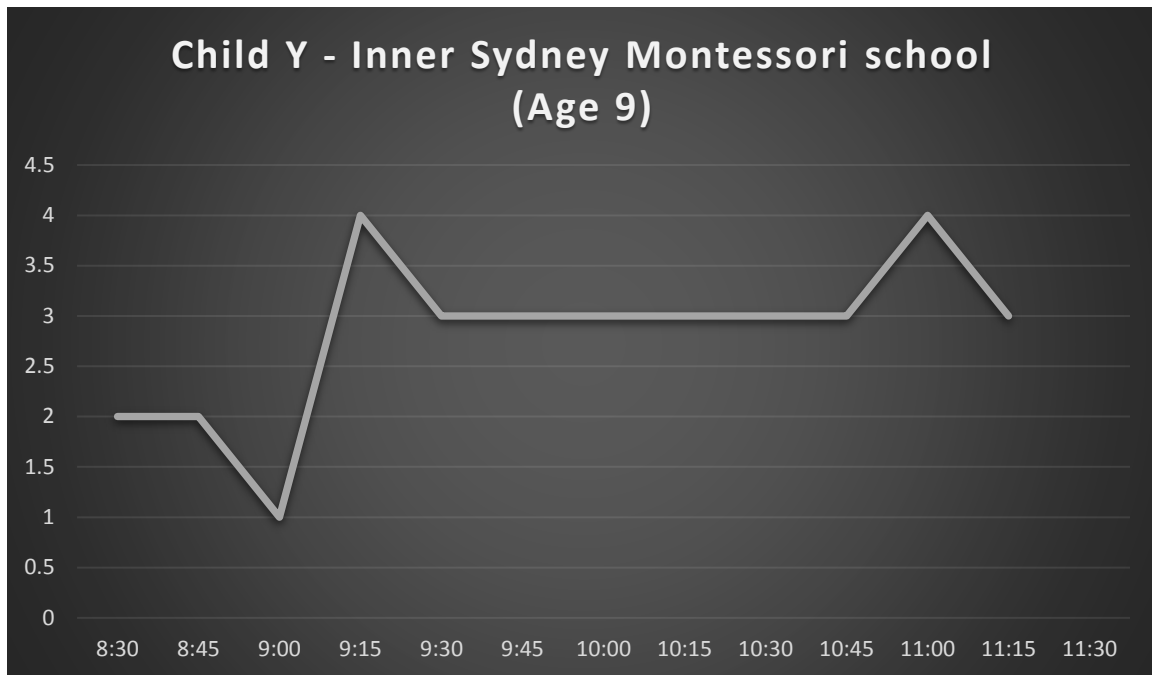
10.45 – Continued to write and illustrate his story.

11.00 – Another boy joined him to assist in illustrating his book.

11.15 – Negotiated the next stages of his story with his friends and continued to work.

11.30 – Preparing for lunchtime.

From the observational notes and the following graph, we can deduce that Child Y is at the stage of *Onset of contemplation*. He started slowly and lost focus slightly at the beginning of the work cycle. Soon he began to really think deeply about the work he was engaged in. His levels of concentration were sustained and as others came to join him, he embraced their input and included them in the activity. Embracing them as individuals who could offer support during the process of writing a story. He used these skills presented to him by the director to enhance his text and even passed on this knowledge to his peers.



According to most Montessorians, the Holy Grail is the wonders that occur during an uninterrupted three-hour work cycle. Montessori teachers must make time to observe their class and the logistics of how the children operate during the work cycles. During these careful observations, teachers are able to compare the patterns of individual children against Montessori's curves of work graphs. Once comparisons have been made, teachers can make adjustments that will enable the children move towards a sustained level of concentration, or as Montessori called it, '*Normalization.*'

The curves of work allow teachers to observe the children's levels of concentration. They instruct teachers on when to intervene and when to take a back seat and allow the children to correct their own behavior. Alone, they do not provide enough for teachers to understand the full potential of a child, but when aligned with other assessment tools, such as observational notes, timelines and anecdotal note taking, they provide an in-depth insight into the exact position of the child on their educational and social pathway. Adjustments to the environment and the presentations delivered within it are key when assisting a child to reach their full potential. "The teacher's first duty is therefore to watch over the environment, and this takes precedence over the rest. Its influence is indirect, but unless it is well done there will be no effective and permanent results of any kind, physical, intellectual or spiritual." Montessori. M (253: 1992)

## **References**

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Montessori. M. (1991) The Advanced Montessori Method. Oxford, England: Montessori-Pierson Estates.

Montessori. M. (1992) The Absorbent Mind. Oxford, England: Clio Press Ltd.