

**THE FEASIBILITY OF MONTESSORIAN EDUCATION IN THE PRIMARY
SCHOOL: AN HISTORICO-EDUCATIONAL EXPOSITION**

by

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submitted in accordance with the requirements
for the degree of

DOCTOR OF EDUCATION

in the subject

HISTORY OF EDUCATION

at the

UNIVERSITY OF SOUTH AFRICA

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November 1994



Maria Montessori

Photograph of Maria Montessori, taken from, M. Montessori, *The discovery of the child*, translated by M.A. Johnstone, India: Kalakshetra Publications, 1958.

Student number: 417-453-4

I declare that THE FEASIBILITY OF MONTESSORIAN EDUCATION IN THE
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work and that all the sources that I have used or quoted have
been indicated and acknowledged by means of complete references.

A handwritten signature in cursive script, appearing to read "Alvin Miller", written over a dotted line.

SIGNATURE

A handwritten date "3-APRIL 1995" written over a dotted line.

DATE

SUMMARY

Maria Montessori's work was initiated in 1898 as a result of her becoming acutely aware of deficient children's learning patterns, while working at the Psychiatric clinic of the University of Rome. The principles which dominate the system, however, did not spring in full panoply from Montessori. Indeed, her inspiration came largely from early and mid-nineteenth century writings of two French physicians, Itard and Seguin, who were also involved in the teaching of deficient children. Extending on the ideas of these two educator-physicians, as well as the ideas of Froebel, Montessori innovatively brought the child's senses into contact with carefully selected didactic apparatus in a carefully structured and ordered environment.

According to Montessori, the liberty of the child is a prerequisite for self-education and forms the first major pillar of her didactic theory, and thus becomes the focus of the first chapter dealing with her didactic approach (chapter three). Montessori believed that the function of education was to assist growth and if the individual child was given the liberty of movement within a prepared environment, a sense of competence would be achieved and the learning of the child would come about almost spontaneously. The principles of individuality and the training of the senses comprise the other two pillars, and form the basis for chapter four and five respectively. The principle of individuality is rooted in the belief that each child has a

uniqueness which cannot be ignored without irretrievable damage to his personality.

The current educational situation in South Africa, reveals a diversity of educational problems as a result of different ethnic and cultural groups all being thrust into a common educational system. The insidious pressures of conformity to a single standard of education must of necessity lead to a compromise of standards. The exposure of educational deficiencies inherent in such a move is characterised by learning impediments and deficiencies in the educational scenario. Research has therefore been undertaken in an attempt to extract those aspects that could provide meaningful pedagogic assistance to meet a present educational need.

KEY WORDS: Montessori; individual education; child liberty; prepared environment; sensitive periods; scientific pedagogy; sense training; developmental periods; didactic apparatus; non-intervention; spontaneous development; natural orderliness.

"The highest honour and the deepest gratitude you can pay me is to turn your attention from me in the direction in which I am pointing - to The Child."¹

Maria Montessori

¹ E.M. Standing, *Maria Montessori: Her life and work*, p. 58. (Address given at the Ninth International Montessori Congress held at London, May 1951.)

ACKNOWLEDGEMENTS

I express my sincere gratitude to those people without whose support and guidance this study would not have been possible

Professor A.E. van Zyl, of the Department of History of Education of the University of South Africa who gave wholeheartedly of his expertise and his time, and who remained always encouraging and positive.

Dr A. Van Schalkwyk, my joint promoter, for her invaluable advice and guidance and time unstintingly given.

My wife, **Debbie**, who quietly and with infinite patience and tolerance encouraged, motivated and believed in me, often at considerable inconvenience and self-sacrifice.

My children, **Kerry-Anne, Blake and Meagan**, who forbore neglect so that this research could be completed.

Genevieve Geekie, my partner and friend, for encouragement motivation and her unwavering belief in me; also for the many hours spent in pointing out features that needed refinement.

My father for patiently reviewing areas and sentences that were not up to standard.

Felicity Varkevisser, for untiringly typing and correcting the thesis

Tracy Hodgson for giving up her valuable time to ensure that the linguistic aspects of the presentation are of an acceptable standard

All glory be to God for answering the many prayers, often rendered in desperation, at those times when all else appeared to fail. The hand of the Lord is acknowledged in the presentation of this thesis.

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CHAPTER ONE

CHAPTER 1 ORIENTATION TO RESEARCH

1.1 INTRODUCTION

Significant movements which stir the minds and souls of men, have their representatives, their interpreters. Such an historical movement was initiated by Maria Montessori, who is regarded by followers and educators alike, as the representative of an educational movement¹ in which the child is firmly placed at the centre of education. Through her, aspirations which were stirring in the hearts of millions of people throughout the world, found articulate expression.² Culverwell³, professor of Education at the University of Dublin, at the turn of the nineteenth century, places the name of Maria Montessori alongside those of Pestalozzi (1746-1827) and Froebel (1782-1812) as one of the greatest in the history of educational progress. Montessori brought to the work of education scientific qualities hitherto unequalled among

¹. See paragraph 2.5

². E.M. Standing, *The Montessori method. A revolution in Education*, California: Academy library, 1962, p. vii.

³. Professor E.P. Culverwell, professor of Education at the University of Dublin at the turn of the century, wrote a comprehensive work on the Montessorian philosophy of education entitled, *The Montessori principles and practice*.

educational pioneers. Seldom in the history of education is research confronted with the innovations of one so convicted by a spirit of reform, as to launch such an unprecedented and uncompromisingly child-centred programme. Maria Montessori's works display courage and determination. Her considerable talents in the field of educational reform during the early twentieth century initiated the "century of the child" and hence helped to elevate the image of the child, which had for so many centuries been left in obscurity.⁴

In addition, from the standpoint of biology, by which Montessori ascribes to the biological doctrine that the child develops according to the biological (genetic) destiny fixed by heredity,⁵ it may be justly claimed that Montessori has made a name for herself among the greatest biologists of all time, namely Darwin, Mendel, Fabre, and De Vries.⁶

The Montessori method of education is so well known to students of education as a theory of child development, that many excellent works have been written in criticism and defence of her

-
4. E. Wakin, *The return of Montessori, in, Montessori in perspective*, edited by the Publications Committee of the National Association for the Education of Young Children, Washington: NAEYC, 1966, p. 25.
 5. M. Montessori, *The Montessori method. Scientific pedagogy as applied to child education in "the children's houses"*, Translated by A.E. George, London: William Heinemann, 1937, p. 105.
 6. Standing, *The Montessori method. A revolution in Education*, p. 4.

system.⁷ Yet, still, wherever educational analysis and innovation are pursued, the now historically remarkable advances made by this reformer and educationalist continue to invite research, in the hope that it may lead to further insights into her educational endeavours as well as the improvement of existing primary educational practice.

1.2 Motivation for research

The initial impetus to study the educational theory of Maria Montessori is derived from the reading of many of her works and papers related to the education of the child, which demonstrate the great success that she enjoyed while working with deprived and less privileged children.⁸ The viability of the application of the Montessorian approach in South African primary schools lies primarily in the careful and critical juxtaposition of a particular present need, namely the education of less privileged

⁷. The following are but a few of the many major books that deal critically and defensively with the Montessori system of Education: W.H. Kilpatrick, *Montessori examined*; W. Boyd, *From Locke to Montessori*; E.P. Culverwell, *The Montessori principles and practice*; C.A. Claremont, *A review of Montessori literature*; R.C. Orem, *Her method and the movement - what you need to know*; E.M. Standing, *The Montessori method. A revolution in education*; L.L. Gitter, *The Montessori way*; D.C. Fisher, *The Montessori manual for teachers and parents*; R.C. Orem, *Montessori today*; R.J. Fynne, *Montessori and her inspirers*; P.P. Lillard, *Montessori - a modern approach*.

⁸. See paragraph 2.4.2 which deals with Montessori's workings with less privileged children in the Casa dei Bambini.

and culturally disadvantaged children in the mainstream of education, and an analysis of the possibilities that her particular theories offer. The danger, however, often lies in too ready acceptance of Montessori's theories, rather than in that of hasty and ill-considered rejection.⁹

The thrust of this research resides in an investigation into the Montessori approach to education, with specific regard to the value that the system holds for the primary school child. A sustained reflection on Montessorian theory therefore, becomes essential to reveal both possible deficiencies in her theory in terms of current educational practices, but more particularly to identify, extract and investigate the applicability of features of Montessorian philosophy and methodology, which can be meaningfully, viably and positively implemented in our present primary education systems.

Further, a review of Montessorian theory subsequent to her demise, can illuminate both positive and negative aspects of her theory. Indeed, methods that we employ in education can only be accepted as being of value when they are time-honoured.¹⁰

Although the researcher values the numerous research projects which have been undertaken regarding Montessorian education in

⁹. E.P. Culverwell, *The Montessori principles and practice*, London: G. Bell and Sons, 1913. p. 7.

¹⁰. *Ibid*, p. xiv.

terms of the pre-school phase, the feasibility of the meaningful application of Montessorian education in the primary school still provides significant scope for investigation. On this principle alone is the Montessori system worthy of serious investigation.

Montessori has established a theory of education that is specifically geared to the education of the child between three and six years of age. Furthermore, the creation of Montessorian primary schools, as an extension of the Montessori pre-primary school, has recently gained impetus in many countries all over the world, including South Africa¹¹, by which the attempt is made to cater for the needs of children over the age of six. This has led the researcher to investigate Montessorian theory with the specific aim of ascertaining whether there is any feasibility of applying Montessorian concepts in the contemporary, South African primary school situation.¹²

¹¹ Montessori primary schools have been established in Pretoria, Cape Town, Port Elizabeth, Namibia and three schools in Johannesburg. Personal interview Lynn Slater of the Village Montessori School in Irene, 23 March, 1994.

¹². One of the major works written by Montessori, towards the end of her life, dwelt mainly on the life of the child of primary school age, namely, *The advanced Montessori method. The Montessori elementary material*.

1.3 Methodology

According to Edson,¹³ there is no single, definable method of historical enquiry, the primary reason being that researchers vary so much in their approaches. The historical-educational research method has nevertheless been chosen because of the in-depth formal method of attack that it employs. Perhaps the most salient feature of the historical-educational research method is that it lends itself ideally to allowing historical-educational researchers to relate issues of almost any historical-educational relevance to it.

For the purpose of enhancing understanding of the historical research process, four main steps pertaining to the historical-educational research method can be identified.¹⁴ Although these steps can be clearly defined, they nevertheless overlap considerably. The first step is the identification, description and postulation of the research problem, and the delimiting of the subject field. The second and third steps constitute the collection and evaluation of source materials, and the synthesis of information respectively. The final step includes analysis and interpretation of the data and the writing of the report, while at the same time focusing on the drawing of any valid generaliza-

¹³. C.H. Edson in, W. Wiersma, *Research methods in Education: An introduction*, fifth edition, U.S.A.: Allyn and Bacon, 1991, p. 205.

¹⁴. Wiersma, *Research methods in education: An introduction*, p. 206.

tions and guidelines for the future. The above-mentioned steps, which were carefully followed, can be directly related to the main aspects of the historical-educational research method and will consequently be discussed in the paragraphs that follow.

The running notes method was employed as a reference technique. This method involves citations by means of reference numbers and footnotes in the text, in conjunction with an alphabetically arranged list of sources.¹⁵ The short title approach, as part of the method, was selected because it facilitates the identification of each subsequent reference without the need for undue paging back and therefore the researcher felt that this method best suits the smooth facilitation of facts necessary for such a research procedure. The list of sources need only be consulted in exceptional circumstances to assist in the identification of a subsequent reference to a given source.¹⁶

1.3.1 Identification, description and postulation of the research problem

Considering the popularity that Montessorian education has enjoyed, a re-evaluation of Montessori's theory could possibly lead to an innovative approach in the South African primary school situation, which is presently characterised by inadequate

¹⁵. M. Burger, *Reference techniques*, eighth revision, Pretoria: University of South Africa, 1992, p. 131.

¹⁶. *Ibid*, p. 167.

educational opportunities for all children. It is the opinion of this researcher that an in-depth investigation of Montessori's theory could possibly provide new interpretations to our present formal, primary educational situation. Noordham¹⁷, the celebrated Dutch educationist, states that a study of the educational past can supply an abundant source of pedagogic thought which can give new direction to the way we should proceed.

With due regard to the unique educational situation in South Africa - with its diversity of cultures, ethnic groups and languages - a study of the educational past, pertaining to Montessori's theories and achievements could possibly provide solutions to our educational future, with specific regard to the primary school situation, especially as Montessori is well-known for her dealings with children who were educationally deprived. The possibility, therefore, exists that research findings could possibly pave the way for action to be taken in the present problematic formal South African primary school educational scenario.

The pivotal problem of this thesis can therefore be postulated as follows:

Can the theory of Maria Montessori provide guidelines that will

¹⁷. N.F. Noordham, in I.S.J. Venter and S.M. van Heerden, *The grounding of History of Education: An introduction*, Pretoria: Euro Publications, 1989, p. 95.

contribute to the improvement of existing educational structures in the South African primary school situation, and will such research promote educational innovations that provide the possibility of feasible and viable application in the primary school situation?

In order to arrive at an answer to this question, the uncertainty which still prevails concerning the educational theory of Maria Montessori, needs to be eradicated, in order to ascertain whether or not her theories concerning these aspects are pedagogically sound. A critical evaluation of Montessori's theory is therefore necessary in order to determine whether her pronouncements could be considered viable for application at the primary school level in their totality, or whether only certain aspects of her theory are worthy of application.

1.3.1.1 Hypothesis

Preliminary reading suggests that various aspects of Montessori's theory have validity for the South African primary school situation, especially if one considers that much of the current practise in pre-primary and primary school education borrows, consciously or unconsciously, heavily from Montessorian theory without acknowledging indebtedness to her. However, this researcher is of the opinion that with modification and adaptation of existing Montessorian structures, the theory can be adjusted to provide educational innovations that would prove to

be feasible in the problematic South African primary school situation.

1.3.1.2 Delimitation of the field

In directing focus on factors related to a study of the feasibility of Montessorian education in the primary school situation, it was necessary to conduct a penetrating analysis of her theory in order to focus on those aspects essential to this research. This is the most logical and obvious step to engage in so as to prevent the research procedure from being involved in a superficial investigation of too broad a field.¹⁸ In this light, three major aspects related to Montessorian education merit serious examination. These aspects become the three pillars on which the entire theory and practice of Montessorian approach is based, and constitute the headings to chapters three, four and five respectively, namely, the liberty of the child, the concept of individuality and the training of the senses, which were thoroughly researched and investigated with the prime objective of discovering whether the application of aspects related to these pillars would be suitable for the South African primary school situation. For the sake of completeness and continuity, Montessori's approach to the teaching of writing, reading and arithmetic is also investigated in the hope that it may provide guidelines for improved present-day educative practice.

¹⁸. Venter and Van Heerden, *The grounding of History of Education*, p. 112.

Research concerning Montessori's three pillars of education, as well as her views regarding the academic skills of writing, reading and arithmetic, therefore, provided a basis in deciding on the authenticity of Montessorian approaches and data for recommendations related to the South African primary school situation. The value of such a study clearly emerges when viewed in terms of the reality of the present day situation on the basis of which a final prognosis is offered.

The problem facing research of this nature, however, is that the three pillars of Montessorian education are so interwoven and interrelated that it is extremely difficult to separate them, even for the purpose of research. Although the three pillars can be distinguished, they cannot exist or function in isolation.

Further, this enquiry into Montessorian education is conducted in order to highlight the positive attributes that may arise as a result of such application. Formulated as a directive, this research will attempt to pinpoint essential features related to Montessori's three pillars of education which can be identified as valid, authentic, and viable of application in the South African primary school situation.

1.3.2 Collection and evaluation of source materials

Once the problem was established, namely; the uncertainty as to whether the identified aspects of Montessorian education would be feasible in the primary school situation, an in-depth study of both primary and secondary sources was conducted in order to gain a solid background of the facts pertaining to Montessorian education in the educational past.

1.3.2.1 Primary sources and secondary sources

The researcher wishes to point out that the following primary sources were studied in depth; *The Montessori method, Spontaneous activity in Education, The advanced Montessori method, The Montessori elementary material*, (which focuses on education from seven to eleven, which constitute the primary school years in education), *The secret of childhood, From childhood to adolescence, The discovery of the child, Education for a new world, The formation of man, Childhood education, Dr. Montessori's own handbook, The advanced Montessori method-I, and Peace and education.*

Although primary sources provided the major input for this research, various secondary sources provided valuable insights into the application and practice of Montessorian theory. Secondary sources were obtained in order to verify the application of principles propounded by Montessori in everyday practice.

This proved to be not only necessary to the research, but rather a fundamental part of the process as it strongly implies the interpretation of reporting, and the recounting of actual eyewitnesses and participants.¹⁹

1.3.2.2 Evaluation of source materials

(a) External criticism

External criticism in historical research evaluates the validity of the document and establishes whether the source is genuine, taking into account the facts surrounding their production.²⁰ In this particular paper, external criticism is not essential for the research process, because most of the primary sources used were written by Montessori herself. Furthermore, the primary sources were translated from Italian into English by reliable translators and the translations are often accompanied by a preface written by Montessori herself, thus implying that she accepted the translations as correct. In the period that elapsed between the publication of the Italian and English editions, Montessori had the opportunity to simplify and render more exact certain practical details of the method, and to gather additional observations concerning her approach to the education of the

¹⁹. Venter and Van Heerden, *The grounding of History of Education*, p. 114.

²⁰. Wiersma, *Research methods in Education: An introduction*, pp. 209-211.

child.²¹ For the sake of completeness it can be assumed that the translations from the original documents be accepted as valid and genuine.

(b) Internal criticism

Through internal criticism in historical research, the meaning, accuracy and trustworthiness of the content of the document is evaluated. The simultaneous use of external and internal criticism establishes the credibility and usefulness of the source.²²

As mentioned in the previous paragraphs, the researcher is of the opinion that the source material is valid as primary source material and can therefore be regarded as accurate. However, interpretation - which is an important aspect of internal criticism - is often complicated as Montessori has the definite tendency to colour her writings with an eloquent and flowery style of presentation rendering interpretation difficult.

Furthermore, Montessori often makes dogmatic assertions, unreasoned assumptions, naive conclusions and rhetorical generalizations leading to ambiguous statements which tend to

²¹. Montessori, *The Montessori method*, p. vii. (preface by Montessori).

²². Wiersma, *Research methods in Education: An introduction*, pp. 209-211.

result in contradictions. The researcher is thereafter left to deduce independently as to what was meant by certain statements, or to try and understand them through the application of secondary sources. This results in considerable cross-referencing between various chapters and sources.

1.3.3 Analysis and interpretation of the data and writing the report

Once a study of the above-mentioned primary sources, as well as relevant secondary sources had been accomplished, an in-depth study was conducted in order to collect relevant data pertaining to the problem. Having decided which data was of pedagogical relevance for the research, they were then classified, systematised and categorised, which led to the researcher concentrating on the three pillars of Montessorian doctrine outlined previously. The problem was further investigated through the major steps mentioned thus far, namely that of identifying the problem, that of analysing relevant information and that of determining the feasibility of application of aspects identified as authentic in the primary school situation, and providing meaningful guidelines for the future. The last step would be the only logical and meaningful way to conclude research based on the identified problem.

This study, however, makes no final judgements or pronouncements. Nevertheless, it attempts to provide insights and recommendations

regarding the validity or invalidity of Montessori's principles related to the education of the child. These recommendations, based on intensive research, coupled with the theories of established and celebrated contemporary educators, provide a basis for both the present and the future of formal, primary education. At this point it may be stated that any investigation by the historical educationist is determined by the pedagogical significance that it holds for the present and the future, which he is capable of and obliged to observe in the past of education.²³

1.4 Fundamental structures implemented in this study pertaining to historical educational research

History of education, as one of the part-disciplines of pedagogics,²⁴ implies more than the mere recounting of historical events, but has its own sphere and character in relation to the other part-perspectives of pedagogics. With due regard to the aspect under consideration, namely, the feasibility

²³. I.S.J. Venter, *History of Education*, Durban: Butterworths, 1979, p. 175. See also paragraph 1.4.1, which deals with the problematic-historic fundamental structure.

²⁴. Pedagogics encompasses such a wide field of subject knowledge, that it cannot be viewed only from one perspective for realization of its full significance. The four main perspectives of Education are the fundamental, the empiric, the didactic and the historic, each investigating pedagogic reality from their own perspective, see Venter, *History of Education*, pp. 33-34.

of Montessorian education in the primary school situation, attention will be given to the structural components by which this research was approached. Venter²⁵ names seventeen fundamental structures from which the History of Education can be studied, of which this researcher has identified seven essential fundamental structures which feature prominently in this research and which, for the sake of continuity, are briefly outlined below.

1.4.1 The problematic-historic fundamental structure

This particular fundamental structure is grounded in the belief that the educational past can only be understood when specific problems or questions are directed at it, directly pertaining to improving or understanding a present, or future situation.²⁶ The above-mentioned structure was specifically implemented to investigate the educational theory of Montessori, in order to understand her approach to education which could possibly improve our primary education situation. Such a pedagogic enquiry has great value for the primary school situation, as it will provide essential perspectives on the purpose of education in a futurological context.²⁷

²⁵. Venter, *History of Education*, pp. 35-187.

²⁶. *Ibid*, pp. 167-168.

²⁷. *Ibid*, p. 170.

Through application of the historic-problematic structure, the aspects of liberty, individuality, the training of the senses and Montessori's approach to writing, reading and arithmetic, will be placed under the searchlight in order to establish whether Montessori's theory, wholly or partially, could be considered as being authentic or inadequate in an educative search for guidelines that may improve educational conditions in our present primary educational situation. Any discussion which does not take historical perspectives into account, exposes itself to serious dangers of an incomplete and limited record which is unworthy of serious consideration.²⁸

1.4.2 The alignment of present and future.

The alignment of present and future must be viewed in conjunction with the afore-mentioned problematic-historic fundamental structure, as it is directly coupled with it.²⁹ Linking up with the afore-mentioned historical-problematic structure, the idea of alignment of present and future implies that an investigation into Montessori's theory, is undertaken by the historical educationist, as he investigates the identified problem and extracts from it what is necessary and valid for our present and future educational needs.

²⁸. *Ibid.*

²⁹. *Ibid*, p. 174.

From another viewpoint, as aspects and approaches propagated by Montessori are investigated and made clear and understandable, educational data, which is regarded as valuable, will come to light in the present, and through implementation will be valuable for future educational practice. The intensive penetration into the ideals and practices of Montessori therefore, does not only have meaning for the present, but important principles may be extracted from it for the pedagogic development of the future.³⁰ The present condition is thereby made clear, as it is enriched by a study of the past.

1.4.3 The pedagogic fundamental structure

This particular pedagogic fundamental structure takes the education phenomenon as point of departure³¹ and is specifically grounded in the relationship between the educator on the one hand, and the educand on the other.³² The significance and importance of this structure resides in the fact that Montessori's theory must always be investigated and evaluated in terms of a description of the educator in his reciprocal relationship with his pupil. Viewed pedagogically, the science of education can only begin in an educative situation, initiated by the educator, who subscribes to a reciprocal relationship of

³⁰. *Ibid*, pp. 174-177.

³¹. Venter and Van Heerden, *The grounding of History of Education*, p. 82.

³². Venter, *History of Education*, p. 37.

understanding and accountability, with the definite understanding that the relationship is a relationship of authority between the educand and the educator.³³

The directive for an historical investigation into Montessori's theories, therefore, resides in the pedagogic itself, in pedagogic liability and thus the educational theory of Montessori must be investigated and evaluated on the basis of generally valid pedagogic criteria. Only then can authentically valid conclusions be drawn with regard to the validity of Montessori's theories, in order to meet present educational needs.

1.4.4 The personal fundamental structure

Venter³⁴ reminds us that in the past the History of Education has been closely connected with prominent personalities³⁵, since they, to a great extent, provide the impetus for educational progress through the ages. The historical-educational researcher must focus on celebrated personalities such as Montessori because they "were not only children of their time, but were also often far ahead of their time, because they had pedagogical insights which had not existed in their time, and they gave new direction

³³. *Ibid*, pp. 36-43.

³⁴. *Ibid*, p. 230.

³⁵. See paragraphs 1.1 and 1.5 respectively.

or greater depth to the pedagogic ideas of other thinkers."³⁶ Maria Montessori was such a person who exercised a profound educational influence on others and whose thoughts were perpetuated by her followers and researched by her critics. The personal fundamental structure was inter-alia implemented in order to determine the underlying reason for the strong appellative action emanating from Montessori, and the reasons for the resulting success that she enjoyed.³⁷

1.4.5 The temporal fundamental structure

Viewed in terms of its temporality, man is never solely concerned with the educational present, but continually casts his sights from the educational past to the educational future in the hope that educational approaches may always continue to improve, and that innovation may play a decisive role in improving future conditions.³⁸

In terms of the temporal structure, the significance of Montessori's theory and practice in the past, is determined by the validity it holds for the child in the present, and the consequences it presents for the future of the child.

³⁶. Venter, *History of Education*, p. 230.

³⁷. *Ibid*, p. 149.

³⁸. *Ibid*, p. 77.

1.4.6 The normative fundamental structure

This fundamental structure reveals that education throughout the ages has been based on certain values and norms which have been in force.³⁹ With due regard to Montessori's theory of education, Montessori must be evaluated in terms of the innate values that her theory subscribed to, and it must also be ascertained as to whether she subscribed to authentic pedagogic norms.

A study of the theory of Montessori, disclosing whether it was accountable to proper pedagogical norms and values, will, therefore, determine whether it has any pedagogical significance for the current primary school situation.

1.4.7 The variable fundamental structure

A study of Montessorian theory and practice is closely concerned with this fundamental structure in that changes in the past amounted to the acceptance of a practice that signified something more than mere continuity of an existing method. Prominent educational thinkers such as Montessori followed the footsteps of their predecessors and appeared when the time was ripe to

³⁹. *Ibid*, p. 120.

provide a valid solution to the problematic situation in question.⁴⁰

The variable fundamental structure is also rooted in the fact that this study intends to recommend changes in the primary school situation, especially if aspects identified as beneficial to the improvement of the existing primary school situation are to be implemented.

1.5 Concluding remarks

In this chapter the researcher has shown the necessity for an enquiry into the theory and practice of Montessori as one of the celebrated personalities and educationalists of the twentieth century. Through application of the historical-educational research method, and the application of the identified structural components, it is envisaged that this research will lead to improved conditions and approaches to current educative practice in the formal, primary school situation.

Further, the intention of this research, namely; to investigate the possibility of implementing certain of Montessori's theories regarding the education of the primary school child, was conducted in the hope that it would meaningfully and realistically integrate with the existing South African, primary

⁴⁰. Venter, *History of Education*, p. 113.

school situation, and hence contribute to a more successful and concomitant education of the child, thereby leading him to a responsible and more meaningful adulthood.

CHAPTER TWO

CHAPTER 2 MONTESSORI IN PERSPECTIVE

2.1 Introduction

There is hardly a country that has not felt, in some measure, the impact of Montessori's didactic theory and principles. Her name has penetrated educational circles for the past century and she has been an inspiration to parents and educators who have first come to accept her ideals and then embrace them.¹

As many adherents as there are to Montessorian philosophy, so too are there critics who feel that her principles and theories are invalid.² A re-evaluation of the theories and principles of Maria Montessori therefore becomes essential, especially at a time when radical political and educational changes are taking place in South Africa. Meditation on the life-history of Montessori reveals a mode of thinking that is not only revolutionary, but worthy of intense investigation. The success that she enjoyed throughout her life³ stands witness to her innovative theory, but also invites researchers to investigate her principles in a search for validity.

1. E.M. Standing, *Maria Montessori: Her life and work*, London: Hollis and Carter, 1957, p. xi.

2. *Ibid*, p. xii

3. See paragraph 2.4.2

Montessori's life history is too vast to be encompassed in its totality in any work attempting to focus on her theory. This chapter, however, makes no claim to constitute a complete biography. It focuses on the more significant facts which can be related to her educational philosophy, and is therefore limited to those aspects of her life history that have more particular relevance to the topic of this thesis. Consequently, irrelevant factors regarding Montessori's life history need not be considered as essential for this research and are therefore discarded. As man's ideas can only be grasped more fully if viewed in terms of his environment, it was thought necessary to provide a sketch of the external factors which had an influence on Montessori's educational points of view.

2.2 External factors which influenced Montessori's educational endeavours.

2.2.1 Political factors

The political structure of Europe, (and more particularly that of Italy), during the mid-nineteenth century, has relevance to an in-depth study of Montessori. The Industrial Revolution, which could be said to have gained momentum in 1783, and the French revolution of 1789 were two of the major operating forces that could be named claimants to the unification of the various Italian states and thus to a new political structure which at this time was characterised by subjugation and oppression on the

part of the Italian authorities. This was primarily a result of artificial barriers and discontent amongst the various social classes, namely the nobility and the common people. The political structure of France was powerfully enforced by the government and so tightly regulated that it prompted Rousseau (1712-1778), the great French educator and philosopher, to start his famous educational work, "The Social Contract", with his now stirring declaration: "Man was born free, and he is everywhere in chains."⁴

Throughout his life Rousseau fiercely attacked the despotic government which promoted social inequality. Throughout the eighteenth century, European thinkers such as Rousseau were providing the intellectual groundwork for a movement towards political unification and liberal reform. Gradually the principles upheld by the revolution were introduced into other European countries such as Northern Italy, France and Germany during the mid-eighteenth century.⁵

In 1789, new reforms began to emerge, which included a new code of laws and a popular system of education. The French Revolution had a wide effect on the other European countries, leading to the disappearance of feudalism, enforced property rights and

⁴. J.J. Rousseau, *The Social Contract*, Great Britain: Maurice Cranston, Penguin, 1968, p. 49.

⁵. C. De K. Fowler and G.J.J. Smit, *Senior History*, 9th Edition, Cape Town: Maskew Miller, 1969, pp. 33-45.

educational reform.⁶ These new forces, the most important being that of freedom and nationalism, culminated in an entirely new and more liberal, political structure. A political freedom and an entirely new social order were thus introduced which laid the basic foundations to our modern world.⁷

The advocations of liberal reformers coupled with various uprisings and political demonstrations were felt in Italy where there was a strong desire to be free from bondage to Austria and a strong desire for constitutional government in the various states.⁸ By 1846 little had been accomplished with regard to establishing a national state. When in 1848 a revolt broke out in France, various states in Italy forced their rulers to grant them liberal constitutions. This, however, was so close to war that the young editor, Count Cavour (1804-1880) wrote in desperation, " ... there is only one path open to the Government, the nation, the king - immediate war."⁹ Small wars broke out between 1848 and 1849 and even after peace was established, the country was still threatened politically with riots and revolutions geared by political uncertainty leading to great bitterness among the people.¹⁰

⁶. *Ibid*, pp. 9-11.

⁷. *Ibid*, p. 1.

⁸ *Ibid*, p. 43.

⁹. *Ibid*, p. 43.

¹⁰. *Ibid*, pp. 43-44.

The writings of various patriots during the mid-nineteenth century led to a strong patriotic spirit known as the risorgimento.¹¹ Reformers such as Mazzini (1805-1872)¹² and Gioberti (1801-1852)¹³, realised that success could only be achieved when all Italians were converted to the ideas of liberal reform, and that they would only succeed in obtaining liberal reforms when the entire country, including the southern Italian states, which were loosely organised, became part of a wider federation of all the Italian states.¹⁴

Under the leadership of Count Cavour (1804-1880), war broke out between Sardinia and Austria. Sardinia gained the sympathy of the European states which led to victory. The Franco-Sardinian success led to a wave of national feeling in Central Italy and the unification of eleven million Italians in Northern Italy in

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11. The strong patriotic spirit that came about as a result of the writings of various patriots during the early nineteenth century resulted in a movement known as the Risorgimento or resurrection. See Fowler and Smit, *Senior History*, p. 51.
 12. Mazzini was one of the principal propagators of the Risorgimento. From early in life he was a liberal thinker, and was arrested in 1830 on account of his liberal ideas and political views. He was exiled after a period of imprisonment. See, Fowler and Smit, *Senior History*, p. 51.
 13. Another influential propagandist of the Risorgimento was Gioberti. He advocated a federation of all the Italian states under the presidency of the Pope, becoming most prominent under the papal administration of the liberal-minded Pope Pius IX, in 1846. See, Fowler and Smit, *Senior History*, p. 51.
 14. *Ibid*, p. 51.

1860.¹⁵

The inhabitants of Southern Italy, motivated by the success of their Northern counterparts, who had achieved greater political liberation, while at the same time dissatisfied with a long period of misrule and corruption, were stirred up by the events in Northern Italy. Under leadership of Garibaldi¹⁶ in 1860, they conquered Sicily and Naples. In 1861 the annexation of Sicily and Naples to Sardinia, resulted in twenty three million Italians being united. By 1860, only Venetia and Rome remained independent and these two states were annexed in 1870 as a result of the foreign policy of Prussia.¹⁷

Amid conflicting political conditions, following the establishment of the new Italy, Montessori was born. She was to play a pioneering role in the educational movement towards greater liberation for all citizens and for a new education, geared towards greater freedom for the child. This was destined to be

¹⁵. *Ibid*, pp. 54-55.

¹⁶. Garibaldi was one of the most enthusiastic supporters of the risorgimento and in 1848 attempted to establish a republic in Rome. See, Fowler and Smit, *Senior History*, p. 51.

¹⁷. In 1865, when Bismarck came to terms with Italy and in the war which ensued between Austria and Italy, the Austrians were forced to cede Venetia and the Quadrilateral to Italy. During the Franco-Prussian war in 1870, the French garrison had been withdrawn from Rome to serve in the war against Prussia. Italian troops took advantage of their situation to occupy Rome. See, Fowler and Smit, *Senior History*, pp. 56-57.

one of the most notable features of the time.

2.2.2 Socio-economic conditions.

The late nineteenth century was characterised by most unsuitable socio-economic conditions. It was a period recovering from the aftermath of major political uprisings and revolts and tinted with the prospect of more war and economic uncertainty. The terrible economic situation was directly related to Italy's subjugation and oppression by Austria. For almost a century, prior to the unification of Italy in 1870, the country had been a backwater of Western Europe. The majority of the existing working class lived in a state of abject squalor, with an illiteracy rate second only to that of Portugal.¹⁸ The result of this economic deprivation led to a starving peasantry and an economically deprived community. Maria Montessori was, therefore, born at a time when Italy was attempting to recover from a dismal economic predicament. She was born on 31 August 1870 in Chiaravalle, in the province of Ancona, central Italy - ironically the same year that all the Italian states were unified.¹⁹

The depressed economic situation, at the time of Montessori's birth, was little improved from the preceding years and had a

¹⁸ R. Kramer, *Maria Montessori. A biography.* Great Britain: Basil Blackwell and Mott, 1976, p. 19.

¹⁹ E.M. Standing, *Maria Montessori: Her life and work,* London: Hollis and Carter, 1957, p. 3.

direct and influential effect on education for firstly, if parents decide that they needed their children to work in the fields, or in factories due to financial pressure, nobody could or would insist that they send them to school instead. Secondly, textile industries could legally employ nine-year olds to work in their factories. Conditions dictated, and literally forced families to send their children to work as the grinding poverty made eating more important than literacy.²⁰ Thirdly, the extremely bad economic situation led to poor remuneration in the form of salaries. This kept many gifted teachers, who could have made a significant difference to the situation, out of the classrooms. Such gifted teachers could have provided a solid grounding for children in education and greater hope for a much needed reformation in the educational structure.²¹

The high hopes generated by the success of the liberal movement of their brothers in Northern Italy in 1860, ten years prior to Montessori's birth, turned to gradual disappointment for Southern Italy, as little hope remained for economic emancipation. The bulk of the population in Southern Italy remained destitute and illiterate with a lack of concern for the education of the poor on the part of the wealthy and powerful.²² Montessori's whole philosophy of education was to have its starting point with

²⁰. Kramer, *Maria Montessori*, p. 20.

²¹. L. Minio-Paluello, *Education in fascist Italy*, New York: Oxford University Press, 1946, p. 51.

²². Kramer, *Maria Montessori*, p. 21.

destitute and illiterate children born into this economic infrastructure.

2.2.3 Educational conditions

It is obvious from the foregoing paragraphs that educational conditions in Italy were inevitably affected by the prevailing political and socio-economic climate. Ironically, the legal system mitigated, and in fact, provided the infrastructures for the harsh educational conditions. In view of this, it is little wonder that education was depicted as "the gloomiest chapter in Italian social history" at the turn of the century.²³

From the time of Montessori's birth, and extending into her youth, educational conditions were little improved and decidedly inferior. Elementary education was a local affair in the hands of the individual communes.²⁴

One of the most unsatisfactory features of the educational system was the structure of its leadership. Most provincial administrative officials were men whose own education was impressive only in a community in which half the population could neither read nor write. Most teachers had little more than a grounding in writing, reading and arithmetic and furthermore

²³. B. King and T. Okey, *Italy Today*, London, 1901, p. 233.

²⁴. Kramer, *Maria Montessori*, p. 26.

garnered little prestige in the community to compensate for the lack of its material rewards.²⁵

Facilities were inadequate and most unsuitable for educative teaching. Both primary and secondary schools were often housed in stables, while the typical Italian elementary school was characterised by overcrowding and distress. Minio-Paluello²⁶ confirms this by stating that the great majority of schools were quartered in rooms and stables inadequate in number and size, and too often unhealthy environments.

In elementary education, even after unification, there were seldom enough books and often not even a map of Italy was available. Frequently, no ink or pens, or other kinds of teaching material existed. There was a syllabus to be taught in every subject and most teaching was by means of the printed text, which pupils were required to memorise and repeat. It was heresy to dissent in any way from the ideas presented in the syllabus.²⁷

Apart from the rather sordid educational conditions mentioned in the preceding paragraphs, psychological conditions conducive to lack of freedom were also prevalent. Physical immobility, as regards freedom of movement in the classroom, was enforced through harsh disciplinary measures, and considered an

²⁵. *Ibid*, pp. 26-28.

²⁶. Minio-Paluello, *Education in fascist Italy*, p. 25.

²⁷. Kramer, *Maria Montessori*, pp. 27 and 32.

educational virtue. Successful learning was measured in terms of the verbatim repetition of facts at the command of the teacher. All spontaneity on the part of the individual was suppressed. The respect due to the teachers was often transformed into terror and fear and this was furthermore underscored by the fact that teachers were, for the most part, unapproachable.²⁸

It can furthermore be deduced that the stifling conditions described in the preceding paragraphs and the poor educational conditions in both primary and secondary education presented an inauthentic and unacceptable educational situation that led to a psychological atmosphere inconducive to learning. This was psychologically unsound, as it presented the child with the conception that schooling was regarded as unimportant by the adult world.

In 1860, ten years prior to the birth of Montessori, the state of education was horrific, with three quarters of the population, both adults and children, being unable to either read or write. Illiteracy was highest in the south, where parents, for the greater part, decided whether pupils attended school or worked in the fields or factories.²⁹

The pedagogically invalid educational system existing at the time of Montessori's birth could therefore be attributed to two main

²⁸. Minio-Paluello, *Education in fascist Italy*, p. 51.

²⁹. See paragraph 2.2.2.

aspects. Firstly, the schools and educational structures with their poor physical conditions provided a poor stimulant for educational advancement. Psychologically, they hindered the progress of children because they resembled protestant classrooms of the middle ages, which were described as places of gloom and even terror for children. Methods of teaching were similarly rigid, disciplined and harsh.³⁰ Secondly, the performance of the educational authorities, including the teachers, was questionable. Educational authorities, who themselves were often uneducated, showed a lack of interest towards improving the system. The authorities were dependent, for the most part, on a class of teachers whose employment was characterised by a lack of educational knowledge and inferior teaching methods. Furthermore, the educational authorities kept their teachers waiting for months for their inadequate salaries. Some authorities dismissed their teachers at the end of two years, rather than provide the automatic raise in salary that the law demanded. As a result schoolmasters struggled to make their way out of the peasantry in order to gain a precarious footing in the lower, middle classes.³¹

It was a system most unfit for learning. In a punitive atmosphere everyone moved at the same pace, over the same material, at the same time. Knowledge was something to be passively ingested, not

³⁰. E.H. Wilds and K.V. Lottich, *The foundations of modern education*, U.S.A.: Holt, Rinehart and Winston, 1970, p. 242.

³¹. Kramer, *Maria Montessori*, p. 27.

a matter of ideas to be questioned or discussed and although girls attended school, the knowledge gleaned was of little consequence to future life.

2.3 Montessori's childhood

Information regarding Montessori's childhood is rather scarce and it is therefore not easy to assume relevance to her childhood as a contributing factor on the path that led her to worldwide fame as an educator. A descendent of nobility, Montessori was born in the province of Ancona, in a town called Chiaravalle, on 31 August 1870. Of particular significance and interest is her immediate genealogy. Her conservative father descended from nobility, while her mother was the niece of an illustrious philosopher-scientist-priest, Antonio Stoppani.³² Montessori's mother was an adherent disciplinarian, yet there was an affection and understanding between them that remained unchanged throughout her childhood.³³

Although Montessori's childhood was normal in every whit and detail, there appears the odd occasion to suggest that a future with a foreordained mission awaited her. Once, while seriously ill, she told her mother not to worry as she had too much to do in life, to die before her time.³⁴ From her earliest years she

³². Standing, *Maria Montessori: Her life and work*, p. 3.

³³. *Ibid.*

³⁴. Kramer, *Maria Montessori*, p. 28.

was involved in helping those less fortunate than herself and in assisting the poor and in so doing displaying the most remarkable leadership qualities.

Montessori's schooling was also no different to that of any other average child. She attended the traditional state-aided day school, where, once again, her ability as a leader was displayed. At the age of twelve, the parents desired a better education for Maria and so they moved to Rome, but even with the educational advantages of this great city, it was not easy to satisfy a person who had already formulated a doctrine regarding her own career. Her ambition initially lay in the field of mathematics and she had already decided that her life career was to be in the field of engineering. Her dogmatic ambition, however, led her to the study of medicine, a career totally unthought of for women. Suffice it to say that she finally attained her desire and was duly admitted to the medical faculty of the University of Rome in 1892 as the first lady, medical student, in Italy.³⁵

2.4 Montessori's academic career

Montessori entered her academic career defying all prejudice, and in opposition to the widespread conviction that academic institutions were not suitable for women, Montessori became the first woman in Italy to receive the degree of Doctor of Medicine in 1896. She had not only satisfied the University of Rome by

³⁵. Standing, *Maria Montessori: Her life and work*, p. 5.

meeting all the necessary requirements, but had impressed the faculty with her diligence and perseverance. In June 1894, at the end of her second year in medicine and surgery, she won the coveted "Rolli" prize and the accompanying scholarship.³⁶

In the interests of progress, in 1896, Montessori was offered a professional position as a surgical assistant at the Santo Spirito Hospital in Rome which was attached to the University of Rome. Part of her responsibility was to visit the various asylums in Rome for insane people in order to select suitable subjects for the clinic. It was in this way that Montessori was led to take an interest in idiot children who were at that time classed together with the insane.³⁷ In August 1896, Montessori was chosen as a delegate to represent Italy at an international women's congress to discuss "the condition of women and the need for reform", which was to be held in Berlin in the same year. The practical, logical, consequences of her lectures were obvious: due to her academic brilliance, and her motivating speeches, she received the title of "ein Sonnenstrahl, un rayon de Soleil."³⁸ Her lectures in Berlin ranged from topics such as the peasant and factory women, to the legal rights of married women. Her confidence and success earned her instant fame and pre-destined

³⁶. Kramer, *Maria Montessori*, p. 52.

³⁷. Standing, *Maria Montessori: Her life and work*, p. 9.

³⁸. Kramer, *Maria Montessori*, pp. 55-59.
Translated this reads: A ray of sunshine.

her to an inevitable mission in the field of education.³⁹

The exceptional interest provoked by Dr. Montessori's ideas, leaves no doubt that they were presented at a time when there was a widespread discontent with prevailing conditions and a climate that sought for some kind of reform. The extraordinary results of her dynamic lectures were, however, superseded by her passionate commitment to less fortunate children. One can scarcely help but admire her adamance to promote a new educational system, especially taking into consideration the empathy she displayed towards mentally handicapped children. As a result of the many visits she paid to asylums in her early years as a medical doctor and her encounters there with the less fortunate children that were unable to function in a normal family or school life, she acquired an empathy for and desire to help mentally handicapped children. It appears that everything in her life to this point had made her sensitive to this encounter with those who were then known as the "idiot children."⁴⁰ This compassion was to direct her to a greater cause in life - a cause that would result in a new status and direction to education - one that would not only benefit the world, but also provoke much critical thought in future generations.

³⁹. *Ibid*, pp. 58-59.

⁴⁰. *Ibid*. See also paragraph 2.4.2.

It is little wonder then that the studies done by Itard,⁴¹ fascinated her and embraced her attention. It is also not surprising that the work done by Seguin in the school for idiots opened by him in 1839,⁴² eventually found a way into her theory. In the light of her own observations, Seguin's work seemed to suggest the answer that she was looking for:

I felt that mental deficiency presented chiefly a pedagogical, rather than mainly a medical, problem.⁴³

In this passage, it is suggested that Montessori began to feel a greater keenness towards the education and care of mentally handicapped children and a shift from her medical profession to a more practical, educational solution to existing problems. This idea is confirmed by her near-immediate enrolment at the University of Rome in pedagogy, as an auditor, during the 1897-

⁴¹. Jean Itard applied his talents to the study of deaf-mutism in the hope of discovering means of curing it, or at least minimising its effects. See, R.J. Fynne, *Montessori and her inspirers*, London: Longman's Green and Company, 1924, p. 67. See also paragraph 2.4.1.2.

⁴². The school for idiots opened by Seguin in Paris, in 1839, was the first of its kind. His work in this school was most successful and attracted the attention of foreign and local educationalists who visited the school in large numbers. See, Fynne, *Montessori and her inspirers*, p. 133. See also paragraph 2.4.1.3.

⁴³. M. Montessori, *The Montessori Method. Scientific pedagogy as applied to child education in "the children's houses"*, Translated by A.E. George, London: William Heinemann, 1937, p. 31.

1898 term. She read all the major works on educational theory of the past two hundred years and this gradually crystallised into her own theory and opinion on education⁴⁴ This was to be based on the initial groundwork towards universal, elementary, education and reform ideals which had been adopted throughout Europe.⁴⁵

In 1898, an article written by Montessori entitled, "Social miseries and new scientific discoveries", once again sparked off practical reforms for a school system that was, as previously mentioned, badly in need of reform. She differentiated between normal education and education for the handicapped child and categorically stated that society owed it to the child to create the kinds of educational institutions necessary for rehabilitation into normal society. During the many weeks and lectures that followed, Montessori became a well established and popular public figure and advocates for and against Montessori appeared in all quarters.⁴⁶

⁴⁴. Kramer, *Maria Montessori*, p. 61.

⁴⁵. In Europe, Pestalozzi (1746-1827) experimented in the education of culturally retarded children. In Europe the effects of the Industrial Revolution and such horrific incidents as child labour, led the reform-minded to focus on the fate of children. In 1816 Robert Owen, a well-known educator at the time, established a school for the children of his employees at his cotton mills, which eventually became the basis for British infant schools. All these theories were to be synthesised into the work of Maria Montessori. See Kramer, *Maria Montessori*, p. 62.

⁴⁶. Kramer, *Maria Montessori*, pp. 84-85. See also paragraph 2.5

Between 1899 and 1901, and as a result of Montessori giving a series of lectures on the education of mentally handicapped children in Milan, Padua, Venice and Genoa, there came into being a state orthophrenic school in Rome (with the prime aim of training teachers in the care and education of deficient children). Under her guidance, teachers were to be given practical guidance in the handling of handicapped children. Attached to this was a practice demonstration school, which was initiated for the purpose of assisting the teachers in their instruction. Twenty-two pupils were initially enrolled in this institute. Montessori made full use of this opportunity by experimenting with the kinds of materials that had been described by Seguin and Itard.⁴⁷

It is not very easy to get any clear details on the exact methodology implemented by Montessori, but it is known that from the beginning results were impressive. Government and educational authorities had nothing but praise for the guiding role played by Montessori. The success obviously had a profound influence on Montessori, for in 1901 she stated:

I gave myself over completely to the actual teaching of the children, directing at the same time the work

⁴⁷. *Ibid*, p. 86. Examples of the kinds of sensory materials developed by Itard and Seguin were three-dimensional shapes and letters to be felt; beads, cloths and laces to be threaded, buttons to be sewn, objects of differing shapes and sizes, colours and textures to be distinguished and handled, so as to develop skills in both perceiving and performing.

of the other teachers in our institute.⁴⁸

In 1901, Montessori left the institute and school for personal reasons which are not known. Very little is known about this period in Montessori's life as it appears to have been concealed from the general public. Speculation suggests that a love affair developed between her and a colleague which clouded her mind as to her real purpose in life. The intellectual energy and vibrance, so characteristic of Montessori, prior to this time, changed gradually to a more spiritual awakening. During the years that followed she made a spiritual retreat for two weeks every summer at a convent to meditate among the nuns and recover from her tragic love affair, which resulted in the birth of her son, Mario.⁴⁹

From the position of a famous public figure and the director of a respected institution, she regressed from her position of a well-known authority in her field, to resolve her problems through intense, internal introspection.⁵⁰

At the age of thirty, after much meditation, Montessori returned to normal life. She enrolled at the University of Rome - as a student of philosophy and undertook educational research in the elementary schools, as a way of learning more about normal

⁴⁸. Montessori, *The Montessori method*, p. 32.

⁴⁹. Kramer, *Maria Montessori*, pp. 91-94.

⁵⁰. *Ibid*, pp. 93-94.

children and how they were educated. During these years she continued to practise in the hospitals and clinics of Rome. In addition to the printed versions of speeches she had given at various congresses, she had also published a number of professional papers, focusing on social problems.⁵¹ In 1904, Montessori was made a professor at the University of Rome, where for four years she occupied the Chair of Anthropology,⁵² but her greatest challenge and triumph was still awaiting her - the challenge of establishing the children's house - the Casa dei Bambini in 1907.⁵³

2.4.1 Philosophies of education that had an influence on Montessori's academic career.

The principles underlying the Montessori theory were declared by educational philosophers and implied in her theories. The works of Pereira⁵⁴ (1715-1780), Itard⁵⁵ (1775-1838) and Seguin,⁵⁶ (1812-1880) have specific reference, as their theories in particular deal with the principles of sense training, individuality and freedom, which are considered by many researchers to be the three major pillars of Montessorian

⁵¹. *Ibid*, pp. 94-97.

⁵². Standing, *Maria Montessori: Her life and work*, p. 15.

⁵³. See paragraph 2.4.2

⁵⁴. See paragraph 2.4.1.1

⁵⁵. See paragraph 2.4.1.2

⁵⁶. See paragraph 2.4.1.3

doctrine. In addition, Rousseau (1712-1778) and Froebel (1782-1852) enunciate, as a great educational principle, that education must be based on a study of the child⁵⁷, and in no greater way have their writings been more profoundly practised than by Montessori.

Repeatedly through her writings, Montessori generously acknowledges her indebtedness primarily to the two aforementioned distinguished doctors - Itard and Seguin,⁵⁸ whose life works were concerned solely with the education of abnormal children who were individually examined in the light of the best scientific knowledge of their respective periods. In the development of her individual theory, Montessori determined that the wonderful methods of these men were applicable to the education of both normal and retarded children, and therefore provided hope for a regeneration of educational thought.⁵⁹ It is furthermore apparent that many parallels exist with regard to both Itard and his follower Seguin, the great French doctor (see paragraph 2.4.1.3) and that the thoughts that crystallised into Montessorian theory, were chiefly obtained from these two philosophers. Montessori herself declares:

I set myself to study the works of Itard and

⁵⁷. Kramer, *Maria Montessori*, p. 62.

⁵⁸. See paragraphs 2.4.1.2 and 2.4.1.3 respectively, which deal with the theories of these two doctors.

⁵⁹. Fynne, *Montessori and her inspirers*, pp. 8-12.

Seguin ... So I did what I had never done, ... I copied out, in Italian, from beginning to end, the writings of these authors ... in order to grasp the spirit of the authors.⁶⁰

2.4.1.1 Jacob Rodriguez Pereira (1715-1780)⁶¹

Although very little is known about the early life of the Spanish philosopher Pereira, researchers seem convinced that he had a sound education in the Classics, Hebrew, Portuguese, Spanish, French and the mathematical sciences for which he displayed a keen disposition and a remarkable aptitude.⁶²

Some educationists and researchers will argue that the influence that Pereira had on Montessorian education was so minor, that he is not worthy of examination. The great influence that Pereira had on Seguin, who in turn so profoundly influenced Montessori, however, allows one to deduce that Pereira also had an influence on the formulation of her educational theory. One of the features synonymous with Pereira, Itard and Seguin⁶³ was their concern for abnormal children - a feature that initiated the theory that

⁶⁰. M. Montessori, *The discovery of the child*, Translated by M.A. Johnstone, India: Kalakshetra Publications, 1958, pp. 33-34.

⁶¹. Fynne, *Montessori and her inspirers*, p. 138.

⁶². *Ibid*, p. 15.

⁶³. See paragraph 2.4.1.2 and paragraph 2.4.1.3 for discussion on Itard and Seguin respectively.

Montessori developed. Although at this point it may be argued that Montessori was directly indebted to the work of Seguin, it is essential to clarify that the work of Seguin incorporated all the essentials that Pereira regarded as important in his philosophy. In the light of the above-mentioned statement it may be pointed out that Seguin himself made a thorough examination of his predecessor, Pereira's, work and entitled it "J.R.Pereire, Analyse Raisonnee' de sa Methode."⁶⁴

At the age of eighteen, Pereira came to Bordeaux and became acquainted with a young woman who had been dumb from birth. His affection for her led him to devote himself from that time to the discovery and means of making deaf-mutes speak.⁶⁵ Despite the harsh nomadic life he probably sustained as a youth, it is of significance to note that he became the first teacher of deaf-mutes in France, probably around 1740,⁶⁶ in defiance of existing traditional and inauthentic views regarding deaf-mutes.⁶⁷

⁶⁴. Fynne, *Montessori and her inspirers*, p. 11. This translated reads, "Analysed summary of its method".

⁶⁵. W. Boyd, *From Locke to Montessori - a critical account of the Montessori point of view*, London: Harrap and Company, 1914, pp. 36-37.

⁶⁶. Fynne, *Montessori and her inspirers*, p. 18.

⁶⁷. Ancient people regarded the plight of deaf and dumb as hopeless. According to the great philosopher Aristotle (384-323 B.C.), they possessed no intelligence, while Roman law (753-146 B.C.) denied them authentic citizenship. Up to the onset of the sixteenth century, deaf and dumb people were held in low esteem and often denied the privileges of life. See Fynne, *Montessori and her inspirers*, pp. 19-20.

Pereira believed that a profound study of physiology and anatomy would allow him to discover principles and facts upon which to base a new theory and practice of deaf-mute education. Of this issue it could be argued that this premise accentuating physical knowledge of the child, is possibly the starting point of Montessori's viewpoint regarding scientific pedagogy and her adherence to biographical charts and measurements.⁶⁸

2.4.1.2 Jean Marc Gaspard Itard (1775-1838)

Jean Marc Gaspard Itard, the great French physician and surgeon, was born and spent the first seven years of his life in the little town of Araison, in Old Provence, a province which is now included in the department of Basses-Alpes.⁶⁹ This physician's achievements occupy a prominent place in the history of medicine, as he developed a theory, partly adopted by Montessori, for both psychology and education.

In accordance with his career decisions, Itard became a physician at the institute for deaf mutes in Paris, at the age of twenty-five. Following his installation, a wild boy discovered in the woods of Caune in Aveyron in Southern France, was brought to him and the great educational work of Itard was initiated. The preliminary observation by most people who saw this wild boy, was that all hope of civilizing him be abandoned. This decision was,

⁶⁸. See paragraph 4.3.4.

⁶⁹. Fynne, *Montessori and her inspirers*, pp. 63-66.

however, according to Itard, made after "the most superficial examination or casual observation."⁷⁰ Furthermore, with regard to consideration for methods and means for the education of this singular being, Itard could obtain no guidance from either medical or educational precedent.⁷¹

This led Itard to devise a method of his own, consisting of apparatus and imitations by which he focused on the development of the mind through the action of the senses. The simple experiments performed on the wild boy, formed the basis for sense experience and laid the foundation for the Montessorian concept of sense training. Through the potent influence exercised on the formation and development of the intellect by the isolated and simultaneous action of the senses, Itard gradually formulated a theory that would play a prominent role in Montessorian doctrine.⁷²

Itard is, however, very careful to point out that the connection between the physical and the intellectual is so intimate, that it is not possible to stimulate the senses without at the same time involving the entire body, including the intellect.

⁷⁰. *Ibid*, p. 70.

⁷¹. *Ibid*, p. 76.

⁷². See paragraph 5.4.3

The simple experiments⁷³ performed with the wild boy, formed the basis for sense-experience and formed one of the pivotal points of Montessorian theory. The medical pedagogy thus advocated by Itard, was expounded by Montessori into an educational philosophy that would reform and revitalise the existing educational structure. The great work initiated by Itard was, however, left to his pupil Seguin to expound.

2.4.1.3 Edouard Seguin (1812-1880)

While it is true that Itard may be called the founder of scientific pedagogy⁷⁴, it is also true, in a general way, that the merit of having completed a real educational system for defective children belongs to Edouard Seguin, the great French teacher and doctor. But though the suggestion for his life-work came indirectly from Itard, his ideas did not originate in their totality from him. Generally speaking, it is true that Itard paved the way for Seguin, but in the same light it is also

⁷³. Kramer, *Maria Montessori*, p.60. Itard invented a simple method of his own to try and teach the boy. It consisted of sorting and matching activities such as matching cardboard letters with metal letters, matching shapes of various colours and sizes in differing orders and other suchlike activities. See also, Fynne, *Montessori and her inspirers*, pp. 99-100.

⁷⁴. Although scientific pedagogy has not yet been definitely constructed, nor defined, it can be argued that according to Montessori, it is the inference or suggestion of a science which is aided by results of positive experiment. It must, however, be pointed out that this terminology is unique to Montessori and her predecessors. See Montessori, *The Montessori method*, pp. 1-2.

accepted that many of the guiding ideas that led to Seguin's theoretical ideas and which provided him with the solutions he sought, came from Saint-Simon and the Saint Simonians.⁷⁵

Eduoard Seguin was born in 1812 in Clamency, France and came to study medicine under Itard. He was especially interested in penetrating the darkness of the world of idiot children and experienced early success in an eighteen month experiment in which an idiot boy was trained to use his senses to the point where he could speak, write and count.⁷⁶

Further, it can be deduced from his writings that he used apparatus after the order of Itard, familiarising the pupils with ideas of form, colour, density and weight and that he also incorporated various gymnastic movements to increase their strength.⁷⁷ He went on to found a school for idiots where he continued his work with impressive results, and in 1846 published a landmark work entitled, "The moral treatment of hygiene and education of idiots and other backward children," which immediately attracted worldwide attention. He later headed the

⁷⁵. Saint-Simonianism was both a religion and a philosophy of life. Saint-Simon, the noble but rather eccentric genius, was the founder of the movement. The philosophy impelled its disciples to give creative effect to their ideals of life, and provoked a zeal for the regeneration of humanity which found practical outlet in a great variety of social experiments. See Boyd, *From Locke to Montessori*, pp. 88-90.

⁷⁶. Kramer, *Maria Montessori*, p. 60.

⁷⁷. Fynne, *Montessori and her inspirers*, pp. 134-135.

Pennsylvania Training School for idiots after which he established a school in New York for weak-minded and weak-bodied children.⁷⁸

Of great significance, is his view towards contemporary education, in which he stated that ordinary education was stultifying in its regimentation and that it stressed rote memory at the expense of all other faculties of the mind. He thus aimed at an education that would emphasise the potential aptitudes of the individual. Montessori later embraced a similar declaration of Seguin's that "respect for individuality is the first test of a teacher."⁷⁹

Practices, such as the use of apparatus as a didactic medium were deemed essential by Seguin, was also later found in Montessorian doctrine. Seguin, in fact, used simple gymnastic apparatus like ladders and swings as well as everyday tools such as spades, wheelbarrows and hammers to stimulate sense perception and motor powers for the special case of the mentally deficient child. He used different sized nails, which were to be placed into corresponding sized holes in a board, as well as beads to be threaded. He developed the child's sense of touch by providing objects of differing texture and stimulated his sense of sight by the use of coloured balls with holders as well as sticks of

⁷⁸. Boyd, *From Locke to Montessori*, pp. 92-93.

⁷⁹. *Ibid*, p. 94. See also chapter 4, which deals with the concept of individuality.

graduated length.⁸⁰

That Montessori was influenced by Seguin is obvious from the preceding paragraphs. Montessori herself declares:

The man who had studied abnormal children for thirty years [Seguin] expounded the idea that the physiological method ... as part of its educational procedure, the analysis of physiological and mental characters, ought to be applied to normal children, thus leading to the regeneration of all humanity. Seguin's voice seemed to me to be that of the prophet crying in the wilderness, and my mind was overwhelmed with the immensity of the importance of a work which might reform the school and education.⁸¹

Guided by the work of both Seguin and Itard, Montessori formulated a didactic theory that would culminate in a movement that would transform many educators thoughts regarding contemporary educational strategies and provide a functional and more rational approach to education.

2.4.1.4 Friedrich Wilhelm August Froebel (1782-1852)

Even though very little information exists to suggest the

⁸⁰. Kramer, *Maria Montessori*, p. 61.

⁸¹. Montessori, *The discovery of the child*, p. 34.

influence of Froebel in the formation of Montessorian theory, certain facts linking the two educators exist, even if it be only in a genealogical order from Rousseau and Pestalozzi through various disciples down to Montessori.

It might do well at this time to review the work done by Froebel and to outline the indebtedness that Montessori should ascribe to this great reformer. Froebel, like Montessori, derived his educational theory from a mystical philosophy based on unity among all living things in nature. Concepts such as individuality, natural order, inborn capacities, spontaneous activities and freedom of choice and action were all core concepts of this great philosopher which later formed the centre of Montessorian theory and practice. Froebel's greatest contribution, namely the freedom of movement of the child to explore the world,⁸² was embraced wholeheartedly by Montessori.

The aspect of liberty just referred to, is enhanced by a further Froebelian principle adhered to so dogmatically by Montessori, namely that education must provide for the spontaneous development of the innate nature of the individual child, and to this end the adult must follow passively without the slightest degree of interference, protecting all that is divine in the

⁸². S.J. Braun, Nursery education for disadvantaged children: An historical review, in, *Montessori in perspective*, edited by, The Publications Committee of the National Association for the Education of Young Children, Washington: NAEYC, 1966, p. 10.

child.⁸³

The practical, logical consequences of Froebel's aims and objectives are embodied in his kindergarten. Here, his philosophy regarding free individual development, self-activity and spontaneity are expressed in an environment of love and freedom. Froebel firmly believed that given the appropriate materials and trained guidance, the young child could find the divine unity that existed in the world of his surroundings.⁸⁴

Thus we cannot refrain from concluding that Friedrich Froebel initiated a theory that was to have a lasting influence on children and even though Montessori does not acknowledge Froebel as much as she ought to, the evidence of his theory is prevalent in so many aspects of her doctrine. Sir Percy Nunn, Director of the London Day Training College, linked Montessori to Froebel using this contrast:

It argues no ingratitude to the great name of Froebel and his thousands of devoted followers to connect the new impulse which is everywhere at work in our schools more directly with the doctrine and

⁸³. Kramer, *Maria Montessori*, pp. 66-67.

⁸⁴. The Publications Committee of the National Association for the Education of Young Children, *Montessori in Perspective*, p. 9.

labours of Dr. Maria Montessori than with any other single source.⁸⁵

2.4.2 The Casa dei Bambini or the Children's House

From the beginning of her work with defective children, shortly after her graduation in 1896, Montessori believed that the methods which she was using contained educational principles for normal children, more rational than those generally in use.⁸⁶

Towards the end of 1906, Montessori had developed such status and fame, as a result of her sheer perseverance and determination with regard to her approach to the education of the less fortunate, that she became highly esteemed by both the public and her colleagues. Dramatic changes took place in Montessori's life from 1906. The prevailing political climate, with its widespread economic disorder and political agitation,⁸⁷ led to a series of social, economic and political reforms which were the most impressive since unification. The gradual industrialization of the Italian economy had furthermore improved the economic situation considerably in Italy.⁸⁸

This improvement in the economy resulted in a dramatic race by

⁸⁵. Standing, *Maria Montessori: Her life and work*, p. xi.

⁸⁶. Montessori, *The discovery of the child*, p. 25.

⁸⁷. See paragraphs 2.2.1 and 2.2.2 respectively.

⁸⁸. Kramer, *Maria Montessori*, p. 108.

entrepreneurs to take advantage of the increased need for housing in order to turn a fast profit. New apartment buildings were erected throughout the city at an incredible rate. This fabricated and misrepresented prosperity was, however, short-lived. Speculation had led to an atmosphere of uneasiness, due to over expenditure, resulting in credit being withdrawn, individual projects collapsing and enterprises failing. Apartment houses stood empty and were eventually occupied by beggars and criminals.⁸⁹ According to Montessori:

There were work-people without work, beggars, prostitutes, convicts just released from prison, all of whom had taken refuge within the walls of houses which had not been completed because of the economic crisis which had suddenly caused the suspension of building in the whole Quarter.⁹⁰

A group of people known as the Roman Istituto Romano dei Beni Stabili⁹¹ undertook an urban renewal scheme and contracted to renovate buildings in order to accommodate about one thousand people. Improvements made were, however, minimal and rooms were divided into mini-apartments with very basic facilities. About sixty children, between the ages of three and seven, of the

⁸⁹. *Ibid*, pp. 108-109.

⁹⁰. Montessori, *The discovery of the child*, p. 38.

⁹¹. The Association for Good Building. See Montessori, *The discovery of the child*, p. 38.

families who moved into the renovated apartments, created something of a problem for the owners.⁹² Although these children were not mentally retarded they were deprived of a sound upbringing. They were dejected, uncared for, obviously suffering from malnutrition, and basically neglected.⁹³

During the day these children ran havoc through the building whilst their parents worked. The directors of the institute calculated that these children needed to be supervised during the day in a make-shift nursery. Montessori was the obvious and most logical choice to undertake the management and control of the somewhat sixty children. Montessori accepted and reflected thus on the project:

They were timid and clumsy, apparently stupid and unresponsive. They could not walk together, and the mistress had to make each child take hold of the pinafore of the one in front, ... they wept and seemed to be afraid of everything ... They were really like a set of wild children.⁹⁴

The change in status, from a brilliant academic, to involvement in such a seemingly insignificant cause, seems to suggest an

⁹². Kramer, *Maria Montessori*, p. 110.

⁹³. Standing, *Maria Montessori: Her life and work*, p. 19.

⁹⁴. Montessori, *The discovery of the child*, p. 39.

illogicality in behaviour. In 1904, at the height of Montessori's career as a professor of Anthropology at the University of Rome,⁹⁵ a substitution as a schoolteacher in the slums was made. However, what was to take place in "the slums" was to lead to world fame and future brilliance. Montessori describes it as follows:

I had a vision and, inspired by it, I was inflamed and said that this work we were undertaking would prove to be very important and that someday people would come from all over to see it ... It was from here that the real work began.⁹⁶

Both Telamo, the director general of the Beni Stabili and Montessori, agreed on the name for the schoolroom in the slums - Casa dei Bambini, or the Children's House. On 6 January 1907 the first of a series of "Children's Houses" opened in the tenement at 58 Via Dei Marsi.⁹⁷ This was to be the start of a whole new conception of schooling within the spheres of existing education.

The approach that Montessori implemented is discussed in greater

⁹⁵. See paragraph 2.4.

⁹⁶. Montessori in, Kramer, *Maria Montessori*, p. 112.

⁹⁷. Montessori, *The discovery of the child*, p. 39. See also, Montessori, *The Montessori method*, p. 43. There is a slight contradiction as to the exact location of the first Children's House as Montessori states that it is 58 Via dei Marsi in "The Montessori method", while in "The discovery of the child", she states the address as 53 Via dei Marsi.

detail in chapters three, four and five which deal with the core aspects of her theory, namely the liberty of the child, individuality and the training of the senses. Furthermore, the notion of having a special place for the upbringing of children before schoolgoing age, yet in direct contact with the home, may still be considered a permanent feature of the Montessorian education ideal.⁹⁸

The group of children attending the Casa dei Bambini furnished surprising revelations, and roused interest throughout the world as a result of the success that they enjoyed. Almost immediately the Children's House became a centre of pilgrimage for people from all over the world, as careful notice was taken of the life and work of this particularly creative individual.⁹⁹

2.5 Montessori's life after her involvement in the Casa dei Bambini

The wider implications of Montessori's beliefs resulted in a zest by people of all nations to receive further instruction in the principles of this new method. Significantly, people came to

⁹⁸. Boyd, *From Locke to Montessori*, p. 255.

⁹⁹. See paragraph 1.4.4 which deals with the Personal fundamental structure as a basic fundamental structure implemented in this research. According to this structure, the significance of the pedagogical genius of educators such as Montessori, must never be lost sight of.

realize more fully the wider significance of her discoveries. Montessori thus felt, after the success of the Children's House, the duty of going forth almost as an apostle, on behalf of all the children in the world, born and yet unborn, to preach for their rights and liberation.¹⁰⁰

The period that followed was characterised by an explosion of public interest. The overwhelming interest generated during the next forty years brought not only fame to Montessori, but her revised education system was considered by many educationalists to be superior to even the most advanced educational theories. Montessori's writings were rapidly translated into many different languages including Russian and German. Besides lecturing in America, training courses for teachers were also diffused to Italy, France, Holland, Germany, Spain, England, Austria, India and Ceylon.¹⁰¹ Montessorian societies were presided over by dignitaries such as Graham Bell, the inventor of the telephone. The secretary of the society was Margaret Wilson, daughter of the then president of the United States.¹⁰²

2.6 The exposition of her theory.

If Montessori had died early in 1906, before establishing the Children's Houses in 1907, she would have been relatively

¹⁰⁰. Standing, *Maria Montessori: Her life and work*, p. 42.

¹⁰¹. *Ibid*, p. 46.

¹⁰². *Ibid*, p. 44.

unknown. By 1908, her name was known all over the world. In that short period she had made herself famous as a result of her success in the Children's House.¹⁰³ There were, undoubtedly, many other contributing factors of varying significance, including the influence of the afore-mentioned philosophers, that led to the adoption and exposition of Montessori's theory and practice, but acknowledgement came as a result of the considerable success she enjoyed in the Children's House. It would therefore not be incorrect to say that her initial theory, undoubtedly, came into being concurrent with the establishment of the first Children's House in 1907, as her entire educational doctrine, in the researcher's opinion, stems from the period in which Montessori had the opportunity of exposing and testing her doctrine with a unique programme of cognitive development.

Regarding the exposition of her theory in the infant years, Montessori declared at the opening of the Casa dei Bambini:

I had a strange feeling that made me announce emphatically at the opening that here was a 'grandiose' undertaking, of which the whole world would one day speak.¹⁰⁴

The exposition of Montessorian theory and practice thus had its inception in the rampant, degraded, slum buildings of San Lorenzo

¹⁰³. *Ibid*, p. 35.

¹⁰⁴. Montessori, *The secret of childhood*, p. 141.

where the Casa dei Bambini operated. The prominent success enjoyed in this children's house in turn led to the unique dispersion of her theory that children possess different and higher qualities than those we usually attribute to them. The Montessori approach made people talk of the success that she enjoyed and the press furthermore spoke eloquently of her methodology and the news of the wonderful children spread in a trice all over the world. Books were suddenly written while many people from different parts of the world came to verify the surprising facts.¹⁰⁵

The social importance of the children's house, which is assumed through its dual function of being both a school within a house and a pedagogical structure, was the starting point in exposing the practical application of her unique theory. A second children's house was established in another tenement building shortly after the first was under way. As Montessori progressed with the application of her unique theory, so the fame spread and people of discernment, too numerous to enumerate here, came from all quarters of the earth to observe the new approach implemented by Montessori.¹⁰⁶

The spread of Montessorian doctrine both then and now has been predominantly through verbal communication, by those people who have enjoyed the success of its practice and benefited from a

¹⁰⁵. *Ibid*, p. 170.

¹⁰⁶ Kramer, *Maria Montessori*. pp. 125-126.

different approach. Montessori herself argues;

It is the children themselves who spread my method. Happily they behave as I say they do in my books, and people go and see them, and at last they believe in it themselves.¹⁰⁷

Observation and experimentation led Montessori to deduce the fundamental principles that would form her theory. The reliance on the spontaneous manifestation of the child proved to be a mainspring idea of her work. Discoveries with observation and experimentation led to the discovery of other fundamental principles, such as the principle of 'sensitive periods' and 'freedom of choice'.¹⁰⁸ Her educational work, though not wholly clarified in educational terms, had been exposed to the world.

2.7 Reaction to her theory.

The first discussion and report of Montessori's work, in an American publication, appeared in a professional educational journal and declared that Montessori was highly successful in a new method of infant education and went on to explain the success

¹⁰⁷. M. Montessori, *The child and the church: Essays on the religious education of children and the training of the character*, edited by E.M. Standing, London: Sands and Company, 1929, p. 184. See also, Orem, *Montessori: Her method and the movement - what you need to know*, p. 51.

¹⁰⁸ See paragraph 5.4.1 and 5.4.3 respectively.

in the use of Seguin's methods in the training of defective children and her subsequent modifications of those methods for use with normal children.¹⁰⁹

In the years that followed the opening of the Casa dei Bambini in 1907, the Montessori fame spread and when Montessori first visited America, between 1914 and 1918, educators and journalists presented countless articles and reports of her works and approach to educational matters. Her methods were discussed at professional meetings of state teachers associations, as well as the prestigious National Education Association.¹¹⁰ By this time Montessori classes had also been imported to England.

By the end of 1911, the Montessorian system had been officially adopted by most public schools in Italy and Switzerland and involved children from pre-primary to nine years of age, while at the same time plans were also being made for the opening of Montessori schools in India, China, Mexico, Korea, Argentina and Hawaii.¹¹¹

The Montessori movement continued to have an influence among numerous dedicated followers and it could presently be argued that the theoretical basis established by Montessori became a driving educational force to be reckoned with. The "revolution-

¹⁰⁹. Kramer, *Maria Montessori*, pp. 150-151.

¹¹⁰. *Ibid*, p. 154.

¹¹¹. *Ibid*, p. 155.

ary" way of viewing the child within the educational system, is debated by educators as being inauthentic for many reasons that will be outlined within the framework of each relevant chapter of this thesis. Although it is difficult to gauge the authenticity of her entire theory, it is not possible to forget the measures of success that it enjoyed in the past.

The Montessori method marked the start of an important world-wide progression in education, not only in the teaching of retarded children, but also with normal children where it is now rapidly winning over thousands of affluent American parents who are eager to give their pre-school children a head start in learning. Today there are some 1300 Montessorian schools in the United States alone ... and new ones opening at the rate of seventy-five a year.¹¹²

Montessorians, however, tend to fight and debate amongst themselves in order to determine who the true Montessorians are. Infighting occurs in the form of power struggles and bickering. An article in Newsweek (20 November 1972) sustains this argument:

But even as Montessori booms in the U.S,
its adherents are engaged in a bitter struggle
to determine who are the real Montessorians.¹¹³

¹¹². Orem, (ed.), *Montessori: Her method and the movement - what you need to know*, pp. 46-47.

¹¹³. *Ibid*, p. 47.

The number of interpretations of Montessorian education, illustrates the various reactions to her theory and points to the difficulty of establishing clear-cut views as to exactly what Montessori aimed at. Of unanimous significance, however, is the fact that Montessorian education provoked intense world-wide reaction as a result of the huge success that it enjoyed.

2.8 Montessori's death.

Maria Montessori's "ministry and mission" ended suddenly on 6 May 1952 at Noordwijk-on-Sea, in Holland, where she collapsed and died at the remarkable age of eighty-one. The day of her death, her son Mario offered to read one of her lectures that she intended giving in which she declared, "Am I no longer of any use then?" An hour later she was dead of a cerebral haemorrhage.¹¹⁴ Her body was laid to rest in a small cemetery of the Catholic church at Noordwijk. The heritage that she left behind, however, is far greater than the beautiful monument that has been erected in her honour at the Noordwijk Catholic cemetery, by those people who regard her work in such high esteem.¹¹⁵

2.9 Concluding remarks.

Montessori's impressive history, though short, possesses significant value and relevance for all educators who make a

¹¹⁴. Kramer, *Maria Montessori*, p. 367.

¹¹⁵. Standing, *Maria Montessori: Her life and work*, p. 53.

careful study of her work, not only because it displays the tremendous success that she achieved with disadvantaged children, but also because it accentuates the dedication of an educator who endeavoured to make a difference. In a very real sense she not only worked against the grain of educational reform, but as a single person she undoubtedly accomplished miracles at a time when the position of women was placed in jeopardy.

Montessori's robust faith in the latent possibility of each individual child inspires researchers to make a careful and penetrating search in order to ascertain whether her approach to educational matters could be at all feasible in the twentieth century educational primary school infrastructure.

CHAPTER THREE

**CHAPTER 3 MONTESSORI'S VIEWS REGARDING THE LIBERTY OF THE
CHILD AND THEIR FEASIBILITY IN THE PRIMARY SCHOOL
SITUATION**

3.1 Introduction

In this chapter the researcher intends disclosing the concept of liberty, one of the three pillars of Montessorian doctrine referred to in chapter one.¹ The prospect of improving the educational system by applying Montessorian concepts is undoubtedly the underlying factor in this research, as it is done at a time when there is a widespread discontent with the traditional approach to schooling, which restricts the child's liberty. There exists an eager desire for educational reform that will make contemporary education more effective than it is at present.²

The desired outcome is obvious. If all the views propounded by Montessori regarding liberty are inauthentic, her entire approach which is based on the concept of liberty, need to be discarded in terms of their validity and feasibility in an authentic South African primary school situation. If, however, all or some of her contentions regarding the liberty of the child can be authenti-

1. See paragraph 1.3.1.2. The three pillars of Montessorian doctrine may, for brevity, be referred to as the principle of liberty, (chapter three), the principle of individuality (chapter four), and the principle of the training of the senses (chapter five).

2. W. Boyd, *From Locke to Montessori - a critical account of the Montessori point of view*, London: Harrap and Company, 1914, p. 8.

cally substantiated, research has to be focused on the implementation of pedagogically authentic ideas in the primary school situation. This would imply a reconstruction in our primary educational institutions based on the specific approach to liberty that Montessori advocated. Any discussion that will lead to the settlement of the issues at stake will thus not be unprofitable in any way.³

3.2. Historical background to Montessori's philosophy regarding the liberty of the child

For many centuries, the state of childhood was regarded as unimportant and an inferior form of human existence. In medieval Europe, there was a widespread resistance to the teaching of Christian dogma to very young children in support of harsh authoritative measures. The Bible was often misinterpreted to suggest that children were to be unnecessarily firmly chastised.⁴ The infantile and toddler years were specifically regarded as burdensome and were hence held in low esteem. Little place was granted for either children or adolescents in society. Freedom,

³. *Ibid*, p. 10.

⁴. Scriptures such as those quoted below, formed the foundation for harsh authoritative measures and were therefore in direct opposition to Montessorian views:
 "Withhold not correction from the child: for if thou beatest him with the rod he shall not die. Thou shalt beat him with the rod and shall deliver his soul from hell." See, *Holy Bible*, U.S.A.: King James Version, 1979, Proverbs 23:13.

with regard to children, was virtually non-existent.⁵

In order to understand Montessori's references regarding freedom, it is precisely necessary to understand the climate of subjugation that prevailed prior to her propagations regarding the liberty of the child.⁶ Many of her statements in defence of the child's right to liberty are in direct opposition to conditions that prevailed during her era. At the time of Montessori, pupils' mental and physical activities were severely restricted. Schools were furnished with long narrow benches, which resulted in children being crowded together. Eventually the seats were separated and the width so carefully calculated that the child could barely seat himself on it, while to stretch himself by making any lateral movements was impossible. These desks were furthermore constructed in such a way that the child was certain to be visible in all his immobility.⁷

The respect due to the teachers was often transformed into terror and teachers often resorted to the worst means of punishment, namely that of brutal corporal punishment, to educate the pupils placed in their care. The attitude of the pupils towards the school was therefore that of a hard and unpleasant duty imposed

⁵. P. Monroe, *A brief course in the History of Education*, London: Macmillan, 1922, pp. 204-208.

⁶. See paragraph 2.2.3.

⁷. M. Montessori, *The Montessori method. Scientific pedagogy as applied to child education in "the children's houses"*, Translated by A.E. George, London: William Heinemann, 1937, pp. 15-20. See paragraph 2.2.3.

upon them by the parents and teachers, to be borne in passive silence.⁸

It is against this background that we study Montessori's views on liberty, which are founded upon one fundamental and major base - the liberty of the child in his spontaneous manifestations.⁹

3.3 Montessori's conviction that liberty implies the existence of a natural "orderliness" in children.

The liberty that Montessori alludes to is much more complex than the freedom defined by conventional educational practice, (which is freedom within limits) but is rather derived from the realms of psychology¹⁰ and demands an understanding of the deeper self of the child, a principle recognised previously by educators such as Pestalozzi (1746-1827), but seldom recognised by other celebrated educationalists of the past. A key element in the Montessori philosophy regarding the liberty of the child is that the environment in which the child is educated must be structured and ordered so that the child can develop his own "mental order" (mind), character and intelligence.¹¹

According to Montessori, there is a "mental form"

⁸. L. Minio-Paluello, *Education in fascist Italy*, New York: Oxford University Press, 1946, pp. 50-51.

⁹. Montessori, *The Montessori method*, p. 80.

¹⁰. See paragraph 4.3.2

¹¹. P.P. Lillard, *Montessori - a modern approach*, New York: Schocken Books, 1972, p. 56.

(characteristic), peculiar to childhood, a natural yearning for order within the child that allows him to develop fully if he is given the freedom of opportunity to do so.¹² The "natural order" in the child, a concept first used by Montessori, therefore implies that the child possesses an innate desire to act in an orderly fashion provided they are granted the necessary freedom to be active. In terms of the afore-mentioned statement it must be clearly understood that Montessori places a great deal of emphasis on order as a prerequisite for effective learning.

Montessori, furthermore, believes that the child appeals for order and that more meaning is attached to the word 'order' than is generally understood by adults. Montessori elaborates:

It is a vital need at a certain age, in which disorder is painful and is felt as a wound in the depths of the soul, so that the child might say, "I cannot live unless I have order about me."¹³

Montessori's philosophy concerning a natural order in the child is furthermore based on the belief that if the child is to gain maximum benefit from the exercises given to him, he is to be

¹². M. Montessori, *Childhood education*, Translated by A.M. Joosten, Chicago: Henry Regnery Company, 1974, p. 33.

¹³. M. Montessori, *The secret of childhood*, translated and edited by B.B. Carter, London, New York and Toronto: Longman's Green and Company, 1936, pp. 59-60.

granted freedom from interference from the adult-educator¹⁴ so that once the child has established his personal order structure, it may be maintained. She defends herself in the following quotation:

... order [in children] came from mysterious, hidden, inner directives, which can manifest themselves only if the freedom permitting them to be heeded is given. In order to give this type of freedom, it was precisely necessary that nobody interfere to obstruct the constructive, spontaneous activity of the children in an environment prepared [ordered] so that their need for development could find satisfaction.¹⁵

Although the aspect regarding non-interference will be discussed in greater detail in paragraph 3.3.2, it is necessary to point out that Montessori feels that interference can cause unnecessary and permanent harm to the personal order structure of the child.

Montessori is of the conviction that nature gives children an intrinsic sensibility to order which is principally limited to the early years of the child's life, and corresponds to the presence of a particular sensitive period¹⁶ that is manifested at that specific time in the child's development. Montessori

¹⁴. See paragraph 3.2.2

¹⁵. Montessori, *Childhood education*, pp. 44-45.

¹⁶. See paragraph 5.4.2, which deals with sensitive periods.

clarifies this standpoint:

Order in his outer environment evidently affects a sensibility that vanishes as he grows bigger. It is therefore precisely one of those periodic sensibilities ... which we call 'sensitive periods'; it is one of the most important and most mysterious of such periods.¹⁷

In essence, Montessori is of the opinion that orderliness is displayed as a natural phenomenon until approximately three and a half years of age. Thereafter, the need for order enters upon a phase of calm and merges into an active, yet tranquil period.¹⁸ It is therefore essentially necessary that the child should acquire the elements of orientation in the environment at an early age.

Hence we see two major reasons upon which Montessori's philosophy, regarding freedom, is based: that of liberty of movement within a prepared and ordered environment; and of non-interference on the part of the adult-educator. These two concepts obviously require further elucidation and will be dealt with in paragraphs 3.3.1 and 3.3.2 respectively.

¹⁷. Montessori, *The secret of childhood*, p. 53.

¹⁸. *Ibid*, pp. 59-60.

3.3.1 Freedom, according to Montessori, implies the liberty of movement within a "prepared environment".

As previously explained, the environment that the child had encountered up to the onset of the twentieth century had been characterised by heavy desks, harsh disciplinary measures and often inauthentic educative teaching, such as repetitive rote learning with little, if any, physical or mental liberty on the part of the child (see paragraph 3.2). The child had been forced to learn by coercive measures, to the detriment of his weak body, and more seriously, the suppression of his personality.¹⁹

In contrast Montessori stressed the meaningfulness of content, based on physical concrete learning materials. Hence the child could construct his own knowledge, based on his own experiences, encounters and challenges, within the structured learning environment prepared by the educator, which as defined by Montessori, is clarified as an area where everything is suitable for the child's age and growth. Obstacles to his development, such as interference and unnecessary rules, are removed. In this manner Montessori was able to aid the child's personality development and foster a sense of competence.²⁰

¹⁹. Montessori, *Childhood education*, p. 107.

²⁰. S.J. Braun, *Nursery education for disadvantaged children: An historical review*, in, *Montessori in perspective*, edited by the Publications Committee of the National Association for the Education of Young Children, Washington: NAEYC, 1966, p. 13.

In order for the child to progress adequately in deference to his human-childhood dignity, two points regarding freedom, according to Montessori, need to be considered. Firstly, the child must actively interact with his environment. This implies that the role of the educator, as the person responsible for structuring the environment, has to be addressed, an aspect which is discussed in more detail in paragraph 3.3.1.2. Secondly, the child must be given adequate freedom to evolve his own development in a carefully structured environment. If either of these two conditions is not met and addressed, the psychic life of the child will be in jeopardy and he will not reach his potential development, and the growth of the child's personality will be stunted.²¹ These two salient aspects pertaining to Montessori's concept of liberty, namely the child's encountering relationship with the environment, and the person of the educator, will therefore be considered under the next two subheadings.

3.3.1.1 Interaction with the environment

According to Montessori, as quoted by Orem²², the prepared environment contains the necessities for a sound psychological climate, and engenders forces important to the maturation of the child as he interacts with it. Thus, by preparing a "free" environment, an environment suited to the natural potential of the child's psyche at a particular stage of development, the

²¹. Lillard, *Montessori - a modern approach*, p. 30.

²². R.C. Orem (ed.), *A Montessori handbook*, New York: G.P. Putnam's Sons, 1965, p. 72.

hidden, unknown, possibility [potential] of the child, should come about spontaneously. The environment is furthermore designed to exclude distractions and offer opportunities for constructive work.

With this idealistic situation in mind, the value of education, according to Montessori, is founded on the underlying principle that education is a natural process, spontaneously carried out by the educand and is acquired by experiences upon the environment, rather than on the traditional scholastic view of listening to words.²³ Montessori felt that in the formative pre-school years the child has, what she refers to, as sensitive periods²⁴ during which time he is particularly receptive to certain stimuli in the environment. These sensitive periods must be taken cognisance of and "built in" to the classroom environment.

The classroom, as the prepared environment, is therefore functionally arranged for the child to develop freely. The room itself and all the furniture in it is proportional to the child's size. His coat is hung on a low hook and the materials are arranged on shelves that are easily accessible to the child.²⁵ There are several other shelves which include a centre for "practical life exercises", with buckets, scrubbing brushes,

²³. *Ibid*, pp. 71-73.

²⁴. Sensitive periods are discussed in detail in paragraph 5.4.2

²⁵. L.L. Gitter, *The Montessori approach to discipline*, second edition, Pennsylvania: Mafex Associates, 1972, p. 10.

mops, brooms and equipment for polishing shoes. Other sections hold stationery and material for sensorial training²⁶. In the classroom, the teacher and the child have a definite obligation to keep the environment orderly. The use of the material in the prepared environment is, however, governed by pre-determined rules.²⁷

1. Any object [learning material] which is used by a child must be returned to its original place [by the child], in its original order, after the child has finished with it.
2. Any task, once begun must be [completed].
3. No one else may use an object [learning material] when one child is working with it.²⁸

The environment not only consists of the classroom, but also of the playground which, according to Montessori, is to be in direct communication with the schoolroom, so that the child may be free to go and come as he likes, throughout the entire day.²⁹

²⁶. See chapter 5 which deals with the training of the senses.

²⁷. Gitter, *The Montessori approach to discipline*, p. 14.

²⁸. The researcher visited a local Montessori primary school and the following rules appeared on the wall:

1. A place for everything and everything in its place.
2. I may never disturb a child or an adult.
3. I may never hurt a child or an adult.
4. I may never damage our materials.

²⁹. Montessori, *The Montessori method*, pp. 80-81.

Thus, Montessori prepared an environment in which the child could find himself immersed in experience and so take in what he needed in order to unfold as an integral personality.³⁰ The child is granted the necessary freedom to progress in accordance with his inner needs and urges, in an environment structured to allow him to experience order and acquire self-discipline, so that these qualities do not have to be imposed upon him from without, but rather flourish from within and become part of the child's being.³¹ In order for this to occur spontaneously a uniquely prepared teacher is required, a concept that will be discussed in the following subheading.

3.3.1.2 Liberty within the environment requires the presence of a uniquely prepared teacher.

According to Montessori the environment plays a significant role with regard to the teacher's duty. She argues:

As guardian and custodian of the environment the teacher, ... instead of being pre-occupied with the difficulties of the problem child [knows] that from the environment the cure will come.³²

Montessori affirms that through the teacher's observation of the

³⁰. Gitter, *The Montessori approach to discipline*, p. 5.

³¹. *Ibid*, p. 11.

³². M. Montessori, *Education for a new world*, India: Kalakshetra Publications, 1959, p. 87.

child, problems arising from interaction in the environment will solve themselves. This principle is confirmed in the following declaration by Montessori:

... faults can be made to disappear without the need of preaching, punishment or even setting a good example by the adult. Neither threats nor promises are needed, but conditions of life.³³

The educator as co-ordinator also has a dynamic role to play, namely that of a keen observer. The question, however, arises as to the necessity of observation and the role of the teacher if the problems self-dissipate through interaction within the prepared environment. According to Montessori, in order for the environment to provide the conditions of life suitable to render the means for achieving success, educators need to penetrate "the secret of childhood" which is assumed means that the educator has to know the latent potential of the child, as well as the nature of each individual child intimately. It is assumed that this is done through observation, as Montessori records:

... she [the educator] must become a passive, much more than an active, influence, and her passivity shall be composed of anxious scientific curiosity, and of absolute respect for the phenomenon which she wishes to observe.³⁴

³³. *Ibid*, p. 78.

³⁴. Montessori, *The Montessori method*, p. 87.

Montessori affirms that the Montessorian teacher will have a knowledge of the child far superior to that of the ordinary teacher, who, according to Montessori, becomes acquainted only with the superficial facts of the child's life.³⁵ This is precisely the reason why Montessori believes that a teacher of a "higher order" needs to be involved in teaching Montessorian ideals. On this point she contends that an ordinary teacher cannot be transformed into a Montessori teacher, but "must be created anew, having rid herself of pedagogical prejudices."³⁶

Furthermore, a Montessori trained teacher is not the "boss" nor is she the "mother". She metes out neither praise nor criticism³⁷, and she uses a minimum of verbalization. She is called the "directress"³⁸, or the one who directs the activities. She is there to help the child establish a relationship with his environment through the use of carefully selected educational materials.³⁹ The teacher's first duty, according to Montessori, is therefore, to watch over the environment, and this takes precedence over all other matters:

³⁵. Montessori, *Education for a new world*, p. 89.

³⁶. Ibid, p. 86.

³⁷. See paragraph 3.3.3.2 which deals with praise and reward.

³⁸. Originally spelt directrice.

³⁹. Gitter, *The Montessori approach to discipline*, p. 15.

The teacher's role and its techniques are analogous to those of the valet: they are to serve, and to serve well.⁴⁰

Should the child fail to respond fully according to the original directive, (structured learning experience) the teacher must realize that the child is not ready to progress to a higher level of development.

Furthermore, in conjunction with previous statements on the teacher being "created anew and stripped of pedagogical prejudice", Montessori indicates how the teacher should appear in order for the child to learn:

The teacher, as part of the environment, must herself be attractive, preferably young and beautiful, charmingly dressed, scented with cleanliness, happy and graciously dignified.⁴¹

The reason for this, according to Montessori, is that the child is a tender person to whom the teacher owes understanding and respect. Furthermore, the child should pay her the compliment of thinking her as beautiful as his mother, who is naturally his

⁴⁰. M. Montessori, *The absorbent mind*, Wheaton: Theosophical Press, 1964, pp. 277-281.

⁴¹. Montessori, *Education for a new world*, p. 87.

ideal of beauty.⁴² In addition to the appealing characteristics required of the teacher she also confirms:

It is not necessary for the adult [educator] to be a guide or a mentor in conduct, but to give the child opportunities of work that have been hitherto denied.⁴³

The child's encountering relationship with his teacher, however, needs to be discussed in conjunction with the following point under the heading of orderliness within the prepared environment, namely that of absence of interference on the part of the teacher. It is evident from the research undertaken that Montessori ascribes great importance to this particular aspect, devoting a major portion of her writings to clarifying her reasons for non-interference as an essential criterion for the liberty of the child.⁴⁴

3.3.2 Liberty, according to Montessori, implies the absence of interference with the process of development.

The second principle adhered to by Montessori in relation to the principle of liberty, implies the absence of interference with

⁴². *Ibid.*

⁴³. *Ibid*, p. 79. See also Lillard, Montessori - a modern approach, p. 53.

⁴⁴. *Ibid*, p. 88.

the process of the child's development.⁴⁵ This absence of interference must be seen in conjunction with the child's individuality, an aspect discussed in chapter four.⁴⁶

According to Montessori, social restraints and coercions of any kind, prevent the child from full development. The child is given as much freedom to work out his own social relations with other children as possible. Montessori felt that, for the most part, children like to solve their social problems, and that adults cause harm by too early and frequent interference.⁴⁷ The concept of freedom as advocated by Montessori is clarified by stipulating that the child should be allowed, even encouraged, to act without the least restriction, so long as his actions do not interfere with the like freedom on the part of others.⁴⁸

With the premise of non-interference as a starting point, it follows naturally, according to Montessori, that the less the learner is interfered with by arbitrary restraint and vexatious unnecessary rules, the more likely, quickly, and spontaneously he will learn. Montessori asserts that the educator often intervenes unnecessarily and therefore she becomes the greatest obstacle to the spontaneous development of the child. With reference to the role of the teacher, Montessori states that the

⁴⁵. *Ibid.*

⁴⁶. See paragraph 4.3.5

⁴⁷. Lillard, *Montessori - a modern approach*, p. 55.

⁴⁸. Boyd, *From Locke to Montessori*, p. 214. See also Montessori, *The Montessori method*, p. 87.

teacher's task is to show the way to perfection, "providing the means and removing the obstacles, beginning with herself. For she may be the greatest obstacle of all."⁴⁹

The freedom thus advocated is an inner freedom, which means that growth must come from a voluntary action on the part of the child himself. This ironically, does not totally exclude adult guidance, for Montessori adds that useless or dangerous acts must be suppressed or destroyed, thus implying adult intervention only when critically necessary.⁵⁰

Montessori, however, insisted that when adults interfere in the child's spontaneous development they nearly always make mistakes. The child is confronted with problems at every step and it gives him great pleasure to face them. He feels irritated if adults intervene, yet he finds a way if left to himself.⁵¹ According to Montessori, the teacher must withdraw totally from the situation once she has structured the environment:

... the teacher withdraws into the background,
and must be very careful not to interfere - absolutely

⁴⁹. M. Montessori, *On discipline - reflections and advice*, Translated by Sheila Radice, in Gitter, *The Montessori approach to discipline*, second edition, Pennsylvania: Mafex Associates, 1972, p. 21.

⁵⁰. Montessori, *The Montessori method*, pp. 87-88.

⁵¹. Montessori, *The absorbent mind*, pp. 223-224.

not, in any way.⁵²

Teachers not familiar with Montessori's views are, according to Montessori, liable to harm the educational situation rather than assist it. With regard to help and praise, Montessori considers such praise to be synonymous with interference:

Mistakes are often made here, as for instance by uttering an encouraging "Good", in passing a hitherto naughty child, who at last is concentrating on some work. Such well-meant praise is enough to do damage; the child will not look at work again for weeks.⁵³

The child is thus free to choose his activities in a carefully prepared environment. This implies a higher activity, namely that of auto-education⁵⁴ accompanied by cautious observation and absolutely no interference on the part of the teacher. Montessori uses the following example to ratify this conclusion;

A child who is lifting something too heavy for him does not want help; even for him to see the teacher

⁵². Montessori, *Education for a new world*, p. 88. See also E.M. Standing, *Maria Montessori: Her life and work*, pp. 291-292.

⁵³. *Ibid.* See paragraph 3.4.4 which denotes a definite contradiction with regard to Montessori's views on reward.

⁵⁴. See paragraph 5.4.3.1 (a) which deals with auto-education.

looking at him is often enough to stop him working.⁵⁵

Montessori, however, does not elucidate how the child is to solve the problem of lifting something too heavy for him, without receiving bodily harm or experiencing physical failure. Montessori ironically affirms, however, that by solving the problem himself the child becomes involved in making choices of a higher nature than he would in a normal classroom situation. This higher activity means leaving the child entirely, so that he can continue undisturbed in his spontaneous activity, thereby allowing him to be involved autonomously. She further contends:

Even if two children want the same material, they should be left to settle the problem for themselves unless they call for the teacher's aid.⁵⁶

Based on the principle that the child must acquire the desire and capacity to obtain knowledge in an environment of freedom, it is imperative that as much opportunity as possible for the exercise of his own initiative and invention be granted. It therefore follows logically that the child must be totally involved in the learning process and that the educator must refrain from any kind of assistance. Once again Montessori is decided on this point:

... if the child is in some difficulty, the teacher must

⁵⁵. Montessori, *Education for a new world*, p. 88.

⁵⁶. *Ibid.*

not show him how to get over it, or the child loses interest ...⁵⁷

Montessori argues that in order to present this type of freedom, it is precisely necessary that nobody should interfere with, or obstruct, the constructive spontaneous activity of the child in an environment so prepared, so that his needs for development could find satisfaction.

Although there are obvious contradictions made by Montessori,⁵⁸ regarding the principle of non-interference, she does attempt to "clarify" her position by suggesting that even the teachers may have misunderstood her viewpoint:

I saw children with their feet on the tables, or with their fingers in their noses, and no intervention was made to correct them. I saw others push their companions, and I saw dawn in the faces of these an expression of violence; and not the slightest attention on the part of the teacher. Then I had to intervene to show with what absolute rigour it is necessary to hinder, and little by little suppress, all those things which we must not do ...⁵⁹

⁵⁷. *Ibid.* See also E.M. Standing, *Maria Montessori: Her life and work*, pp. 291-292.

⁵⁸. See paragraph 3.4.3 which deals critically with Montessori's viewpoints regarding non-interference.

⁵⁹. Montessori, *The Montessori method*, p. 93.

It may thus be deduced that Montessori ascribed to the fact that the child must be left free in his activities and in all actions which are not of a disturbing kind. She most probably meant that disorderly conduct must be eliminated while any action that is orderly must be permitted in order to allow the most complete liberty for development.⁶⁰

In discussing the most essential aspects of non-intervention, the concepts of obedience and discipline were implied. These principle concepts as viewed by Montessori now need to be discussed in greater detail in order to determine their relationship to the liberty of the child.

3.3.3 The concepts discipline and obedience as viewed by Montessori and their relation to the liberty of the child

The Longman Family Dictionary defines discipline as, "the training in obedience and self-control, through instruction and exercise". In addition to this qualification, discipline is further defined as, "the punishing or penalising for the sake of control".⁶¹ It is a well known axiom of thought, that discipline is not synonymous with punishment, nor is coercion or compulsion to be equated with discipline. True discipline is rather a form of self-control.

⁶⁰. Orem (ed.), *A Montessori handbook*, p. 159.

⁶¹. *Longman Family Dictionary*, London: Chancellor Press, p. 192.

Cordier⁶² (1479-1564), the famous French educator of the sixteenth century, conveyed an accurate definition of discipline when he described it as "endeavouring to train children to become self-reliant ... obeying an inner law of their own. Montessori was also of the opinion that the only true discipline is "inner discipline", which is developed by the child himself as he spontaneously interacts with the objects in his environment.

According to the Longman Family Dictionary, obedience is defined as "doing what one is told - dutifulness, that is, to be submissive to the will or authority of a superior."⁶³ Obedience is, however, not total submission to the will of the adult educator, but rather inherent on a deep respect obtained by the child-enroute to adulthood putting his trust in the adult-educator.⁶⁴

3.3.3.1 Discipline and obedience must come through liberty

According to Montessori, the point of departure with regard to an authentic view of discipline is the ability of the child to discern between good and evil. The task of the educator lies in seeing that the child does not confound good with immobility, and evil with activity, as often happens, according to Montessori,

⁶². W.H. Woodward, *Vittorino de Feltre and other humanist educators*, p. 162.

⁶³. *Longman's Family Dictionary*, p. 467.

⁶⁴. J.L. Du Plooy, G.A.J. Griessel and M.O. Oberholzer, *Fundamental Pedagogics for advanced students*, Pretoria: Haum, 1987, pp. 95-106.

in the traditional classroom situation.⁶⁵ The child's first teacher, therefore, as determined by Montessori, will be the child's psyche [conscience] or rather the vital urge as directed by the cosmic laws that lead him unconsciously towards acting properly.⁶⁶ This ultimately leads to the fusing together of discipline, as an inner urge, with obedience and freedom.⁶⁷

According to Montessori, discipline is equated to the child's innate capacity for self-control. Words therefore such as compulsion, coercion, punishment and such-like terminology are limited in Montessorian theory, which she argues are adult orientated. Acquiring real self-control is difficult, and not simply the valueless compulsory obedience to external force or persuasion, so often evident in the traditional view of education. Montessori argues:

If a child is not yet master of his actions, if he cannot obey even his own will, so much the less can he obey the will of someone else.⁶⁸

Fisher defends Montessori's viewpoint with regard to obedience and its relationship to the child:

⁶⁵. Montessori, *The Montessori method*, p. 93.

⁶⁶. Montessori, *Childhood education*, pp. 21-22.

⁶⁷. *Ibid*, p. 39. In the Children's House founded by Montessori, the most amazing feature was the orderliness and quietness maintained by the small children. There was an anxiousness to obey - a social harmony and everything happened spontaneously.

⁶⁸. Montessori, *The absorbent mind*, p. 276.

The [educator] should make the most careful distinction between the conscious wilful action of a child, and the sort of wild irritability which results in "naughty" actions, but which is the result itself of nervous fatigue, due to injudicious treatment.⁶⁹

The development of the will is a slow process that evolves through a continuous activity in relationship with the environment.⁷⁰ Montessori is not merely referring to the blind obedience that has been so much a part of our contemporary culture and which has been the cause of so much terror in the classroom, but as a natural characteristic of the human being and as the final development of the will in an evolutionary manner. Obedience, therefore, occurs as a final stage in the development of the will.⁷¹

Essentially then, according to Montessori, no child should be forced to obey a whim of the adult-educator. Rather, to further the culmination of self-manifestation of norms which he will need to obey when he is grown up, he must naturally and spontaneously respond as propriety demands. Primarily then, the child will only obey a command because the command is a reasonable, logical one,

⁶⁹. D.C. Fisher, *The Montessori manual for teachers and parents*, Massachusetts: Robert Bentley, p. 113.

⁷⁰. Montessori, *The absorbent mind*, pp. 252-254.

⁷¹. Lillard, *Montessori - a modern approach*, pp. 42-44.

which his reason tells him, is necessary to obey.⁷²

Arguing along the same lines, Montessori contends that the will of the child is seriously hampered by the artificial induction of a system of reward. According to Montessori, a system of reward interferes with the self discipline of the child, and therefore warrants addressing within the scope of its relation to discipline and obedience.

3.3.3.2 Punishment and reward and their relation to discipline and obedience

Following the ideas of Rousseau,⁷³ Montessori believed that punishment was not necessary and that nature itself would inevitably provide the necessary punishment.⁷⁴ In order not to interfere with the child's free choice of activity, there are, therefore, according to Montessori, no artificially induced competitions, rewards or punishments in the prepared environment, for these lead to a discipline dependent on outside factors, rather than on the internal, natural tendencies of the child. Montessori therefore argues that prizes and rewards interfere with the child's free choice of activity by artificially inducing motivation. Montessori argues that a system of

⁷². D.C. Fisher, *The Montessori manual for teachers and parents*, Massachusetts: Robert Bentley, 1964, p. 109.

⁷³. University of South Africa, Department of History of Education, *History of Education: tutorial letter 104/1991 for EDU201-p*, Pretoria, 1991.

⁷⁴. Montessori, *The Montessori method*, pp. 103-106.

reward is only "another prop approved of by science and offered to the support of the decadent school. Such prizes are the instrument of slavery for the spirit. The prize and the punishment are incentives towards unnatural or forced effort and therefore [one] certainly cannot speak of the natural development of the child in connection with them."⁷⁵

Again Montessori adamantly argues that rewards and threats are aids to the teacher who fails to channel the attention and directive of the child and is indicative of a pupil who becomes dependent on outside factors, rather than on the latent power (ability) within him.

3.4 FUNDAMENTAL AND CRITICAL EVALUATION OF MONTESSORI'S VIEWS REGARDING THE LIBERTY OF THE CHILD AND THEIR FEASIBILITY IN THE PRIMARY SCHOOL SITUATION.

Having discussed Montessori's views regarding the liberty of the child and related aspects, an attempt will be made in the evaluation that follows, to determine the validity that her theory regarding the liberty of the child holds in terms of authentic educational practice. Aspects and principles related to the liberty of the child are thereby brought into focus against the total phenomenon under investigation, namely, the feasibility of applying aspects of Montessorian education, regarding liberty, in the primary school situation. The salient aspects related to the liberty of the child, namely that of "orderliness", liberty

⁷⁵. *Ibid*, p. 21.

of movement within a structured environment, the role of the teacher and discipline as well as non-interference on the part of the educator, will be discussed in order to determine whether they will contribute to a more meaningful and authentic primary school situation.

3.4.1 An evaluation of Montessori's views regarding a natural "orderliness" in children

As previously outlined by Montessori, the sensitive period for order is from one year of age to about three and a half years of age, when the child is orientating himself to his environment and acquiring a more definite sense of order.⁷⁶ Clearly, Montessori made a definite distinction between the child's love of order and consistency and the adult's traditional, overbearing satisfaction of having everything in place.⁷⁷ The child's love of order is based on a vital need for an organized environment in which he can constitute his world.⁷⁸ While Montessori is correct in her assumption that the child yearns for order in his life,⁷⁹ it could be argued that Montessori places such a great deal of emphasis on natural orderliness, that it in fact inhibits the true attainment of accountable liberty of the child which implies the accompanying role of the adult-educator. Although Montessori's idea of an organised environment is a dynamic

⁷⁶. See paragraph 3.3

⁷⁷. Lillard, *Montessori - a modern approach*, p. 33.

⁷⁸. See paragraph 3.3

⁷⁹. See paragraph 3.3

concept, it is unduly marred by her own limitations, by which order is enforced through rules⁸⁰ thus contradicting her ideas on the liberty of the child.

Schechter⁸¹, professor of child psychiatry at the University of Oklahoma, argues that it is contradictory to subscribe to an orderly environment whilst the child is permitted free choice of materials. Critical sentiments are also shared by Kilpatrick,⁸² who states that a limitation of opportunity (which is reflected by Montessori's views that specific exercises had to be conducted with specific material) is, in effect, nothing less than repression. Furthermore, according to Schechter⁸³, order is only possible because of the firmness of the rules dealing with the use of the didactic materials, as well as the emphasis on the need to respect the rights of other members of the group, which implies definite disciplinary measures, an aspect discussed in paragraph 3.4.4

It could be argued that a too intensely structured environment, such as is often encountered in the Montessori classroom, becomes

⁸⁰. See paragraph 3.3.1.1

⁸¹. M.D. Schechter, *Montessori and the child's natural development*, in, K. Edelson and R.C. Orem (editors), *The Children's House parent-teacher guide to Montessori*, New York: G.P. Putnam's Sons, 1970, p. 78.

⁸². W.H. Kilpatrick, *Montessori examined*, London: Constable and Company, 1915, pp. 44-45.

⁸³. Schechter, *Montessori and the child's natural development*, in, Edelson and Orem, (editors), *The Children's House parent-teacher guide to Montessori*, p. 78.

unduly restrictive and presents little opportunity for self-expression, allowing a feeling of repression to prevail in the environment.⁸⁴ This would imply that the need for order experienced by the child is, in fact, met by the inculcation of an unnatural order which is not characteristic of everyday life.

However, if the child is given definite boundaries for liberty of movement and opportunities are created for the orderly structuring of his own creative activities, the ordered environment becomes a springboard for the development of the child in all areas of development. Erikson,⁸⁵ agrees with Montessori that if the environment either at home or at school is not controlled and orderly, the instinctual urges of the child tend to prevail, with chaos resulting instead of the desired control of energies for productive use. Furthermore, according to Erikson, the child plays best and learns more easily when there is something organised, clear-cut and definite in which he can be involved without being as unduly restrictive as is often encountered in the Montessori classroom. Lillard⁸⁶ argues that the teacher must find the flexibility she needs to maintain the order in the classroom, without creating a static environment.

⁸⁴. Kilpatrick, *Montessori examined*, pp. 44-45.

⁸⁵. E. Erikson as quoted in, Schechter, *Montessori and the child's natural development*, in, Edelson and Orem, (editors), *The Children's House parent-teacher guide to Montessori*, p. 78.

⁸⁶. Lillard, *Montessori - a modern approach*, p. 57.

3.4.1.1 The feasibility of subscribing to a natural "orderliness" as defined by Montessori in the primary school situation.

The view taken by this researcher is that there is definite validity in the concept of establishing "orderliness" within a prepared environment, especially if one accepts that an orderly environment would result in the desire to function within well-ordered surroundings. Orderly conduct, however, even in a structured environment, does not come "automatically", as the latter is also an outcome of adult intervention. If this had not been the case, prominent educationalists like Kilian, and Du Plooy, would not have emphasised it.⁸⁷

Because not all children would have had the advantageous opportunity of benefitting from well-ordered exercises related to the use of didactic material which certainly helps inculcate orderly conduct in the first four years of their life in a Montessorian school, or a well-structured pre-school, the primary school will need to take the responsibility of inculcating orderliness in the life of the child, especially since many of the children entering the educative system for the first time come from an environment where they were unaccustomed to their true needs being consciously structured to inculcate orderly conduct. It has to be accentuated, however, that the adult-

⁸⁷. See J.L. Du Plooy and C.J.G. Kilian, *Introduction to Fundamental Pedagogics*, second revised edition, Pretoria: Haum, 1984, pp. 83-84.

educator must take definite responsibility for the establishing of orderly conduct within the orderly structured environment - the educator's educational intentional interference is crucial in assisting the child adhere to what is propitious, and in so doing meeting the child's needs for order.⁸⁸

The alert primary school teacher will, taking cognisance of Montessori's theory, find it necessary to rearrange the classroom environment continually to keep it a friendly, albeit ordered place, thereby building not only the child's intelligence, but also his trust in, and acceptance of an orderly environment. In this manner the educator has to help the child experience the environment as a meaningful place, and must attempt to structure the environment in such a way that it meets the varied needs of each individual child. In addition, as mentioned, the child, also needs order emanating from the active interference from the educator. If this was not the case, the educator's role might as well be reduced to that of the overseer who hardly makes contact with the child.

The educational implications are obvious; the aspects of orderliness have to be actively initiated (by means of personal contact) in the home, and continued in the nursery schools and even in the early phases of primary school, so that the order structure is authentically developed. Applied logically, order and structure must be reflected in all aspects of the child's life, including that of personal relationships with adults. The

⁸⁸. *Ibid.*

home must be so structured that it is conducive to the total unfolding of the child. In addition to the child being taught to replace toys, to make up beds and to ensure that the home environment is kept orderly, so as to aid the development of the order structure within the child in the formative years, with specific implications for the child's entrance into the primary school situation, the child needs to learn to accept active adult assistance and even accountable adult interference.⁸⁹

Without following a speculative line of thought, the logical assumption is that future class sizes will increase in number, suggesting that the principle of orderliness within a prepared environment, as advocated by Montessori, is most certainly a prerequisite for successful teaching and the classroom will thus need to be more functionally structured if all pupils are to benefit from it. The child must know where to find learning materials and these materials must be grouped, where applicable, in order of difficulty. The child must be given greater liberty to participate in self-discovery activities within an environment so prepared that all pupils can profit from it. Furthermore, the child must be instructed in how to return the learning material in an orderly manner so that other children could also benefit from its use. The environment, however, cannot replace the active "interfering" role of the educator who needs to help the child, not only to interact with his environment, but also to accept

⁸⁹. Du Plooy, Griessel and Oberholzer, *Fundamental Pedagogics for advanced students*, p. 94.

reasonable orders (reflecting society's norms) from the adult.⁹⁰

3.4.2 An evaluation of Montessori's views regarding liberty of movement within a prepared environment

Although Montessori propounded most emphatically that the onus lay inescapably on the educator to structure, with utmost sensitivity, the environment so that it would promote self-development. Sadly, Montessori fails to realise that often the activities within the child's environment (what Montessori terms "natural manifestations") need to be guided and put into their proper perspective by the adult educator. Furthermore, Montessori's views often appear to be inconsistent with the total liberty that she so eloquently advocates.

Kilpatrick⁹¹ suggests that the underlying problem which Montessori's views of liberty of movement within a prepared environment poses, is that of the degree to which the child shall, by his own choice, determine his activities at school, as opposed to the teacher "deciding"⁹² on the activity in accordance with a prevailing sensitive period. Furthermore,

⁹⁰. *Ibid*, p. 182.

⁹¹. Kilpatrick, *Montessori examined*, p. 23.

⁹². At one of the Montessori schools that the researcher visited (pre-primary and primary), the directress assigned each child didactic apparatus that she felt was most suited to the needs of the child.

Montessori's suggestion that cures will come from the environment can rather be understood to mean that the cure will come as a result of the educator structuring the environment in such a way so as to allow the child the liberty to discover the solution for himself. While Montessori tells us that the child himself is the final arbiter as to which material is suitable, Fynne,⁹³ argues that Montessori's limited variety and choice of material suggests that an artificial environment is structured that does not give the child true liberty of movement or the chance to make real independent choices.

In a broader sense, the carefully prepared Montessori environment, (although, as pointed out is often contradictory to her own definition of liberty) could be regarded as a beneficial concept for the education of the child in the formative years extending into the primary school and is considered by many educationalists to be one of the main merits of the Montessorian philosophy. For example, Du Plooy⁹⁴, feels that the educator must give the child opportunities to determine his relationship in the environment by entrusting certain duties (activities) to him and by structuring the learning material most suitable for his present needs. Du Plooy⁹⁵ further contends that in allowing this the educator gives the child a chance to act freely and then he can cherish

⁹³. R.J. Fynne, *Montessori and her inspirers*, London: Longman's Green and Company, 1924, pp. 329-330.

⁹⁴. Du Plooy, Griessel and Oberholzer, *Fundamental Pedagogics for advanced students*, pp. 73-83.

⁹⁵. *Ibid*, pp. 73-83.

the expectation that the child will orient himself in the environment through constituting it as his home. The experiences that he encounters will affect him for the rest of his life as they will constitute part of his inner being.

Having presented a basic evaluation on liberty of movement within a prepared environment, the researcher desires to direct the reader to the paragraphs that evaluate further aspects that are inescapably linked to the liberty of movement the child within a prepared environment, namely that of non-intervention on the part of the educator,⁹⁶ the role of the teacher⁹⁷ and discipline and obedience.⁹⁸

3.4.2.1 The feasibility of applying liberty of movement within a prepared environment in the primary school situation

The overemphasis placed on freedom of movement by Montessori, (which, if carefully analysed, is restricted as her apparatus allows only predetermined activities) is in juxtaposition to our modern day schools all of which stand in marked contrast to the Montessori way of the child actively engaging in self-discovery activities.⁹⁹ A balance between the overemphasis of liberty of movement, which is often encountered in Montessorian theory and

⁹⁶. See paragraph 3.3.2

⁹⁷. See paragraph 3.3.1.2

⁹⁸. See paragraph 3.3.3

⁹⁹. See paragraph 5.4.3

the restrictive nature of present day education that limit the time spent on exploration through a system of education ruled by bells, age variations, limits to the length of time spent on projects, and deadlines, is therefore required to meet the requirements for authentic educational practice. The Montessorian environment, which is designed for the child to move in, allows the child to enjoy experiences, and is geared to his level providing built-in opportunities for the tactile experiencing of knowledge¹⁰⁰ and is characterised by inherent excitement on the part of the child, needs to be considered as essential by the contemporary primary school educator.

Such liberty of movement is, however, not entirely feasible in the primary school situation. While class teachers in the lower standards of the senior primary school are in an advantageous position to permit greater freedom of movement, as they keep their own class the entire day, the academic nature of the senior primary situation calls for a somewhat more passive learning situation.

Be that as it may, teachers, taking into consideration the length of time needed to complete general classwork and organising the environment through the implementation of programmed instruction or self-discovery activities in an environment that is specifically structured to meet the needs of each individual child, should give the child the liberty of moving between

¹⁰⁰. R.C. Orem (ed.), *Montessori: Her method and the movement - what you need to know*, New York: Capricorn Books, G.P. Putnam's Sons, 1974, p. 95.

activities within the classroom, or even structured activities within the media centre. Because dealing with diverse, goal-directed activities is generally demanded by society at large they should feature more prominently in primary school education. Opportunities need to be created for the child to move from formal general classwork to activities geared to meet specific needs involving didactic apparatus and learning games. In an attempt to provide the primary school child with such an environment, learning corners should be structured to provide the child with the opportunity of using as wide a range of didactic material as possible, all structured around the relevant theme.

Once the normal work in the class has been completed the child should be granted the necessary freedom of movement to select an activity that firstly attracts his attention, and gives him the opportunity to learn through programmed instruction and auto-education.¹⁰¹ The child will thus be motivated by the excitement that self-discovery brings. In this way the child takes definite

¹⁰¹. See paragraph 5.4.3.1 (a)

responsibility for his own learning after the normal lesson has been completed.¹⁰² Children with learning difficulties can be assigned specific activities in order to remedy their existing learning inhibition.

Because this liberty of movement is "controlled" by the creative teacher, an effective educational learning environment can be maintained in which the child becomes free to enter into numerous and varied relationships with didactic apparatus and material geared to impart a specific learning skill. The child is thus afforded ample opportunities, encouragement, and incentive to being built in totality. Furthermore, teachers should take care to ensure that movement within the environment presents optimum conditions for the child's physical, emotional, intellectual, and social development.¹⁰³

Primary school classrooms, both in the junior primary phase as well as the senior phase, therefore need to be designed so that the child can absorb experiences from the prepared environment. Given the present political situation which is characterised by an influx of children suffering from learning difficulties, the

¹⁰². The Children's centre of New Jersey is one of many schools that offer an environment containing activities for all the aspects of the child's development. The schools offer a similar sort of arrangement as outlined by the researcher whereby the environment is so structured as to include a rich array of materials for children between the ages of two and twelve. See, Orem (ed.), *Montessori: Her method and the movement - what you need to know*, p. 111.

¹⁰³. Orem (ed.), *Montessori, The method and the movement - what you need to know*, p. 110.

contemporary primary school can play a leading role in providing educational conditions that will be conducive to effective learning by structuring an environment that is specifically adapted to the life of the child that is in need of assistance and which will also satisfy the creative impulses that tend to realise human potential.¹⁰⁴

Montessori's viewpoint concerning liberty of movement within the prepared environment has definite merit for the primary school situation especially if care is taken to ensure that the problems embodied in the subject matter that is being taught emanate from the child's own environment, reflecting normal, everyday functional life. According to Duminy¹⁰⁵, the closer the primary school can come to life itself, the better the chances are for the work done by the school to become more functional in the life of the child.

3.4.3 An evaluation of Montessori's views regarding non-intervention

Freedom of action, as defined by Montessori, is facilitated by the absence of interference on behalf of the adult, in the individual child's development. By identifying liberty with non-interference, Boyd¹⁰⁶ argues that Montessori contrives to give

¹⁰⁴. Montessori, *Childhood education*, p. 100.

¹⁰⁵. Duminy and Sohngé, *Didactics: Theory and practice*, p. 47.

¹⁰⁶. Boyd, *From Locke to Montessori*, pp. 215-218.

the idea of liberty a more positive grounding. She inauthentically assumes the child to be free because he is self-sufficient and therefore claims that he does not need the help of the adult educator in his journey to adulthood, which in effect negates the authority of the educator.¹⁰⁷

Based on the preceding statement, it could also be argued that non-interference implies non-disciplining in order to promote self-discovery. On the one hand the adult-educator, (the bearer of authority) according to Montessori, becomes redundant and takes on the role of observer, in the place of educator or guide. Thus no guidance or help emanates from the adult-educator to the child. This lack of recognition of the adult educator has direct relevance to later years when the child is involved in more formal education and finds it hard to accept the authority of the adult educator.¹⁰⁸ On the other hand it could be stipulated that Montessori lacks clarity in her definition of non-interference and that this lack of understanding was found to exist in the educational practice of her observer-teachers.¹⁰⁹ This is borne out by her statement that observers perhaps misunderstood her, by allowing the pupils to do precisely as they liked. It is this very ambiguity that often renders a lack of clarity to her approach, for firstly she insists that there must be absolutely no interference on the part of the educator; absolutely not in

¹⁰⁷. Montessori, *Education for a new world*, p. 88.

¹⁰⁸. Personal interview with Mrs R. Coetzee, head of department, junior primary phase, Glenstantia Primary School, 6 June 1994.

¹⁰⁹. See paragraph 3.2.2

any way¹¹⁰, while later she states:

It is of course understood that here we do not speak of useless or dangerous acts, for these must be suppressed, destroyed.¹¹¹

Another quote showing evidence that Montessori was aware of the danger of non-intervention reads as follows:

[Any] foolish act multiplies itself in a group of children, perhaps even throughout the class. This sort of gregariousness leads to a collective disorder, the antithesis of social life which is made up of work and good order. Imitativeness propagates and exalts, among the crowd, the defects of one: it is the point of least resistance where degeneration begins.¹¹²

On this point Boyd¹¹³ argues that the sentiment of such exceptions is quite unimpeachable, but surely lays her open to the charge of crushing out innate tendencies of the child in opposition to her definition of liberty. With this premise in

¹¹⁰. Montessori, *Education for a new world*, p. 88. See also footnote 55.

¹¹¹. Montessori, *The Montessori method*, pp. 87-88.

¹¹². Montessori, *On discipline - reflections and advice*, in, Gitter, *The Montessori approach to discipline*, pp. 25-26.

¹¹³. Boyd, *From Locke to Montessori*, pp. 213-216.

mind, Boyd¹¹⁴ argues that guidance and prohibition play as large a part in the Montessori system as in any other system, but because it is carefully concealed from the pupils, Montessori attempts to negate its influence. The suppressing of any spontaneous activity surely implies both discipline and intervention in the child's natural actions, which is in contradiction to her definition of liberty. It is therefore very difficult to form firm definite conclusions as to what Montessori actually had in mind with regard to non-intervention, for one is constantly confronted with ambiguities. Montessori herself declares that "once a direction is given to them (regarding their work), then the child's movements are geared towards a definite end, so that he himself grows quiet and contented ..."¹¹⁵ The means of applying direction is in itself pedagogic assistance, which Montessori very often states is not to be given.¹¹⁶

There is no need to dwell further on these ambiguities, except to state categorically that if interference by the educator assists with the progress of the child on grounds of social acceptance and educability, then surely such intervention could be construed as valuable and beneficial to the child.¹¹⁷ Such

¹¹⁴. *Ibid*, p. 222.

¹¹⁵. M. Montessori, *Dr. Montessori's own handbook*, U.S.A: Robert Bentley, 1964, p. 21.

¹¹⁶. See paragraph 3.3.2

¹¹⁷. The researcher visited a local Montessori School (primary and pre-primary) and noted on several occasions that the directress intervened to assist children working with apparatus, which Montessori would never have permitted.

thought could be founded purely on educational grounds, where the educator as the bearer of authority must allow the child to reach out towards responsible freedom. In this light the concept "authority" is not linked to coercion or compulsion, but rather to responsible guidance as a necessary support to enable the child to choose and make responsible choices, develop responsibility towards freedom and prevent the child from misusing the freedom granted to him. In no case according to Boyd¹¹⁸, can freedom possibly suggest the absence of guidance or prohibition.

Du Plooy¹¹⁹ confirms Boyd's viewpoint by arguing that if the educand refuses to act according to certain principles, consciously or unconsciously performing or intending to perform a wrong or dangerous act, the educator has to intervene to prevent the educative purpose from being defeated. Furthermore, the security of knowing that there is a supportive adult on hand to protect, comfort and guide, forms a firm frame of reference for the child in his formative years.

Montessori's overemphasis on freedom, presents a problematic situation to modern-day educators who are hesitant to apply greater freedom in the primary school, as advocated by Montessori, for fear of the disorder that non-interference would bring. It would also construe the teacher as being merely an observer, whereas most educators regard themselves as being

¹¹⁸. Boyd, *From Locke to Montessori*, p. 222.

¹¹⁹. Du Plooy, Griessel and Oberholzer, *Fundamental Pedagogics for advanced students*, p. 103.

educators and guides to the child-en-route to adulthood.

Montessori's theory regarding non-intervention however takes on a different perspective if viewed in the light of Blessington's (headmaster of a school adhering to Montessorian principles), statement. According to Blessington¹²⁰, Montessori's ideas regarding non-intervention and aspects related to it were originally worked out for children from three to six years of age when the child is involved in egocentric activities. Blessington is of the opinion that non-intervention tapers off as the child becomes older, becoming much less detailed for the primary school years. This interpretation makes Montessori's principles much more feasible for the primary school situation.

3.4.3.1 The feasibility of Montessori's views regarding non-intervention in the primary school situation

From the exposition above it is clear that with regard to the primary school situation authority, sympathetically actualized, should not and ought not to deprive the child from the freedom to accept the demands of propriety. The primary school teacher as a professionally trained specialist, realizes that he sometimes has to resort to responsible, didactic pedagogic intervention in order to lead the child to responsible adulthood.¹²¹

¹²⁰. S. de Leon, Montessori for adolescents, in Edelson and Orem (editors), *The Children's House parent-teacher guide to Montessori*, p. 54.

¹²¹. *Ibid.*

With regard to the present formal, primary school situation which is characterised by an ever-increasing ratio between the pupils and the educator, non-intervention would prove to be a directive to chaos, and will result in an inauthentic education situation existing in the primary school classroom.

Linked to the consequences of peer group pressure non-intervention could create a climate in which little educative instruction is achieved. The alternative to total freedom would be a balance of authority governed by obedience and discipline and motivated through reward of individual success.

3.4.4 An evaluation of Montessori's views regarding discipline and obedience

On closer perusal of Montessori's theory regarding discipline and obedience, this researcher is drawn to the conclusion that some of Montessori's views regarding discipline and obedience could be construed to be in harmony with modern, pedagogically valid views on education. According to the famous twentieth century educationist Gunter, obedience is a gradual process. The child is constantly binding himself through gradual responsibility to the norms of responsible action placed on himself by himself,¹²² which as agreed by Montessori, is the freedom that allows the

¹²². C.F.G. Gunter, *Opvoedingsfilosofië - op weg na n Christelike opvoedingsfilosofie*, Stellenbosch/Grahamstown, Universiteitsuitgewers en Boekhandelaars, 1964, p. 139.

child's authentic becoming to responsible adulthood. Du Plooy¹²³ had much the same in mind when he stated that the educator acts on behalf of the child, however the moment he fails to let the child take up the responsibility that he can accept, he is no true educator any more, because he then robs the child of his own existential possibilities.

Although Smith¹²⁴, associate professor of Psychology at the State University of New York, is of the opinion that discipline carries negative connotations (as is often suggested by Montessori), he also states that it can be used to produce constructive desirable behaviour such as training and control. He is of the opinion that discipline over the centuries has become confused with punishment. Montessori inauthentically assumes that "external" discipline cannot have a positive role in the life of the child. Montessori's failure to acknowledge the necessity for external discipline in the form of restraint is often noted by teachers in the primary school situation to be stressful, especially when children used to free reign of activity in the Montessori school, are suddenly cast into the more formal and disciplined conditions of contemporary collective teaching.

While coercion, compulsion and punishment find no place in

¹²³. Du Plooy, Griessel and Oberholzer, *Fundamental Pedagogics for advanced students*, p. 181.

¹²⁴. N. Smith, *Discipline ... how and when*, in Edelson and Orem, (editors), *The Children's House parent-teacher guide to Montessori*, p. 38.

Montessorian theory and practice, Montessori's failure to acknowledge that external discipline is sometimes beneficial for the betterment of an existing situation, is regarded by this researcher to be inauthentic. Smith¹²⁵, argues that firm, but not severe correction, including encouragement of the desired behaviour, applied immediately and consistently, is usually efficacious in most cases. On Montessori's premises it is difficult to get a coherent view of the relations of the individual child with relevance to inner discipline and the outer law related to control. Montessori satisfactorily criticizes the encroachments of inner discipline often in accordance with modern views of education¹²⁶, but often fails to provide any measures to be taken to remediate a problematic situation requiring external control. This is brushed aside by Montessori, even if it is granted by her that the child's spontaneous actions ought to be ruthlessly repressed when they are contrary to social well-being, but she fails to provide criteria to be used in discriminating between those actions which are to be permitted and those which are not.

With regard to punishment, Montessori chooses to abide by the theory that all punishment is negative.¹²⁷ According to Smith¹²⁸, however, recent experimental studies reveal that even

¹²⁵. Ibid, pp. 39-40.

¹²⁶. Boyd, *From Locke to Montessori*, p. 215.

¹²⁷. See paragraph 3.3.3.2

¹²⁸. Smith, Discipline ... how and when, in Edelson and Orem, (editors), *The Children's House parent-teacher guide to Montessori*, pp. 43-44.

very mild punishment can be effective if correctly administered, especially if all other alternatives have not resulted in a constructive outcome.

With regard to praise being detrimental to the development of the child,¹²⁹ Montessori once again invalidates her theory with contradictions, for she personally declares in another of her famous works, after noting the success of a certain individual;

Then, as I always do with my little ones, I was loud in my praises.¹³⁰

Without following an intricate, speculative line of argument, it may be assumed that an inauthentic approach towards punishment and reward has been assumed by Montessori and that she holds an unrealistic viewpoint with regard to the positive value of the topic under discussion.

With regard to obedience Montessori emphatically points out that obedience is a deep-rooted instinct inherent in human nature. Obedience is therefore almost certainly an instinct latent in children. Acquiring real self-control is difficult and not the valueless compulsory obedience to external force or persuasions

¹²⁹. See paragraph 3.3.2

¹³⁰. Montessori, *The discovery of the child*, p. 278.

so traditional in nature.¹³¹ Montessori is theoretically correct that obedience cannot come from one or two violent efforts on the part of the educator. It is true that if the child's ability to explore is stifled by an overdose of strictness, he becomes the adult's echo without a will of his own, and such an obedience will never lead to normal self-reliance¹³². Contrary to Montessori's educational theory, it has to be borne in mind that the child must acquire obedience with the guidance of the educator, who through his wealth of experience is able to assist the child to make the correct decisions. The child therefore is not necessarily obedient "because the instruction is a reasonable one, which his reason tells him it is necessary to obey", but rather because the child knows that it will be in his best interest to obey the instruction because the adult himself has experienced it in his life.¹³³ Obedience, therefore, cannot be viewed as "true obedience" if obedience to the adult-educator is negated.

¹³¹. See Lillard, *Montessori - a modern approach*, pp. 42-43.

¹³². Du Plooy, Griessel and Oberholzer, *Fundamental Pedagogics for advanced students*, p. 181.

¹³³. Fisher, *The Montessori manual for teachers and parents*, p. 109.

3.4.4.1 The feasibility of applying Montessori's views regarding discipline and obedience in the primary school situation

This researcher interprets the sentiments of Montessori in that he believes that far too many of our primary schools are guilty of not allowing children to think for themselves. Children are forced to submit to an unimaginative curriculum in an environment where the teacher makes all the decisions through strict disciplinary measures. This highly prescriptive infrastructure is probably the obvious reason why so many children are ill-prepared for life. Happily though, this researcher perceives that conditions have improved remarkably over the past twenty years.

It therefore appears from the above investigation that certain aspects of Montessorian philosophy regarding discipline and obedience, namely that of a reduction in prescriptive and harsh actions regarding disciplinary measures, as well as the creation of opportunities for greater self-expression, have decided merit for the primary school situation in furthering self-discipline. Discipline and obedience in Montessorian schools therefore require particular investigation as there are aspects to be taken cognisance of by modern primary school educators.

Since society is based on a system of obedience namely, obedience to civil laws, obedience to religious laws, obedience to parents and teachers and obedience to employers, it is imperative that

the child acquire patterns of behaviour conducive to conformance with existing norms and structures inherent in his everyday environment, early in life. Because for many children the primary school situation constitutes the first encounter with the larger "community", primary school teachers will need to inculcate patterns of obedience in the early years of primary school.

It has to be admitted that overemphasis with regard to discipline, so prevalent in traditional schools, and still often prevalent in contemporary primary schools, which enforce obedience in order to obtain educational objectives, is rather tactless and frightening for the child. The educator in the primary school needs to take cognisance of the fact that if the child is presented with a task suited to his particular needs and is given the necessary instructions to complete the work and at the same time has no fear of asking questions, a relationship of trust and understanding will be built between the educator and the educand which will enhance discipline and obedience. The obvious conclusion in delivering the child from restrictive bounds, so prevalent in the past, therefore lies in a deep-rooted understanding of the child - acquiring a knowledge of the child before we can educate him.¹³⁴

Furthermore, modern primary school educators need to realise that severe and rigid discipline is not good for the very young child as his personality is still developing and he is not able to understand harsh disciplinary measures emanating from the adult-

¹³⁴. Montessori, *Childhood education*, p. 19.

educator. It could furthermore be construed that the primary school child has a natural desire to learn and work with a strong willingness to please the adult-educator. As a result obedience often follows as a natural consequence of his desire to learn. This is evident in all levels of primary school education. The child consistently seeks new challenges and opportunities to please, even though the work level increases in its intensity.

Motivation as a didactic principle - which was also neglected by Montessori - similarly plays a significant role in furthering self-discipline. Our entire scheme of life is based on the motivational factors of competition and reward - aspects which Montessori negated. For example, sport and cultural activities are all based on competitive skills. In adult life the individual seeks to improve himself through study and promotion to acquire a "reward" which to the academic student is a degree, or to the employee is a higher position. A similar sort of reward value is sought after by the child (and more specifically a primary school child) in his own life-world situation.¹³⁵ However, real competition implies that the child should continually compete with himself and perform according to his own unique ability in a desire to improve himself.

¹³⁵. When the researcher visited the "Village Montessori School" in Irene, he noted one small child using the metal insets. Having produced a beautiful diagramme she turned to the directress to show her the artwork and was praised on her picture. The child walked away beaming because her "reward" was the praise she received from her teacher.

3.4.5 An evaluation of Montessori's views regarding the role of the teacher

The Montessori teacher is in direct contrast to a modern day educator by virtue of the fact that there is a major difference in the involvement of the teacher in the educative process. In accordance with the theory that children need to be guided by the adult-educator to responsible adulthood, it must be borne in mind that this aspect was neglected by Montessori, who rather ascribed a more passive role to the educator. While the Montessori teacher's role is limited to observation after having carefully structured the learning environment, rather than teaching, by which she provides him with the kind of work that her observation of him leads her to think is best suited for him¹³⁶, the modern teacher is more actively involved with the pupil. With regard to involvement, Boyd¹³⁷ argues that Montessori perhaps underrates the part played by the adult educator as a role model in that she overlooks the fact that the teacher sets the example for the children to follow, whereas Montessori felt that it was not necessary for the adult to be a mentor or a guide.

Traditionally the role of the teacher was that of "dispenser of knowledge,"¹³⁸ while in Montessori education the consequent relegation of the teacher to the background has tended to become

¹³⁶. See paragraph 3.3.2

¹³⁷. Boyd, *From Locke to Montessori*, pp. 223-224.

¹³⁸. A. Olivier, H. Murray and P.G Human, *A constructivist approach to early arithmetic*, University of Stellenbosch: University Press, 1990, p. 364.

a fetish so that subjects, which from their nature demand greater activity on the part of the teacher, such as the humanistic subjects, such as History, have been ignored in the Montessori curriculum.¹³⁹ Furthermore, the Montessori teacher is not involved in assisting the children through direct interaction, nor is she involved in activities such as dramatical activities, singing, recitation or any other activities that result in relation-building between peers and educator.

The educator must be someone whom the child can look up to with trust and respect. With this in mind, it could be argued that an inauthentic view of the teacher is upheld by Montessori who does not accentuate the necessity of authentic interaction between the pupil and the educator. She furthermore implies that the teacher as a role model is not crucial to the child's development.¹⁴⁰

Furthermore, the harshness of Montessori's statement¹⁴¹ that children do not need adults to be a mentor or an example,¹⁴² is frightening if one considers the absolute confidence and trust that the primary child places in the educator as someone to whom he can turn to for help and guidance. The adult-educator needs to retain his position of authority. The severity of the nature of this concept is further hampered by Montessori's dogmatic

¹³⁹. L.C. Wynsouw, *Report on the Montessori system of education*, Johannesburg: University of Witwatersrand, 1915, p. 13.

¹⁴⁰. See paragraph 3.3.1.2

¹⁴¹. See paragraph 3.3.1.2

¹⁴². See footnote 46.

of this concept is further hampered by Montessori's dogmatic adamance that the teacher must withdraw into the background and be careful not to interfere in any way, nor must the teacher show the child how to get over difficulties.¹⁴³

Such advice promotes a breach in the educational relationship of trust, knowing and authority existing between the adult educator and the child-en-route to adulthood. The example he sets through word and deed will convince the pupils of the fact that he also subscribes to and realizes that the norms and conventions that he unfolds to them are authentic.¹⁴⁴ The immaturity of the child thus appeals to guidance from the mature adult.¹⁴⁵

¹⁴³. See paragraph 3.3.2

¹⁴⁴. Du Plooy, Griessel and Oberholzer, *Fundamental Pedagogics for advanced students*, p. 182.

¹⁴⁵. *Ibid*, p. 188.

The significance of the adult's role is confirmed by Langeveld,¹⁴⁶ the well known educationalist of the twentieth century, who maintains that the educator must take on the role of mentor and guide and the child must gain his freedom from the educator, with whom he must identify in order to allow him to establish norms. Education must be guided at helping the child become capable of moral self-determination in a moral order which enables the child to act with greater responsibility.

Similar sentiments are expressed by the modern day educator Duminy,¹⁴⁷ who states that the teacher is the competent person who performs the educative act of teaching. In the unfolding of the pupil through educative teaching, the teacher assists the pupil to obtain a perspective on reality and himself. He fundamentally unfolds laws, norms and principles to the child. He is professionally and didactically trained to execute the task of leading the child to responsible adulthood.

The child's freedom to choose and act is not a random freedom, because the child in the world is always situation bound and dependant on the norms with which he has identified, and which are embodied by the adult-educator.¹⁴⁸ According to the famous

¹⁴⁶. M.J. Langeveld, *Beknopte theoretische paedagogiek*, Groningen: Wolters-Noordhof, 1974, p. 52.

¹⁴⁷. Duminy and Sohngé, *Didactics: Theory and practice*, pp. 7-8.

¹⁴⁸. G. Reeler, *A re-evaluation of the essential components of discipline as pedagogic occurrence*, Pretoria: Unpublished M.Ed dissertation, University of South Africa, 1983, pp. 14-15.

educational theorist of the twentieth century, Gunter,¹⁴⁹ true freedom implies that the child is binding himself through gradual responsibility from the guidance of the adult educator, to the norms of responsible action placed on himself by himself. The child therefore progresses towards self-responsibility as the highest freedom attainable, advancing towards total self-responsibility. Contrary to Montessorian doctrine, the child is not left entirely to his own devices but receives the guidance of the educator.

Montessori's principle of non-intervention renders serious pedagogical problems. With regard to the educator in the primary school situation, Du plooy¹⁵⁰ states that the educator has to fulfil a special task in the instruction situation as pedagogic situation; he is both a transmitter of knowledge and a moral mentor.

With regard to the exaggerated Montessorian philosophy that the teacher should be "young and charmingly attractive"¹⁵¹, it could be argued that Montessori was not specifically referring to physical characteristics, but rather personality traits that would be appealing to the child. The exaggeration nevertheless presents an inauthentic and one-sided, view of the person of the teacher. The ability of the teacher to assist the child-en-route

¹⁴⁹. Gunter, *Opvoedingsfilosofië*, p. 139.

¹⁵⁰. Du Plooy, Griessel and Oberholzer, *Fundamental Pedagogics for advanced students*, p. 171.

¹⁵¹. See paragraph 3.3.1.2

to adulthood should take preference to characteristics of "youthfulness, charm and beauty." At face value, Montessori's philosophy with regard to the appearance of the teacher is in strong contradiction to modern day views. Du Plooy¹⁵² poses the same question asked by Montessori, "How does the 'ideal' teacher look like?" and then provides a suggested answer. The answer reflects all the characteristics of a moral mentor rather than physical characteristics such as depicted by Montessori. These requirements, identified by Du Plooy, are listed as possessing a strong, pleasant and dynamic personality, an exemplary and incorrigible conduct in life, honesty, responsibility, respect for authority, forgiveness, trustworthiness, sobriety, unselfishness and devotion, absolute candidness, willingness to sacrifice, accuracy, punctuality, diligence and industry, perseverance, soundness and particularly empathy.¹⁵³

The unconventional attitude of the teacher's role and appearance described by Montessori is, therefore, found to be unacceptable by this researcher. Furthermore Montessori's presumption that "conditions of life" ¹⁵⁴ will assist children to responsible adulthood, with little visible guidance on the part of the teacher¹⁵⁵, should be considered as impractical and does not merit further discussion.

¹⁵². Du Plooy, Griessel and Oberholzer, *Fundamental Pedagogics for advanced students*, p. 172.

¹⁵³. *Ibid.*

¹⁵⁴. See paragraph 3.3.1.2

¹⁵⁵. See paragraph 3.3.2

3.4.5.1 The feasibility of applying aspects related to Montessori's views on the role of the teacher in the primary school situation.

This researcher has concluded that Montessori's views regarding the role of the teacher are narrow-minded and unsuitable for the primary school situation as they negate the significance of the role of the teacher. Furthermore, the researcher is of the opinion that the role of the teacher as a guide and a mentor is intensified in the primary school and it becomes even more imperative for the primary school teacher to be someone whom the child can look up to. The child in his formative and early primary school years, leans heavily on his teachers for guidance and assistance, and view them as a role model. It is therefore unquestionably true that the educator in his everyday activity must make value judgements for the benefit of the child, whose sense of values and norms is still inadequate.¹⁵⁶

Applied logically, the realization of the didactic task of the primary school educator in assisting the child to responsible adulthood rests in the educator being an example and an inspiration to the child.

3.5 Concluding remarks

¹⁵⁶. Du Plooy, Griessel and Oberholzer, *Fundamental Pedagogics for advanced students*, p. 103.

The most valuable contribution of Montessorian theory concerning the liberty of the child, is her emphasis on valuable principles of self-activity, self-education and greater independence being given to the child to do things for himself. However, the principle of total non-intervention on the part of the adult-educator is unacceptable. The problems of discipline cannot solve themselves, as hoped for by Montessori, nor can they "melt" into thin air and become non-existent, through interest in various undertakings. Such a view of discipline is utopian and far from practical. It could further be construed that such discipline is inauthentic educational practice because it does not meet the expectations of sound and authentic educational practice and theory. However, in appraisal, the capacity for close consecutive attention, so prevalent in Montessorian theory is a very valuable activity in furthering self-control and self-discipline, if accompanied by authentic adult guidance.

CHAPTER FOUR

intellectual education (the teaching of writing, reading and arithmetic), which are closely related to individuality, are however, discussed in different chapters in an attempt to facilitate a logical presentation of Montessori's ideas.² It is predominantly in the years from birth to age of six or seven with which Montessori has mainly concerned herself, because it is during this time that formative education takes place and that an individualistic method can possibly be most easily and successfully employed.³

Montessori, understood individuality to encompass more than the mere giving of attention to each individual child, but rather to an understanding of the nature, needs and innate ability of each child individually. A close scrutiny of the concept of "individuality" is therefore not only essential to this study, but rather critical to it, especially if it is taken into consideration that the interpretation that Montessori ascribes to the concept of individuality sometimes appears to be ambiguous and even contradictory.⁴

A clarification of Montessori's interpretation of individuality will be profitable as it will lead to an understanding of the concept in relation to current views with the possibility of

2. Chapter 5 deals with the training of the senses, while chapter 6 deals with Montessori's approach to the teaching of writing, reading and arithmetic.

3. W. Boyd, *From Locke to Montessori - a critical account of the Montessori point of view*, London: Harrap and Company, 1914, p. 187.

4. See paragraph 4.4.1

reconciliation of terms and possible adoption (either wholly or in part) in the South African primary school situation.

4.2 The concept "individuality"

4.2.1. Traditional interpretation

The Longman Family dictionary defines individuality from three angles, all pertinent to this study. Firstly, it refers to the total character peculiar to and distinguishing one individual from another. Secondly, it implies the tendency to pursue one's course with marked independence or self-reliance. Thirdly, and most relevant to this chapter, it refers to adoptment or adjustment to suit a particular individual.⁵

4.2.2 Pedagogical interpretation.

According to Van Rensburg, childhood as a mode of human existence rests on the didactic principle that the educator must take into cognisance the individual differences amongst pupils. The educator must endeavour to view each child differently and to take into consideration differences in, for example, ability, teaching background and personality. The systematic application of individualization will thereby lead to differentiation.⁶

⁵. Longman Family Dictionary, London: Chancellor Press, 1984, p. 354.

⁶. C.J.J. Van Rensburg and W.A. Landman, *Notes of Fundamental- Pedagogic Concepts*, fifth edition, Goodwood: N.G. Kerkboekhandel, 1988, p. 374.

Gunter⁷ has much the same in mind when he states that every individual child, though human in general, and individual in uniqueness, is prone to do that which is wrong. He is thus still very dependent, irresponsible and undisciplined. By means of education and the guidance of the educator, the individual is assisted in his life journey. On his own, the child cannot attain independence as he deviates too often and fails.

4.3 Essential aspects regarding Montessori's views on the individuality of the child

4.3.1. Montessori's concept of individuality was enunciated by her predecessors.

According to Culverwell,⁸ all the great educational theories of the past have embodied some unchanging truths and therefore something from each of them can be found in any subsequent system considered for general adoption. This implies that Montessori's views on individuality, were also referred to by her educational predecessors.

The concept of individuality was propounded by John Locke (1632-1704)⁹ who repeatedly stated that the child's individuality

⁷. J.L. Du Plooy, G.A.J. Griessel and M.O. Oberholzer, *Fundamental Pedagogics for advanced students*, Pretoria: Haum, 1987, pp. 66-67.

⁸. Fynne, *Montessori and her inspirers*, p. 1.

⁹. See also paragraph 5.2.1

should be taken into account. According to him, each student (child) had to be individually assessed in order to ascertain the level of work he could carry out successfully in order to identify assignments suitable for his unique individuality. Furthermore, individual attention had to be given irrespective of status or position in society.¹⁰ In the educational treatises of John Locke, we find three of the principles upon which Montessorian education is concentered, namely, the liberty of the child, the principle of individuality and the training of the senses,¹¹ - the second principle, namely the principle of individuality, being the focal point of the present chapter.

Another celebrated educator who propounded the principle of individuality with great conviction and who had a great influence on Montessori, was the democratically minded French-Swiss iconoclast and political writer Jean-Jacques Rousseau (1712-1778).¹² Rousseau enunciated, as a great principle, that education must be based on a study of the child. For him, as for Montessori, education must ever be directly concerned with individuality, bearing in mind the peculiar nature and needs of each individual child.¹³

With regard to Montessori's individualised apparatus (discussed

¹⁰. J.L. Axtell (ed.), *The educational writings of John Locke*, Great Britain: Cambridge University Press, 1968, pp. 39 and 54.

¹¹. Fynne, *Montessori and her inspirers*, p. 2.

¹². See paragraph 5.2.2

¹³. Fynne, *Montessori and her inspirers*, pp. 3-5.

in chapter five), Montessori herself acknowledges the influence of another great educator, Edouard Seguin (1812-1880)¹⁴. She confirms:

I had read Edward Seguin's book with great interest ... Guided by the work of these two men [Seguin and Itard] I had manufactured a great variety of [individualised] didactic material.¹⁵

It is thus clear from the preceding paragraphs that Montessori received her inspiration and insight from many of her predecessors and her work is definitely concatenated with these remarkable pioneers of education.¹⁶

4.3.2 Montessori's concept of individuality is inherited from the realms of psychology.

Through in-depth research, it becomes quite clear that Montessori viewed individuality from a radically different viewpoint than

¹⁴. See paragraph 5.2.4

¹⁵. M. Montessori, *The Montessori method. Scientific pedagogy as applied to child education in "the children's houses"*, translated by A.E. George, London: William Heinemann, 1937, pp. 35-42. Initially the apparatus was used on individual deficient children, but unless they were presented correctly they failed to attract their attention. The researcher is, however of the opinion that this experimentation paved the way for Montessori to devise material of a more individualistic nature, based on the nature and ability of each individual child rather than on separate pupils.

¹⁶. Fynne, *Montessori and her inspirers*, p. 7.

that commonly defined by the society of her time. The definition of individuality that Montessori abides by, is related to "something new" that has developed in the child through the process of evolution¹⁷ and which, according to Montessori, can hardly be accurately defined in terms of our limited human capacities.¹⁸ The nature of the individuality of the child is furthermore complicated as a result of his spiritual capacity which has to be respected by the adult. Montessori is of the opinion that the individual child is vested in a mystic sanctity. Her contention is that behind every individual child lies the mysterious life force that directs itself in the process of growth.¹⁹ According to her, educators should refrain from trying to fully understand the concept of individuality in mere academic terms,²⁰ which implies that we will never really be able to truly know the child as an individual. We are therefore confronted with a Montessorian concept of individuality that is evolved from the realms of psychology, and which (for the sake of brevity) is mysteriously endowed within each individual child.

Despite its undefinable character, individuality, according to Montessori, should be considered in terms of each child's educational needs. In order to do this the child must be given

¹⁷. M. Montessori, *Childhood Education*, Translated by A.M. Joosten, Chicago: Henry Regnery Company, 1949, p. 79.

¹⁸. *Ibid*, pp. 76-83. See also Boyd, *From Locke to Montessori*, p. 192.

¹⁹. Boyd, *From Locke to Montessori*, p. 192.

²⁰. Montessori, *Childhood education*, pp. 9-22.

the freedom to spontaneously act within a prepared and ordered environment.²¹

4.3.3 Montessori's concept of individuality is closely related to discipline

Closely related to Montessori's concept of individuality is discipline, which Montessori believes is one of the fruits of liberty. In fact she states that discipline and liberty, as essential features of individuality, cannot really be separated.²²

Montessori regards discipline as a natural spontaneous self-discipline²³ that the individual child will develop once there is order or structure in his life.²⁴ The liberty suggested by Montessori seems to imply that self-discipline can only come about if the individual child is given the necessary liberty to discover it for himself. She does, however, clarify that no child may infringe on the freedom of other individuals in their desire to work spontaneously:²⁵

²¹ Montessori, *The discovery of the child*, translated by M.A. Johnstone, India: Kalakshetra Publications, 1958, pp. 91-92.

²² E.M. Standing, *Maria Montessori: Her life and work*, London: Hollis and Carter, 1957, p. 156.

²³ M. Montessori, *The secret of childhood*, translated and edited by B.B. Carter, London, New York and Toronto: Longman's, Green and Company, 1936, pp. 161 and 162.

²⁴ See paragraph 3.3

²⁵ Montessori, *The Montessori method*, p. 87.

We must therefore check in the child whatever offends or annoys others, or whatever tends towards indecorous or impolite acts. But all the rest, - every manifestation having a useful scope, - whatever it be, and under whatever form it expresses itself, must not only be permitted, but must be observed by the teacher.

With the above statement in mind, Montessori suggests that there is little need for much guidance (or external discipline) on the part of the teacher. By this we are led to believe that Montessori is endeavouring to give the child liberty for individual development and growth as an individual in order to achieve the unique kind of self-discipline described in the previous paragraphs.

Discipline, according to Montessori, must therefore come to each individual child through liberty and not imposition.²⁶ Montessori defines an individual as disciplined when he is master of himself, and can therefore regulate his own conduct when it shall be necessary to follow "some rule of life".²⁷

Because each individual child must learn to control himself through his own efforts, the discipline that he achieves is of far greater value than that enforced on him from outside, as it

²⁶. *Ibid*, p. 86.

²⁷. *Ibid*.

is an inner discipline regulated by himself as an individual.

4.3.4 Montessori's concept of individuality implies obtaining a direct physical knowledge of the child.

Towards the end of the eighteenth century and at the onset of the nineteenth century, schools of scientific pedagogy arose which had, as their aim, the instruction and training of teachers in the new trend of pedagogy which started focusing on improved methods of education.²⁸ The schools sought to reform education through directed observation of the child and experimentation of various and differing approaches. The great Italian anthropologist Sergi (1841-1936) was the main propagator of this philosophy. Montessori meditated upon the idea of experimentation and following the theory of Sergi, came to the conclusion, and agreed with Sergi, that if we are to possess direct knowledge of an individual child it is absolutely necessary that we have exact and definite physical observations made of each individual child. Montessori felt that once the individual was known through the medium of observation, the art of education would come into existence almost naturally.²⁹ Because the physical transformations that occur between the ages of three and six are so phenomenal, it led Montessori to consider a system of recording in order to observe the physical changes of each individual child more easily. Furthermore, the physical changes that the children were undergoing were individual changes that

²⁸. Montessori, *The discovery of the child*, pp. 2-4.

²⁹. *Ibid*, p. 2.

were to be observed, noted and recorded by the children themselves.

From the onset of her work in the Children's House in 1907,³⁰ and at the same time having been influenced by the ideas of Sergi, Montessori began devising a biographical chart to record specific observations of each individual child. She based her chart on ideas learned at the school for scientific pedagogy³¹ with the prime objective of assisting her in the quest for a more complete picture of an individual child, and thus a greater knowledge of the needs related to his education. The frequency of the measurements had to be undertaken on a monthly basis, while the weight of the pupil was required to be recorded weekly in a register (see plate 4.1). This anthropological investigation was not limited to height and weight alone, but extended to factors such as, inter alia, the circumference of the head, the circumference of the chest, length of the index fingers and the circumference of the two maximum diameters of the head.³²

This physical diagnosis assisted in providing the teacher with a more composite picture of each individual child in his corporality. The implications, according to Montessori are significant for the education of the individual child. Firstly, it provides the teacher with an accurate composite physical picture of each

³⁰. See paragraph 2.4.2

³¹. See paragraph 2.4

³². Montessori, *The discovery of the child*, p. 73.

individual child with specific regard to features that could affect his education, namely the child's physical constitution and state of nourishment.³⁴ Secondly because the child is involved in his own individual measurements and recordings, it promotes the acquisition of good habits and orderliness, which, according to Montessori, are pre-requisites for effective learning and ultimately greater observance of themselves as unique individuals.³⁵

The analysis of details obtained from the chart³⁶ led to a further significant observation. Montessori came to the conclusion that it was necessary to prepare conditions which render possible the manifestations of the natural physical characteristics of individual children.³⁷ This led Montessori to design and have manufactured furniture that would be suitable for the physical needs (physique) of each individual child in an ordered environment so perfectly structured and rendering sufficient liberty of movement for the child to continue with his work uninhibited, thus allowing him to proceed with his work intelli-

³⁴. See Plate 4.1, the biographical chart.

³⁵. Montessori, *The discovery of the child*, pp. 74-75. See also paragraph 3.3

³⁶. Montessori adhered to the principle of experimentation by which new approaches and material were used on children as an experiment to see what results they would yield. Montessori's first experiments were carried out on deficient children in Rome and were based on the apparatus devised by Seguin and Itard. See also, Montessori, *The discovery of the child*, pp. 29 and 36.

³⁷. Montessori, *The discovery of the child*, p. 75.

gently and freely.³⁸

4.3.5 Montessori's concept of individuality is geared towards obtaining independence.

Montessori argues that no individual can be free unless he is independent: therefore the first active manifestations of the child's individual liberty must be so guided, that through his activity, he may arrive at independence.³⁹ This is not a single occurrence, but is initiated at birth and continues with the child as he makes his way towards complete independence in adulthood.⁴⁰

According to Montessori, because each child differs so much from the next child, he needs, for his fullest development, the greatest possible liberty to retain his unique individuality.⁴¹ Montessori argues that the child in his quest for independence, is a "body that grows and a soul which develops" and both these forms, physiological and psychic, must be granted the greatest liberty to develop and that "we must neither mar nor stifle the mysterious powers which lie within these two forms of growth."⁴² Montessori further contends that discipline emanating from the adult, stifles the child in his development and from gaining full

³⁸. Montessori, *The discovery of the child*, p. 75.

³⁹. Montessori, *The Montessori method*, p. 96.

⁴⁰. *Ibid*, pp. 96-97.

⁴¹. *Ibid*, pp. 86-89.

⁴². *Ibid*, pp. 104-105.

independence. Each individual child must find out how to control himself by his own efforts through spontaneous activity. Montessori refers to this as an indirect self-discipline.⁴³ She contends that assistance given to the child in an attempt to help him gain independence forms an impediment, rather than a stimulus, to the development of natural strength. According to Fisher who quotes Montessori:⁴⁴

... the less he [the child] is interfered with by arbitrary restraint and vexatious unnecessary rules, the more quickly, easily and spontaneously he will learn.⁴⁵

Montessori considers the individual child to be independent when he has reached a more advanced stage of development, which is manifested by his ability to make decisions based on a stable inner order, that is as a result of free choice of activity.⁴⁶

4.3.6 Individuality implies the spontaneous use of apparatus.

As previously mentioned, the underlying philosophy of Montessorian theory regarding individuality is grounded on the

⁴³. Montessori, *The discovery of the child*, pp. 370-371.

⁴⁴. *Ibid*, p. 88.

⁴⁵. D.C. Fisher, *The Montessori manual for teachers and parents*, Massachusetts: Robert Bentley, 1964, p. 20.

⁴⁶. Montessori, *The discovery of the child*, pp. 85-89.

belief that each individual child's needs must be catered for in a structured environment. History bears record and testifies that her work in the Casa dei Bambini and her use of didactic apparatus, provided phenomenal results and led to teachers becoming more aware of the importance of the spontaneous use of individualised didactic apparatus in the physical and mental development of the individual child.⁴⁷

Montessori contends that if the teacher has materials to offer the child in order to polarise his attention, he will find it possible to give each individual child the freedom he needs for his development.⁴⁸ In order to serve the purpose of unfolding each child's mental development, or "internal formation", as Montessori called it, the materials must correspond to the child's inner needs. The teacher therefore, needs to know what the child's inner needs are through a personal knowledge of each child, so that the materials are presented to the child at the right moment in his development, once again demonstrating why Montessori insisted on a structured and prepared educative environment.⁴⁹

Catering for the child's inner needs is therefore accomplished by the teacher or directress observing the individual child as he goes about his activity and by providing him with the kind of

⁴⁷. Montessori, *The Montessori method*, pp. 108-116.

⁴⁸. M. Montessori, *Spontaneous activity in education*, New York: Schocken Books, 1965, p. 28.

⁴⁹. See paragraph 3.3.1

work that her observation of the child leads her to think is best suited for the stage of development that he has reached.⁵⁰

During the entire monitoring process the teacher watches for the quality of concentration in the child and for a spontaneous repetition of his actions, in order to determine whether the activity becomes boring or meaningless to the child. According to Montessori the responses obtained from the child's use of the apparatus will indicate the meaningfulness of the material to him at that particular moment in his growth, and whether the intensity of the stimulus which that material represents for him is also matched to his individual, unique, internal needs. Both the material itself and the intensity of the stimulus it presents can be varied to meet the child's inner needs.⁵¹

The role of the teacher is likened by Montessori to that of a gardener. She states:

The educators [must] behave as do good gardeners and cultivators towards their plants. Behind the good cultivator, however, stands the scientist who scrutinises the secrets of nature. His experiments enable him to acquire profound knowledge, which helps not only to a better understanding of the plants, but which can be used to transform them.⁵²

⁵⁰. Boyd, *From Locke to Montessori*, p. 144.

⁵¹. Montessori, *Spontaneous activity in education*, p. 29.

⁵². Montessori, *Childhood education*, p. 11.

According to Lillard, an authority on Montessorian education, the educator as 'cultivator' and 'scientist' has to show great flexibility in the material that an individual child has to master in order to develop his individual characteristics.⁵³ Lillard is of the opinion that an elaboration of the Montessori apparatus is essential in order to provide for individual activities of children more effectively.⁵⁴

A fundamental underlying principle that Montessori adheres to is that every bit of apparatus, every detail rests solidly, and is in full recognition of the fact that no human being is educated by anyone else other than himself. Each individual child must accept the fact that he is responsible for his own education and that all growth must come from a voluntary action of the child himself.⁵⁵ In order that the child be given the opportunity to develop individually, the didactic material is specially devised for the intellectual development of the individual child.⁵⁶ In order for the individual child to obtain maximum benefit from the apparatus, Montessori devised a system of gradation.⁵⁷ The apparatus is graded in that the consecutive phases require

⁵³. P.P. Lillard, *Montessori - a modern approach*, New York: Schocken Books, 1972, pp. 60-61 and 153.

⁵⁴. See paragraph 5.4.3 for a more descriptive analysis of the didactic apparatus

⁵⁵. Fisher, *The Montessori Manual*, p. 20.

⁵⁶. See paragraph 5.4.3

⁵⁷. See paragraphs 5.4.3.1 (a) and 5.4.3.1 (b) which deal with auto-education and graded stimuli respectively.

greater muscular effort, extended concentration and more difficult movements catering for the individual child with differing abilities, so that as the child acquires the ability to participate in an activity requiring greater skill or dexterity he will be ready to do so.⁵⁸ According to Fisher⁵⁹ the apparatus is of immense value to the individual child, as it is immensely ingenious and wonderfully successful and it accomplishes its purpose with great economy of effort.

Montessori suggested age levels for introducing each of her materials to the child; however the sensitive moment⁶⁰ for introduction of didactic material to each individual child needs to be determined by observation and experimentation.⁶¹ While an assistant at the Psychiatric Clinic,⁶² Montessori read Edouard Seguin's book dealing with deficient children and then came to the conclusion that the material or didactic apparatus provided the means of effective individual education much more than any other method because it renders auto-education⁶³ possible, which can be clarified by stating that each individual child works

⁵⁸. Montessori, *The discovery of the child*, pp. 187-194.

⁵⁹. Fisher, *The Montessori manual*, p. 24.

⁶⁰. See paragraph 5.4.2.1

⁶¹. See paragraph 4.3.4

⁶². See paragraph 2.4

⁶³. See paragraph 5.4.3.1 (a)

individually at his own pace. Furthermore, the material contains built-in correction of errors to assist him as an individual.⁶⁴ The quality of the stimuli must also be adjusted to the child's individual needs.

Although the material was initially intended for the teaching of children with deficiencies, the Montessori apparatus is so ingeniously devised⁶⁵ that any normally inventive individual is able to determine its prescribed correct.

If the child fails to do a task which has been assigned to him, the directress does not compel or urge him to try again. His failure implies that he has not reached the stage of growth relevant for that particular exercise. According to Montessori, there is nothing to be done, but to wait and give him some simpler task in the hope that it will lead him to the stage when he will be able to attempt the previously discarded activity again.⁶⁶ Hence Montessori's adamantness against reward or

⁶⁴. For those not familiar with the didactic apparatus, it can most correctly be described as a systematic array of objects resembling learning games, each of which is carefully designed to impart particular learnings. The material is made of wood, metal and cardboard and is usually manipulatable and contains control of error enabling the learner to work individually. See paragraph 5.4.3. Montessori in, R.C. Orem (ed.), *Montessori: Her method and the movement - what you need to know*, New York: Capricorn Books, G.P. Putnam's Sons, 1974, pp. 28-29.

⁶⁵. See paragraph 5.4.3

⁶⁶. Boyd, *From Locke to Montessori*, p. 144.

punishment.⁶⁷ It appears, however, that the process makes no allowance for the lazy, unmotivated or indifferent child, other than Montessori's belief that the child was not ready for a particular stage which did not arouse his interest.

The technique of the Montessori approach to the use of the apparatus is therefore vested in the natural physiological and psychological development of the individual child⁶⁸, which may be divided into three stages which each require their own didactic apparatus. As the didactic apparatus is discussed in detail in chapter five, it would suffice at this point to state the thrust of the three types of didactic material: Firstly, Montessori implemented apparatus to further motor education, which primarily implies the care and management of the environment itself; secondly, the Montessori didactic apparatus provides for the active training of the senses⁶⁹ and thirdly for the intellectual development of writing, reading and arithmetic.⁷⁰

4.4 FUNDAMENTAL AND CRITICAL EVALUATION OF MONTESSORI'S VIEWS REGARDING INDIVIDUALITY AND THEIR FEASIBILITY IN THE PRIMARY SCHOOL SITUATION

⁶⁷. See paragraph 3.3.3.2

⁶⁸. Montessori, *Dr. Montessori's own handbook*, U.S.A: Robert Bentley, 1964, p. 17.

⁶⁹. See chapter five which deals with the training of the senses.

⁷⁰. See chapter six which deals with intellectual education related to the teaching of writing, reading and arithmetic.

4.4.1 An evaluation of Montessori's definition of the concept of individuality as being inherited from the realms of psychology

From the exposition on individuality in the preceding paragraphs, it is quite clear that Montessori's views regarding individuality imply that the teacher must obtain a definite knowledge of each individual child's needs in relation to his education, and an understanding of the child in terms of the world in which he lives. However, it often becomes difficult to comprehend Montessori's definition of individuality because of the mysticism attached to her theory, by which, for some occult reason, she deems the individual child's life as being spiritually invested.⁷¹ Boyd argues that this unscientific resort to mystery is really an admission by Montessori that we will never know the original human characteristics of the child and thus must accept that our knowledge is limited.

Montessori's basic viewpoint that the individuality of the child is inherited from the realms of psychology is, however, in accordance with current views of education. The fact that the department of Empirical Education at the University of South Africa has recently changed its name to the department of Psychology of Education, testifies to the significance of attempting to understand the child from a psychological dimension. Furthermore, the establishment of child psychologists, child psychiatrists and paediatricians in modern times are all

⁷¹. Boyd, *From Locke to Montessori*, p. 192.

geared to the psychological needs of the individual child and are testimony to what degree an understanding of the child from the psychological viewpoint is essential. This change in the approach of how we view the child, must therefore also affect the way that we educate our children, specifically in the primary school situation.

4.4.1.1 The feasibility of realising Montessori's definition of individuality as being inherited from the realms of psychology in the primary school situation

With regard to the individuality of the child, primary school teachers need to attempt to get a clearer understanding of the psychological nature of an individual child in terms of the world in which he lives with specific regard to his educational needs. Teacher training should therefore aim at training teachers-embarking on a career in primary school education - to understand and analyse psychological characteristics of the individual child without reading into a child's behaviour an adult-centered interpretation.⁷² For this reason, understanding the child within the primary school situation from a psychological dimension has a meaningful contribution to offer in inter alia building the self-image of each individual child.⁷³

⁷². J.A. Hadfield, *Childhood and adolescence*, Great Britain: Penguin Books, 1962, p. 12.

⁷³. Van Rensburg and Landman, *Notes of Fundamental - Pedagogic concepts*, p. 461.

4.4.2 An evaluation of Montessori's concept of individuality as being closely related to discipline

While the aspect of discipline featured prominently in the previous chapter relating to the liberty of the child,⁷⁴ it also becomes necessary to evaluate Montessori's views with regard to the focus of attention in the present chapter, namely, the individuality of the child as being closely related to discipline. Such an evaluation will determine whether the views that Montessori advocates are feasible in the primary school situation. The reader is therefore advised to refer to the paragraphs related to the various aspects regarding discipline outlined in the relevant chapters so that a more holistic view is obtained.⁷⁵

In the previous chapter it was pointed out that Montessori places little emphasis on external discipline. Edelson and Orem⁷⁶ confirm Montessori's viewpoint that the only "true" discipline is "inner" discipline which is developed by the child himself as he works at interesting tasks at home or at school. This researcher posits that the child must be permitted enough freedom to develop self-discipline through positive experiences in a structured environment. The child must progress towards self-responsibility as the highest discipline attainable. The product

⁷⁴. See paragraph 3.3.3

⁷⁵ See paragraphs 3.3.3 and 4.3.3.

⁷⁶. K. Edelson and R.C. Orem (editors), *The Children's House parent-teacher guide to Montessori*, New York: G.P. Putnam's Sons, 1970, p. 17.

self-discipline, which according to the modern-day educationalist Gunter⁷⁷, is the highest form of discipline which the child can attain because of its intrinsic value.

John Dewey,⁷⁸ (1859-1952) a twentieth century American philosopher, supports Montessori's view of individual discipline. According to Dewey, problem-solving requires internal self-discipline, rather than the type of external coercion often administered by teachers in the traditional manner, in the hope that the individual child will eventually internalize it. Dewey, like Montessori, believes that discipline comes from the problem itself and is internal to the requirements of the task posed by the problem.⁷⁹ However, Dewey can also be criticised as he neglected the teacher's authority in promoting self-discipline during the early years.⁸⁰

Van Rensburg⁸¹, a South African educationalist of the twentieth century, argues that self-discipline also incorporates the child's voluntary acceptance of the influence and learning of the normed adult educator and the child's personal appropriation of the knowledge, dispositions and ideals of the educator, whereas

⁷⁷. Du Plooy, Griessel & Oberholzer, *Fundamental Pedagogics for advanced students*, pp. 66-67.

⁷⁸. G.L. Gutek, *A History of the western educational experience*, New York: Random House, 1972, p. 384.

⁷⁹. *Ibid*, p. 384.

⁸⁰. *Ibid*.

⁸¹. Van Rensburg and Landman, *Notes of Fundamental-Pedagogic concepts*, p. 326.

Montessori negated the value of the educators assistance in the educational relationship. This negation creates a problematic situation in the primary school situation especially if one considers that the child turns so frequently to the adult for assistance and guidance.⁸² Significantly both the theories of Van Rensburg and to a degree that of Montessori⁸³, denote order so that work can proceed smoothly in order for educational objectives to be met. This researcher is once again in agreement with Du Plooy⁸⁴ that individual discipline is based on a reciprocal relationship of knowledge, trust and understanding so that self-discipline will come about, as the child, in a mutual relationship of understanding, trusts the adult with his future.

In a broader sense discipline therefore implies not only an external manifestation of authority in order to maintain control so that education can proceed smoothly, but also a reciprocal relationship of trust which, as previously outlined by Van Rensburg, is essential as it will eventually lead to inner discipline that Montessori regarded as the highest form of discipline that any child can attain.

Initially, it appears as if Montessori's definition regarding discipline in relation to the child's individuality is foreign to modern educational thought, but on closer investigation it

⁸². Du Plooy, Griessel and Oberholzer, *Fundamental Pedagogics for advanced students*, p. 94.

⁸³. See paragraph 3.4.1.1

⁸⁴. Du Plooy, Griessel and Oberholzer, *Fundamental Pedagogics for advanced students*, pp. 180-185.

to modern educational thought, but on closer investigation it seems that an understanding of Montessori's concepts reveals that there are some similarities that are in harmony with existing modern views on discipline. For example, modern educational views do not necessarily consider an individual disciplined when he is rendered silent or brought to immobility, as is often suggested by Montessori.⁸⁵ Furthermore, it is generally felt that current educators do not necessarily equate discipline with punishment or even imply that discipline is synonymous to coercion.

4.4.2.1 The feasibility of applying Montessori's concept of individuality as being closely related to discipline in the primary school situation

The feasibility of application of self-discipline as outlined by Montessori in the preceding paragraphs can only be regarded as essential in South African primary schools if it is enforced by mutual respect based on a relationship of knowledge, trust and authority between each individual child and his educator. Although the responsibility in South African primary schools lies squarely on the educator to promote self-discipline through individualized activities, it is essential that the educator develop a mutual trust and understanding with each individual child so that when circumstances arise when it is necessary to apply external discipline or restraint (not necessarily physical punishment) in order to improve a situation, the child will realise that it is fairly administered. Because of the mutual

⁸⁵Montessori, *The Montessori method*, p. 86.

trust existing between the educator and educand, the child will realise that the educator is acting in his best interest. Both external and internal discipline has a positive role to play in leading the child to proper adulthood, towards freedom and towards independence and towards responsibility.

4.4.3 An evaluation of Montessori's concept of individuality as related to obtaining a direct physical knowledge of the child

It must be remembered at this point that Montessori's focus, at the time of the opening of the Casa dei Bambini, (where the biographical chart was first used) was on the child mainly between the ages of three and six. Montessori, as quoted by Standing⁸⁶, was correct in her judgement that the individual child is in a state of continuous and intense transformation of both body and mind, especially between the age of three and six.⁸⁷ Her biographical chart provides a more or less composite picture of the child as an individual in his changing corporeality in the formative years. No-one will dispute the contention that the more a teacher knows about the individual child, the better he is likely to teach him, but although the chart may produce useful information about the child's physical characteristics, it must also be remembered that no chart can

⁸⁶. E.M. Standing, *The Montessori method. A revolution in education*, California: Academy Library, 1962, p. 8.

⁸⁷. See paragraphs 5.1 and 5.4.1 respectively.

ever adequately or fully define the individual child. Boyd⁸⁸ argues that the weakness of the chart is that it makes no provision for a physiological or a psychological examination on the grounds that these are too cumbersome to be of real use.

It can be assumed that Montessori later realised that the biographical chart did not provide adequate information for a full picture of the child's education. In addition to the physical measurements obtained from the biographical chart, Montessori managed to get a more holistic picture of each individual child through a process of direct observation.⁸⁹ These two processes, the biographical chart and the process of direct observation therefore assisted Montessori in gaining a greater and more comprehensive picture of the child in his totality and had, and still have, some very definite advantages. Through application of the chart, Montessori was able to determine whether the child was healthy, or whether he displayed significant signs of lack of nutrition or even physical abnormalities which could affect his learning.

4.4.3.1 The feasibility of applying Montessori's concept of individuality as related to obtaining a physical knowledge of the child in the primary school situation

Much of the theory which we adhere to in modern times can be directly linked to Montessori's theory derived from her

⁸⁸. Boyd, *From Locke to Montessori*, pp. 199-200.

⁸⁹. See paragraph 5.4.3.2

biological chart and is also currently in practice. Firstly, schoolroom furnishings are manufactured in many various sizes in accordance with the physical needs of individual children. As a general idea, this view of scaling down materials for children is not unusual in present day nursery settings, but is originally derived as a result of the application of the biographical chart. This has direct relevance to the primary school situation for according to Schechter,⁹⁰ a contemporary child psychiatrist, children learn best in a setting which allows for the fullest use of all their senses and muscular development without awkwardness or restraint.

Secondly, the syllabus now requires that physical education teachers must evaluate the pupils on a bi-annual basis to determine their physical capabilities and limitations by means of recording their weight in relation to their height in order to determine whether they display any signs of physical inconsistency. Thirdly, the ed.lab record cards currently in use in South African primary schools (See plate 4.2) could be said to resemble Montessori's biographical chart while at the same time incorporating significant factors, such as the child's psychological and health history. Primary school teachers should therefore be trained to complete and utilise these records to the child's best advantage as these ed. lab cards reflect a confidential psychological and physical history of each

⁹⁰. M.D. Schechter, Montessori and the child's natural development, in Edelson and Orem (editors), *The Children's House parent-teacher guide to Montessori*, p. 74.

individual child so that each educator involved in the child's education can have immediate access to understanding problems existing in the child's history.

The Montessorian biographical chart, displays definite feasibility in the primary school situation especially if the child is involved in the physical measurements and recordings himself. Each individual pupil will thereby gain the opportunity of assessing his own individuality in terms of his physical characteristics and should receive direct advice on improvements that can be made (such as dietary supplementation, and exercises in order to aid physical development). Furthermore, if such evaluation is done on a regular basis, the individual child would be able to record improvements which would lead to an improved self-image and possibly a better performance at school. However, because much of what Montessori advocated with regard to the biographical chart is currently being practised there is no specific need to dwell further on these aspects.

4.4.4 An evaluation of Montessori's concept of individuality as being geared to the independence of the child

Montessori's idea of independence is in marked contrast to modern views of education that prefer to think that independence is rather gained from the adult-educator, assisting him in varying degrees as occasion requires. Gunter⁹¹ clarifies it thus:

⁹¹. C.F.G. Gunter, in Du Plooy, Griessel and Oberholzer, *Fundamental Pedagogics for advanced students*, pp. 66-67.

In his being a child he is still very dependent and destitute ... he is eager to be assisted and to be accompanied because he can, and wants to become more independent, skilled, competent, experienced disciplined and responsible.

Current educational thought which requires that educators take the nature and ability of each individual child into consideration, suggests that every type of situation will call for a different type of assistance, in accompanying the child towards independence. No fixed formula or method can be prescribed for a situation that may occur due to the individual capabilities of each child's differing capabilities.⁹² It is essential though, that whatever help the teacher gives, should be of the right kind. In order to give the right kind of assistance it is required of the educator to obtain a definite and firm knowledge of the mind and character of the individual child.

In order to evaluate Montessori's views regarding the independence of the child, it is necessary to understand that Montessori viewed independence in conjunction with non-intervention, a concept discussed in the previous chapter.⁹³ By

⁹². Van Rensburg and Landman, *Notes of Fundamental - Pedagogic concepts*, p. 334.

⁹³. See paragraph 3.3.2 which deals with non-intervention and the liberty of the child.

identifying independence with total freedom, and non-intervention on the part of the adult, Montessori contrives to give the idea of independence a perfect medium for total development.

Van Rensburg⁹⁴, suggests that assistance given by the adult-educator consists as much in opposing the individual child's wilful marring of his own educational endeavours, as in giving his blessing to whatever spontaneous acts are in the child's own interests. This in effect means that the adult as a guide must know when to assist and when to hold back with his support. Absolute non-intervention, according to Du Plooy⁹⁵, displays a poor attitude as regards the educator ... proving him or herself to be a disinterested person not worthy of the name educator.

The child is therefore dependent on the adult educators assistance, in gaining his dependence, which as previously discussed⁹⁶ is essential for the child between the ages of six and thirteen. It can be further argued, contrary to Montessorian theory, that essentially necessary educative interventions assist the child to responsible adulthood and independence and thereby directs the child towards establishing a place for himself in life. The individual child will reach the stage when he is no longer dependant on his parents or his teachers for his existence but will be self-reliant. Only then is he truly independent.

⁹⁴. Van Rensburg and Landman, *Notes of Fundamental - Pedagogic concepts*, p. 334.

⁹⁵. Du Plooy, Griessel and Oberholzer, *Fundamental-Pedagogics for advanced students*, p. 124.

⁹⁶ See paragraph 3.4.5

Montessori's premise that assistance is useless and forms an impediment to natural strength,⁹⁷ therefore becomes irrelevant and shows Montessori to be pedagogically rather narrow-minded.

4.4.4.1 The feasibility of applying Montessori's concept of individuality as being geared to the independence of the child in the primary school situation.

While Montessori's theory regarding non-intervention may have some validity, such as curbing too frequent and unnecessary intervention that interferes with the spontaneous activity of the individual child, it has limited validity in the primary school situation in that activity is not limited to the apparatus alone but rather to group classroom instruction. Assistance, by the adult educator, in varying degrees, is necessary in the primary school situation as it is suited to the academic nature of the primary school situation and suited to the individual eventually gaining his independence.

Regarding non-intervention, the researcher ironically obtained first hand confirmation of the value of accountable intervention when he visited a local Montessori primary school.⁹⁸ The directress gave the child explicit instructions on how to complete an exercise using the ten rods.⁹⁹ After the child

⁹⁷. See paragraph 4.3.5

⁹⁸. This information was obtained on 16 March 1994 when the researcher visited the "Village Montessori School", in Irene.

⁹⁹. See paragraph 6.6.1.1

attempted to do the exercise several times, with no apparent success, the directress intervened and gave the child minor assistance. The child, encouraged by the assistance, happily went on to complete the exercise on her own. Although the directress acted contrary to pure Montessorian theory, she demonstrated that non-intervention is not necessarily a pre-requisite for independence, as assumed by Montessori.

4.4.5 An evaluation of Montessori's concept of individuality as related to the use of apparatus

With due regard to the fact that the didactic apparatus will be discussed in greater detail in chapter five, an attempt will be made to show the relationship between the concept under discussion, namely the individuality of the child and the didactic apparatus in terms of its educational validity. When reading this section, which focuses on individuality as related to apparatus, the reader is once again reminded of the manner in which the concept of individuality is so intensely and totally interwoven in all aspects of Montessori's approach to the education of the child that it renders research difficult.

A major concern with the didactic apparatus, is that it overemphasises individuality and provides little or no scope for social togetherness because each child is involved with his own apparatus, with little or no possibility of associating with his fellow beings of similar age. In our modern society, the social aspect is significantly emphasised so that the child may take his

rightful place in society in which he is, after all, made to live.¹⁰⁰ The social aspect must receive attention, for without it the individual child would find it difficult to design his stand in a community. It is therefore reasonable to suggest that Montessori's narrow orthodoxy in the matter of utilising only individualized apparatus over-emphasises individuality at the cost of socialization and is therefore not feasible in the primary school situation.¹⁰¹ The restrictive nature of the apparatus coupled with Montessori's negation of the need for play presents a problematic situation.

John Dewey,¹⁰² (1859-1952) a twentieth century philosopher, emphasised this viewpoint and made it clear that the material that has the greatest social value for the child must be emphasised, while that judged to be socially detrimental to the child must be eliminated.

Individuality, as Montessori envisaged it, emphasised the child working by himself which in itself is not inauthentic, but is not necessarily, as Montessori assumed, the only approach to learning. Promoting individuality at the cost of social togetherness is regarded by this researcher to be inauthentic as the pupil does not receive adequate stimulation from his

¹⁰⁰. Du Plooy, Griessel and Oberholzer, *Fundamental Pedagogics for advanced students*, pp. 150-151.

¹⁰¹. Fynne, *Montessori and her inspirers*, p. 329.

¹⁰². Gutek, *A History of the western educational experience*, pp. 382-385.

classmates, thereby making slower social progress. The importance of social togetherness is strongly emphasised by Duminy and Sohngé¹⁰³:

Individual education ... [as an isolated approach] is also undesirable for certain pedagogic and didactical reasons. Where individual education is given to one pupil he misses precisely that stimulation which he would receive from being in the same learning situation as his contemporaries. Lack of the motivation which is inherent in the learning situation with classmates results in less creative work.

Duminy further contends that the individually taught pupil makes slower social progress than the pupil receiving education as a group.¹⁰⁴ Montessori's approach to the use of the apparatus, which overaccentuates the child working individually, is therefore not pedagogically justified feasible in the primary school situation, as an isolated approach, as it negates social togetherness and makes little provision for the aesthetic and emotional development of the child. Furthermore, the initial years in the primary school situation are most significant for the educator, who needs to realise the vital significance of

¹⁰³. P.A. Duminy and W.F. Sohngé, *Didactics: Theory and practice*, Cape Town: Longman, 1980, pp. 27-28.

¹⁰⁴. *Ibid*, p. 28.

developing social patterns of behaviour in the individual child.¹⁰⁵

One serious objection regarding Montessorian apparatus viewed in terms of individuality, is Montessori's insistence on the use of the didactic apparatus only in the way that she has prescribed it. In so doing Montessori is in fact interfering with the liberty and individuality of each individual pupil and therefore not abiding by her own definition of freedom.¹⁰⁶ The didactic apparatus as an individualised activity forms the principle means of activity in the Montessorian education, but affords singularly little variety.

Montessorian apparatus provides a limited series of exactly distinct and very precise activities that are decisively formal in character. According to Kilpatrick¹⁰⁷, so narrow and limited a range of activity cannot go very far in satisfying the normal child. To this end Fynne¹⁰⁸ argues that Montessorian apparatus provides too little scope for those intelligent children who desire to explore and who seek to discover the hidden possibilities of manipulative materials, but are prohibited from doing so because the apparatus may only be used in one way.

¹⁰⁵. J.A. Hadfield, *Childhood and adolescence*, p. 165.

¹⁰⁶. See paragraph 5.4.3

¹⁰⁷. W.H. Kilpatrick, *Montessori examined*, London: Constable and Company, 1915, p. 41.

¹⁰⁸. Fynne, *Montessori and her inspirers*, p. 330.

Fynne¹⁰⁹ suggests the following remedy:

For this greater freedom and fuller expression there is required much more and varied material for the exercise of creative or constructive activities, much more that would readily lend itself to considerable alteration and adaption by the thoughtful child.

Dorothy Canfield Fisher,¹¹⁰ one of Montessori's most adherent disciples in modern times, also intimated on the limitations of Montessori's apparatus in our present day society. She noted that even though the Montessori apparatus is extremely valuable, it is not enough even in the pre-school situation.

Montessori is correct that unnecessary and ill-timed intervention could be harmful to an otherwise healthy and constructive programme of self-development. However, while it is widely accepted that self-correction and self-evaluation are sound principles, the decisions that the child needs to make often require adult endorsement to motivate the child to proceed with the activity.

It is not in any way suggested that the adult-educator in the primary school situation should always be there to tell the child exactly what to do, nor is it implied that the individual child

¹⁰⁹. Ibid.

¹¹⁰. Fisher, *The Montessori manual for teachers and parents*, pp. 121-122.

should be left entirely to himself, but a careful observation on the part of the educator is required so that the situation should be carefully monitored. With regard to the primary school situation, it is the viewpoint of modern educators that the monitoring should lead to the adult being able to assist the child, contrary to Montessori's views, at the right time in the activity if assistance is needed.

4.4.5.1 The feasibility of applying Montessori's concept of individuality as related to the use of apparatus in the primary school situation

This chapter has revealed that the use of apparatus can play an important role in catering for the individual needs of the child.

In chapter 5 it will be shown that with the reconstruction of education in the junior primary phase of the primary school in 1993, apparatus for the training of the senses and motor education, based on Montessorian theory, has successfully been introduced.

In addition to existing didactic apparatus used in the formal education situation, both of Montessorian and modern origin, children in the primary school should be exposed to a great deal of other apparatus or articles in daily use, in their natural everyday environment, such as spades, small wheelbarrows, tools, scrubbing brushes and vacuum cleaners to cater for individual needs. Fisher states that if the individual child is initiated

in exercises related to these everyday tools at a young age, he will not have a shirking, lazy irresponsible attitude to life when he is older.¹¹¹

Teachers in the primary school situation need to create opportunities for individual self-discovery by means of relevant apparatus in order to ensure that each individual child realises his potential to the maximum. Montessorian apparatus can furthermore be modified and extended to enrich individual children in the primary school situation. The implications for our changing educational structures are vast. The following guidelines are suggested:

(a) Individuals with learning difficulties

Educational conditions in present-day South Africa reveal that many individual children of varying cultures display serious learning and sensorial disabilities as a result of educational deprivation and under stimulation in their formative years, especially where ethnic and cultural groups are now interspersed in a common, formal educational situation for the first time in the history of South Africa. The fact that schools are open to all races, presents somewhat of an immediate problem with regard to educational differences and disabilities because of a backlog created by education experienced in a foreign cultural setting. It is, however, exactly in this setting that Montessori

¹¹¹. Fisher, *The Montessori manual for teachers and parents*, p. 121.

experienced her greatest success, and against which her didactic materials were structured.

The same success enjoyed by Montessori in the Casa dei Bambini with underprivileged children can be achieved with children with learning defects by using Montessorian based apparatus such as the "Audiblox" (see plate 4.2).¹¹² This set of didactic remedial apparatus, which has been designed by Dr. Jan Strydom of the University of Pretoria, is used to inculcate basic concepts and skills which are necessary for successful school entry and for sustained achievement at school. The apparatus sharpens attention, develops accurate perception, improves memory and promotes logical thinking. The programme improves reading and spelling ability to such a degree that it presents a solution to dyslexia

The teacher, however, is the responsible person who must identify, research and experiment with didactic apparatus in order to decide whether such apparatus is valid in the primary school situation, or whether it is inauthentic and worthless. According to Strydom the apparatus can be used as an effective remedial programme helping to improve the individual child's achievement in all subjects.¹¹³

Montessori's individualised material, along with other modern apparatus, could be effectively utilised in a bridging class for

¹¹². *Remedium Bulletin*, Volume 7(3), p. 1

¹¹³. *Ibid*, p. 5.

PLATE 4.3 EXAMPLE OF MODERN APPARATUS (AUDIBLOX)¹¹⁸

THAT MAY BE USED IN CONJUNCTION WITH MONTESSORIAN
APPARATUS

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te soos kan leersproke op skool
voorkom word.

Tersy in leersproke (audiobloks) groen-
325 "oudskool" is, vind die leersproke
die leersproke om sy probleem weg te
werk. Vir leersproke nou kous van die
leersproke HANXELSTOP was nou 'n
speler van leersproke (audiobloks) is.

Onderskryfing wat gebruik is oor die
werking van die leersproke (audiobloks) vir die
leersproke (audiobloks) leersproke op die ge-
bruik van leersproke. Wat gebruik is die
leersproke van leersproke (audiobloks) is, is leers-
proke. Die leersproke word nou ge-
bruik om die leersproke (audiobloks) van
sy leersproke, te versterk.

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aimed at the evolution of basic concepts
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bilities of development to both the gifted
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To the adult student it can be of very
great value, as it develops memory (both
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a very high degree, while it can also be
used for the pre-school child from an ear-
ly stage (two years of age). AUDIBLOX is an
excellent programme for the purpose of
preparing the pre-school child and the
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AUDIBLOX is indispensable in the
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through regular and continued use of
AUDIBLOX. Even children who are com-
pletely dyslexic can be helped to overcome
this problem completely.

Improvements of as high as 100% in
actual achievement have already been ob-
tained through the use of AUDIBLOX.
AUDIBLOX can be used by any par-
ent or home. Dr. Strydom also
recommends it for use in schools for be-
ginner classes and remedial classes, as
well as for (senior) students (even he used
individually as well as in a group).

As a rule, children enjoy AUDIBLOX.
They regard it as a pleasant game, with
a special challenge, which stimulates the
child's sense of achievement. In this way,
it develops the child's self-confidence in
the learning situation.

NEW HOPE FOR THE 40 000 STUTTERS IN SOUTH AFRICA

A breakthrough has been achieved by Dr
Jan Strydom of Pretoria which brings
new hope to the 40 000 mainly white
males who suffer from this speech
problem.

While studying for his doctoral thesis in
Portugalia Dr Strydom solved a mystery
which has long troubled researchers on the
subject. "One day in 1978 I suddenly be-
came clear to me what it is that causes
a stutter. I immediately set to work in an
endeavour to find ways and means of
eradicating this cause.

"My first patient was the daugh-
ter of one of my former colleagues. She
had been struggling for years to get rid
of her stutter.

"I am not sure whether the child's par-
ents were aware of it, or whether I
was, after the success of one first week
of help according to this idea."

Inspired by this initial success, he con-
tinued with his efforts. Gradually more
successes followed.

Now his solution has been standardized
into a practical course, viz. STUTTER-
STOP, developed through years of
research, which promises a significant im-
provement in self-confidence and in most
cases, a new life-style for the hap-
pily stuttered students.

STUTTERSTOP is a course that runs
over a minimum of four weeks. The
course consists of exercises that must be
done in the morning, as well as tapes that
must be listened to at night. The student
will spend about 20 minutes in the
exercise in the morning and about 30
minutes to listen to the tapes.

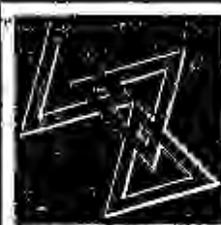
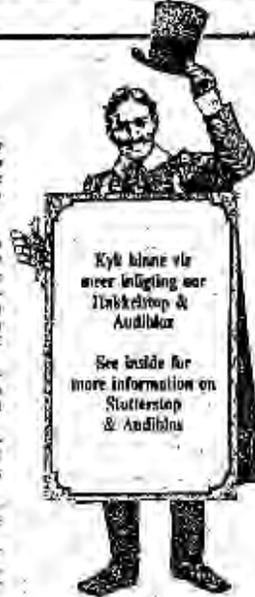
Many students have expressed their
delight with Dr Strydom's methods. One
of them is the 35 year old Mr. Berman,
who has been working on the STUTTER-
STOP course for two months. "A man
who has been stuttering for so long
I find it difficult to break the habit. There
is, however, a very noticeable improve-
ment in my speech."

Another student is the student Mr. van
der Merwe, who had been a stutterer since
the age of three. All efforts to rid him
of this embarrassing speech impediment
had proved to be in vain.

"That was until I met Dr Strydom
and started using his revolutionary
methods in the STUTTERSTOP course.
Within only a few days a remarkable im-
provement occurred in my speech."

"Suffice it to say that I have completed the
course, I am now completely rid of my
stutter. It is a wonderful feeling to be
able to speak without stuttering," he
says.

Not all students are so fortunate to
make such rapid progress, says Dr. Stry-
dom. "The course is no magic formula
or instant cure for stuttering. In some
cases it may require up to a year
to overcome a stutter. Most students,
however, start improving during the
course of the second month of the STUT-
TERSTOP course."



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See page 2

struggling pupils to get back into mainstream education with similar successful results as Montessori achieved.

The obvious aim of remedial teaching is to advance learning by using special didactic apparatus suited to the child's individual needs, taking into account his individual capabilities.¹¹⁵ In order to implement such an extensive programme, the teacher must firstly get to know the individual child and ascertain the exact nature of his learning impediment. Once the exact problem has been established, then individualized didactic apparatus can be assigned to the individual in order to bridge the gap between the child and his peer group. This can either be done after the actual lesson has taken place or when the teacher feels that the child is no longer benefitting from the existing instruction.

In contrast to the Montessorian point of view which often limits possibility, one needs to retain open mindedness with regard to the existing and modern apparatus and put that to the test. Much of the individualized material that is available on the market has been used with great success.

(b) Individual differentiation

The point of departure concerning individual differentiation is this: Not only does every individual child differ from every other child, but, not being a fixed and inanimate object, he is

¹¹⁵. Q. Cosford, *Remedial teaching. A practical guide for class teachers and students*, second edition, Cape Town: Maskew Miller Longman, 1990, p. 12.

in a constant state of flux and differs from himself from day to day as he grows. His attention, his memory, his mental endurance, his intellectual interest are not only unlike those of the child next to him in school, but will tomorrow be different from what they are today.¹¹⁶

It is the principle of differentiation - the grading of work into levels achievable by each individual on his own level - where Montessorian education finds its greatest merit - for the whole system of Montessorian education is founded on the basic principle of auto-education.

The latter view is supported by P. Van Zyl¹¹⁷ who states that the individual child, like the individual adult, possesses abilities enabling him to transcend limits that may prove insuperable to another. Likewise, one human being may have deficiencies keeping him from the success enjoyed by the majority of his fellows. Taking cognisance of the child's own individual capacity for success or failure is of tremendous significance in ensuring that the child progresses at his own possible pace and in accordance with his own unique and individual abilities. The adult educator therefore needs to be a differentiating educator, especially when deciding what apparatus a child should use.

¹¹⁶. Fisher, *The Montessori manual for teachers and parents*, pp. 18-19.

¹¹⁷. Du Plooy, Griessel and Oberholzer, *Fundamental pedagogics for advanced students*, p. 48.

Two ways of individual differentiation are suggested by the researcher. Firstly, in the form of a bridging class for pupils impeded with a learning difficulty holding them from mainstream education and, secondly, with children who are unable to keep up with the normal pace of the classroom instruction. Modern trends in South Africa, indicate a move towards a forty-to-one relationship between pupils and teacher respectively with the included proviso that principals need to be willing to exceed this number, in the case of the imperative not to deny every child his right to education.¹¹⁸ Clearly, traditional methods of teaching cannot accommodate successfully these kind of numbers. However, the researcher suggests that elements of Montessorian strategies are ideally suited to this contingency. Here the child intrinsically accommodates his own pace, and confirmation and reinforcement by the teacher in turn, accommodate individual children. Hence, although the onus remains on the teacher to structure the learning environment, as a facilitator, the teacher's actual time constraints are far more flexible.

Hypothetically it could be argued that if the teacher were to concentrate on the one pupil who cannot keep up with his peers, thirty nine pupils would sit passively waiting their corporate turn to benefit from the teacher's expertise. Seen in another light thirty nine could benefit from the teachers expertise while, the one individual child experiencing difficulty could concentrate on remedial work in a demarcated area, using

¹¹⁸. Office of the M.E.C., P.W.V., *Draft document*, Enrolment of pupils at schools in the P.W.V. province for 1995, Annexure A, p. 4.

individualised apparatus suited to his particular needs.

It should also be borne in mind that pupils who finish their class work ahead of the others can also be taught by means of appropriate apparatus. Viewed in this perspective the use of apparatus takes on a supplementary role and becomes a useful tool in sharpening the awareness of certain basic abilities such as visual and auditory perceptual skills.

4.5. Concluding remarks

From the preceding paragraphs, it is quite obvious that not all Montessori's ideas regarding individuality are valid in the primary school situation. There seems to be a slant of ambiguity in Montessori's concept of individuality, by which she often reasons away some of the more vital issues; such as teacher assistance. As pointed out, the idea of non-intervention is narrow-minded, and not feasible in the primary school situation. It is also obvious that certain aspects such as self-discipline and self-discovery, that Montessori practised have already been implemented in principle, though they may not be in exactly the same form as Montessori practised them. Montessori must be credited on the sensible arrangement of the environment, wherein the child is granted greater opportunity for the assertion of his individuality and where his independence is displayed in a more responsible manner.

Because the ideas of Montessori concerning the individuality of the child being supported by apparatus are already often

implemented in the primary school situation there is little reason to dwell on them as their validity is already substantiated through their application in the current primary school situation. However, it must be borne in mind that researchers and educators alike have provided the educational field with countless apparatus, based on Montessorian principles, that can be successfully utilised to provide adequate sense training, remediation and enrichment so necessary for advancement to responsible and independent adulthood.

CHAPTER FIVE

CHAPTER 5. MONTESSORI'S VIEWS REGARDING THE TRAINING OF THE SENSES AND THEIR FEASIBILITY IN THE PRIMARY SCHOOL SITUATION

5.1 Introduction

According to Montessori, the period of life between the ages of three and six years, is characterised by rapid physical growth, and the building up of the sensorial-mental faculties. In addition it is a period characterised by intense emotional feelings and the establishing of major thought patterns. During this period, the sensorial-mental faculties of the child are particularly sensitive to intense stimulation and the child's attention is directed towards the observation of his surroundings.¹

It is in this area of rapid physical, emotional and mental change that Montessori is best known for her design of sensory training by means of "synthetic intellectual functions".² A major portion of Montessori's philosophy is concerned with the training

¹. M. Montessori, *The discovery of the child*, translated by M.A. Johnstone, India: Kalakshetra Publications, 1958, p. 188.

². After perusal of Montessori's didactic practices, the researcher presupposes that the term "synthetic intellectual functions", can be defined as functions of learning which are not natural or innate but rather the direct result of deliberate intellectual stimulation in a structured educational environment. Publications Committee of the National Association for the Education of Young Children, *Montessori in Perspective*, Washington: NAEYC, 1966, p. 14.

of the senses and she thus devotes much of her research and time to this topic. This chapter of the research therefore focuses on the third major pillar of her doctrine, namely the training of the senses.³

In order to gain greater clarity with regard to the topic under discussion it is, however, necessary to ascertain Montessori's aims with regard to sense training, and to realise that the concept of sense training was advocated by educators prior to Montessori. Therefore, this aspect will be dealt with in order to facilitate a logical presentation of facts and to ascertain the continuity between Montessori's aims, the objectives of her predecessors and, ultimately, the feasibility of applying Montessorian concepts in the primary school situation.

5.2 Sense training was advocated by different educationalists prior to Montessori.

The concept of sense training, as advocated by Maria Montessori, was not entirely of her own making and design, but was the focus of many great and prominent educationalists, including John Locke (1632-1704), Jean-Jaques Rousseau (1712-1778), Friedrich Froebel (1782-1852) and Montessori's direct predecessors, Jean Itard⁴

³. The other two pillars of Montessorian doctrine, are that of the liberty of the child and of individuality, discussed in chapters three and four respectively. See paragraph 1.3.1.2 for greater clarity on the three pillars of Montessorian theory.

⁴. See paragraph 2.4.1.2

(1775-1838) and Edouard Seguin (1812-1880) to which Montessori added her exclusive notions begotten of her own experience.⁵

5.2.1 John Locke (1632-1704)

The mode of thought and the approach to education which Locke, an English philosopher and physician, advocated were more influential than any others in their contribution to the comparatively settled life of the eighteenth century.⁶ He realised that all the materials of thinking must first come through the senses.⁷ In his "Essay concerning human understanding", Locke writes that "since there appear not to be any ideas in the mind before the senses have conveyed any in, I conceive that ideas in the understanding are coeval with sensation, which is such an impression or motion made in some part of the body as produces some perception in the understanding."⁸ According to Locke, there are no inherent ideas or notions because the child is at birth a *tabula rasa* (a clean slate) on which experience writes its history.

⁵. See paragraph 2.4.1.3

⁶. R.R. Rusk and J. Scotland, *Doctrines of the great educators*, Great Britain: Macmillan Press, 1979, p. 80.

⁷. R.J. Fynne, *Montessori and her inspirers*, London: Longman's, Green and Company, 1924, p. 2.

⁸. J. Locke, *Essay concerning human understanding*, edited by J.W. Yolton, Everyman, p. 92.

Although Locke makes frequent mention of the senses, and presents their development as a major concern, the researcher finds no indication of Locke having a definite methodology with regard to an education based on the senses.

5.2.2 Jean-Jaques Rousseau (1712-1778)

Rousseau was directly influenced by the philosophy and to some extent the sensationalist psychology of Locke. The educational ideas of Rousseau could therefore be considered a development of Locke's, whose concepts are often to be found in Rousseau's works. In Rousseau's famous treatise on education, "Emile", Locke's name is often quoted in response to aspects of sensory education, considered to be important by Rousseau.⁹

Rousseau, like Montessori, regarded the act of education not as a process of passive learning and memorization, but rather of active sense perception. However, due to his aversion to book learning he exaggerated the value of sense training and though he suggested certain activities for the sensory development of the child, his contribution to the training of the senses was by no means phenomenal.¹⁰

⁹. J.J. Rousseau, *Emile, or treatise on education*, abridged, translated and annotated by W.H. Payne, New York and London: D. Appleton and Company, 1926, p. 52.

¹⁰. University of South Africa, Department of History of Education, *History of Education: tutorial letter 104/1991 for Edu 201-P*, Pretoria, 1991, p. 14.

5.2.3 Friedrich Froebel (1782-1812)

Froebel, like Rousseau, believed that children should be able to grow up naturally, unfettered by unnatural and superfluous adult constraints. The theory that Froebel formulated, with its methodology and principles, still has a most profound influence on pre-school education, as it is grounded in the belief that children develop their senses through self-activity.¹¹ Froebel, (whose ideas can be traced back through Pestalozzi to Rousseau), valued play as a means of self-expression and encouraged a stimulating environment, believing that through free activity the child would develop his feelings and senses in a spontaneous and genuine manner.¹² Many of the sensory exercises done by the children in a Montessorian environment are distinctly Froebelian in conception, namely, that of sewing mats and the use of cubes and bricks.¹³

¹¹. Fynne, *Montessori and her inspirers*, pp. 6-7.

¹². L.C. Wynsouw (scholar 1913-1914), *Report on the Montessori system of education*, Johannesburg: University of the Witwatersrand, 1915, p. 5

¹³. Publications Committee of the National Association for the Education of Young Children, *Montessori in perspective*, Washington: NAEYC, 1966, pp. 9-11.

5.2.4 Edouard Seguin (1812-1880)

Edouard Seguin, the disciple of Itard,¹⁴ had most successful results with the education of the Savage of Aveyron, which was specially valuable as it showed the value that Seguin attached to the training of the senses. This is confirmed in the following testimonial written in Seguin's favour by two of the greatest medical authorities of the time, namely, Esquirol and Guersant:

In eighteen months M. Seguin has taught his pupil to make use of his senses, to take care of himself, to speak, to write, to reckon, etc.¹⁵

Seguin's viewpoint is based upon the fact that he believed in the significance and value of the pupil as a living organism. According to Seguin the pupil is an entity with body and mind, reflexes, instincts, senses, muscles and nerves, intellect, feeling and will, which are all unified.¹⁶ In order that the child may develop to his greatest efficiency, with education as the vehicle, the process must be initiated with the development of muscular and sensational powers, for the obvious reason that the nervous system as the controlling organ of the body can only be reached in this way.¹⁷ Seguin had a most profound influence

¹⁴. See paragraph 2.4.1.2

¹⁵. Fynne, *Montessori and her inspirers*, pp. 132-133.

¹⁶. *Ibid*, p. 144.

¹⁷. *Ibid*.

on the shaping of Montessori's philosophy regarding sense training and played a prominent role in developing her theory.

5.3 Montessori's aims with regard to the training of the senses

According to Montessori, the primary (overall) aim of education is twofold, biological and social. The biological objective is to help the child to unfold, as a physical being, in his natural development en-route to adulthood, while the social aim for Montessori (in contrast to its traditional meaning) is to prepare the individual for interaction with his physical environment. Montessori's aim with regard to *the training of the senses* is of utmost importance for biological and social development, as she sees it, especially if one considers the following statement made by Montessori;

The education of the senses is of the highest importance for both purposes [biological and social]; the development of the senses precedes that of the higher intellectual powers, and in the child between three and six years of age, it is in the formative period.¹⁸

Considering the above statement, we can assume that Montessori attaches great importance to sense training, mainly because the

¹⁸. Montessori, *The discovery of the child*, pp. 187-188.

biological, social (interaction with the environment) and intellectual development of the child is firstly dependent on the training of the senses. It can be deduced that Montessori regards sense training as a basis and foundation for higher intellectual study that will come later in the child's life, commencing with the primary school phase of the child's life.

A careful scrutiny on Montessori's views on sense training will reveal that she regards the training of the senses in a very serious light. According to Montessori:

The education of the senses has, as its aim, the refinement of the differential perception of stimuli by means of repeated exercises.¹⁹

To the student of education analysing Montessori's views, her aim with regard to the training of the senses is embedded in the improvement and refinement of the senses which will undoubtedly lead to the enrichment of the intelligence and character of the child in the years preceding formal primary school education.

A secondary aim of sense training, identified by Montessori, which is further dependent on biological and social development, is that of establishing order (logicality) in the mind and world of the child. This aim has particular relevance to this study as

¹⁹. M. Montessori, *The Montessori Method. Scientific pedagogy as applied to child education in "the children's houses"*, translated by A.E. George, London: William Heinemann, 1937, p. 173.

it has particular value for the primary school situation. Montessori associates this aim in terms of the use of apparatus, as the latter would result in the formation of intrinsic discipline that leads the child to responsibility, which would promote the establishing of order (logicality) in the child's mind. According to Montessori:

The aim [of establishing order in the child's mind and world] is an inner one, namely, that the child train himself to observe; that he be led to make comparisons between objects, to form judgements, to reason and to decide; and it is in the indefinite repetition of this exercise of attention and of intelligence that a real development ensues.²⁰

During the formative years, (0-6) filtering into the primary school years, the child is exposed to a host of impressions and experiences and has accumulated a wealth of information in his subconscious mind which needs to be organized. It is at this junction that Montessori announces her major objective with regard to the training of the senses, which incidentally embraces Seguin's aim, namely, to lead the child from sensations to ideas - from the concrete to the abstract.²¹

²⁰. M. Montessori, *Dr. Montessori's own handbook*, U.S.A: Robert Bentley, 1964, p. 33.

²¹. Montessori, *The Montessori method*, p. 226.

5.4 Particular characteristics relating to Montessori's concept of sense training

5.4.1 The training of the senses implies differing developmental periods during the child's life

According to Montessori²² (who quotes psychologists of her time, though she makes no mention of their names), there are different and distinct *developmental periods* in the course of the child's life, corresponding curiously to different phases in the development of his physical body. The first period goes from birth to six years and may be termed "the period of major transformation". This period is subdivided into two sections, namely, from 0-3 years, which displays a mentality that is unapproachable by the adult who, according to Montessori, can exercise no [little] influence over it.²³ From 3-6 years of age, the psychic entity becomes approachable and great psychological and physical transformations take place in the individual, which allow him to be school ready at the end of this period. The second period, from 6-12 years of age, may be termed "the period of uniform growth" or the "second stage of childhood". This period is mainly one of physical growth but, according to Montessori, no phenomenal psychological transformations occur. According to her, the child remains serene and docile during this

²². M. Montessori, *Education for a new world*, India: Kalakshetra Publications, 1959, pp. 14-15.

²³. *Ibid*, p. 14.

phase.²⁴ A third period, from 12-18 years of age, is identified as "the period of unsteady transformation" and is again characterised by transformations, both physical and psychological.²⁵

Researchers can find numerous references in Montessori's works where she makes lengthy and direct references to these three developmental periods. Montessori's aim with the didactic material, namely, the acquisition of a fineness of differential perception, can be obtained only through auto-education²⁶, mainly during the "period of major transformation".

²⁴. *Ibid*, p. 15.

²⁵. *Ibid*.

²⁶. Self-teaching by the child using the didactic material. See paragraph 5.4.3.1 (a)

5.4.2 The theory of sense training implies the existence of sensitive periods in the child's life

Apart from developmental periods, Montessori often refers to sensitive periods²⁷ which are periods usually manifested within the first developmental period, namely the "period of major transformation".²⁸

5.4.2.1 The concept "sensitive periods"

Sensitive periods are described by Montessori as periods corresponding to special sensibilities found in "creatures" [children] in the process of their development. Such periods are characterised by an impulse or an attraction in the environment which later disappears and is replaced by a different impulse.²⁹

Venturing to be more definite, Standing,³⁰ supplies a more suitable definition of sensitive periods, which appears to clarify Montessori's definition. According to Standing, the child as a living organism, is faced with certain elements in the environment, which at certain times in the child's development, present irresistible impulses calling for well-defined activi-

²⁷. See paragraph 5.4.2.1

²⁸. See paragraph 5.4.1

²⁹. M. Montessori, *The secret of childhood*, translated and edited by B.B. Carter, London, New York and Toronto: Longman's, Green and Company, 1936, p. 39.

³⁰. E.M. Standing, *Maria Montessori: Her life and work*, London: Hollis and Carter, 1957, p. 100.

ties. These periods are transitory and serve to help the child acquire certain functions, or determined characteristics, which, when accomplished, die away and are replaced by other and quite different sensibilities.

Standing, however, focuses on the interpretation of Montessori's concept of the senses, and confirms that the child exercises his senses corresponding to the needs of his present sensibility. The child advances and reaches a degree of perfection with the activity or task that he is faced with and which is inimitable in other moments of life. At such times he will accomplish, quite spontaneously, labours of patience and industry which are truly astonishing.³¹

Viewed from another angle, children at particular stages of their life reveal an intense and extraordinary interest in certain objects and exercises, which one might look for in vain at a later age.³² Claremont³³ has much the same in mind when he states that in each sensitive period, it would appear that nature is busy constructing some particular power which will then serve as a support for the next sensitive period.

³¹. E.M. Standing, *The Montessori method. A revolution in education*, California: Academy Library, 1962, p. 37.

³². Standing, *Maria Montessori: Her life and work*, p. 100.

³³. C.A. Claremont, *Montessori education - the hope of the future*, Offprint from *Communications*, Association Montessori Internationale: 1962-1964, seventh printed page.

5.4.2.2 The theoretical basis of sensitive periods in the child's life

According to Montessori, the child moves through three developmental periods until he has reached the norm of the species at the age of eighteen.³⁴ It is essential to understand how Montessori links the "period of major transformation" (0-6 years) to the concept of "sensitive periods", which in turn has implications for the training of the senses.

According to Montessori, the child falling in the age group of three to seven³⁵, which extends into the junior phase of the primary school, experiences a structured environment intensely and stimulatingly (though according to her classification of developmental periods it would seem that intense and stimulating experience takes place mainly during the first developmental period which figures from the ages of 0-6 years). It is therefore essential that his senses be developed to their fullest capacity, in order that a structured foundation be prepared, upon which a clear and strong mentality may be built³⁶. In order to achieve this end, according to Montessori, the teacher needs to be aware of the following sensitive periods (deduced by Orem³⁷, from

³⁴. Montessori, *The Montessori method*, p. 217.

³⁵. Montessori, *Education for a new world*, pp. 14-17.

³⁶. *Ibid.*

³⁷. R.C. Orem (ed.), *Montessori: Her method and the movement - what you need to know*, New York: Capricorn Books, G.P. Putnam's Sons, 1974, p. 128.

Montessori's works) in which sense training can take place at an appropriate educational moment:

- Birth to three years - absorbent mind/sensory development
- One and a half to three years - language development
- One and a half to four years - co-ordination and muscle development/interest in small objects
- Two to four years - Refinement of movement/concern with truth and reality/awareness of order sequence in time and space
- Two and a half to six years - sensory refinement
- Three to six years - susceptibility to adult influence
- Three and a half to four and a half years - writing
- Four to four and a half years - tactile sense
- Four and a half to five and a half years - reading

However, there is no reason to assume that these are the only sensitive periods that occur, nor is there any reason to assume that the sensitive periods are strictly served by the above-mentioned time brackets, within the "period of major transformation". Montessori herself states that between the ages of six and twelve years a psychological sensitive period for culture exists, during which the abstract structure of the human mind needs to be organized.³⁸ Establishing the abstract structure of the mind is, however, dependent on sense training experienced earlier during the formative years and could

³⁸. M. Montessori, *From childhood to adolescence*, New York: Schocken Books, 1973, p. 132.

therefore, also be viewed as being responsible for fulfilling meaningful adaptation to the present generic epoch of civilisation, which, inter alia, implies a meaningful integration into practical life.³⁹

Montessori states that the sensory didactic apparatus has been designed to correspond to the appropriate sensitive moment, thereby fulfilling the need for education at that particular sensitive moment in the life of the child. In order to present this form of education, it is necessary to understand and have a clear vision of the implementation of her sensory didactic material.⁴⁰

5.4.3 Sense training implies the implementation of didactic apparatus or sensory material

Orem⁴¹, a contemporary disciple of Montessori, defines the Montessori didactic material as a systematic array of objects resembling learning games, each of which is carefully designed to attract the spontaneous attention of the child and teach a particular educational skill. The material lends itself to manipulation, thereby enabling the learner to proceed success-

³⁹. Montessori, *The discovery of the child*, p. 189.

⁴⁰. See plate 5.1

⁴¹. Orem (ed.), *Montessori: her method and the movement - what you need to know*, pp. 28-29. See also the section under "acknowledgements". Orem's definition of Montessorian apparatus can be considered as authentic as it was derived from the contributions of approximately one hundred Montessorian organizations and facilities.

fully on his own. However, before the material is presented to the child, prior training is essential for the teacher because of the complex nature of the material. (Plate 5.1 provides the contents of the Montessori material, while plate 5.2 is a photograph of all the Montessori didactic apparatus).

With regard to the didactic material for the training of the senses, Montessori personally defines the complexity of the didactic material:

Our sensory material, in fact, analyses and represents the attributes of things: dimensions, forms, colours smoothness or roughness of surface, weight, temperature flavour, noise, sounds. It is the qualities of the objects, not the objects themselves, which are important.⁴²

The material or apparatus furthermore proceeds on different levels. In the first place it advances from the concrete to the abstract, from the simple to the complex, as the child moves within the environment and within particular sensitive periods. Furthermore, the child is at liberty to discover creative and ingenious ways of using the material. Montessori calls this "intelligent modification."⁴³ This view, however, appears to be

⁴². M. Montessori, *Spontaneous activity in education*, New York: Schocken Books, 1965, p. 203.

⁴³. Orem (ed.), *Montessori: Her method and the movement - what you need to know*, p. 29.

PLATE 5.1 A TABLE OF THE DIDACTIC MATERIAL FOR THE
TRAINING OF THE SENSES.⁴⁴

- * Three sets of solid insets
- * Three sets of solids in graduated sizes, comprising:
 - (1) Pink cubes
 - (2) Brown prisms
 - (3) Rods: (a) coloured green (b) coloured alternatively red and blue.
- * Various geometric solids (prism, pyramid, sphere, cylinder, cone, etc.)
- * Rectangular tablets with rough and smooth surfaces.
- * A collection of various "stuffs" [Stuffed material objects].
- * Small wooden tablets of different weights.
- * Two boxes, each containing sixty-four coloured tablets.
- * A chest of drawers containing plane insets.
- * Three series of cards on which are pasted geometrical forms in paper.
- * A collection of cylindrical closed boxes [for teaching sounds].
- * A double series of musical bells, wooden boards on which are painted the lines used in music, small wooden discs for the notes.

⁴⁴. Montessori, *Dr. Montessori's own handbook*, pp. 18-19.

PLATE 5.2 MONTESSORI'S DIDACTIC MATERIAL FOR THE TRAINING OF
THE SENSES.⁴⁵



⁴⁵. Poster displayed at "Village Montessori School", in Irene.

in contradiction to Montessori's general philosophy of liberty as she did not want the child to use the material in ways not prescribed by her, such as playing with the material.⁴⁶

Although similar material to the sensory didactic apparatus was used in the initial education of deprived children in the Casa dei Bambini⁴⁷, Montessori later abandoned a large percentage of her didactic material and other material was modified for the teaching of normal children. According to De Beer, Montessori was constantly experimenting, modifying and adapting her didactic material to suit the needs of the children.⁴⁸

An important deduction made by Montessori and one which must be borne in mind by the reader, is that the didactic material is adapted to train the senses rather than measure the senses. The latter implies an attempt to discover the level of sense ability that the child possesses through means of psychometric tests. Montessori's material on the contrary, does not permit a measuring of the senses, but rather is adapted to the exercising and training of the senses.⁴⁹ A careful scrutiny of her educational philosophy reveals three essential features related to the use of this material, namely, that of auto-education, that of graded

⁴⁶. W.H. Kilpatrick, *Montessori examined*, London: Constable and Company, 1915, p. 42.

⁴⁷. See paragraph 2.4.2

⁴⁸. D. De Beer, Education the Montessori way, *Pretoria News*, August 12, 1983. See Plate 5.3.

⁴⁹. Montessori, *The Montessori method*, pp. 168-169.

stimuli and finally that of repetition, which are discussed in paragraph 5.4.3.2

5.4.3.1 Essential features related to Montessori's sensory didactic apparatus

(a) The use of the apparatus implies auto-education

Auto-education utilises a form of differentiation and suggests that Montessori recognised the differing abilities of each child, taking into account the ability of each, unique individual. Montessori furthermore affirms that such a process of differentiation is governed by the all-embracing objective of helping the natural psychic and physical development of the child.⁵⁰ The Montessori sensory didactic material is arranged in such an order that if the child makes a mistake he is able to correct it himself. It therefore renders auto-education possible, because it presents control of error functions. Through trial and error and by means of graduated stimuli, the child is afforded a methodical education of the senses. Sensory auto-education, according to Montessori, leads to a perfecting of the child's psychosensory processes and lays the foundation for intellectual education. According to Montessori:

The material control of error leads the child to apply to his doings his reasoning power, his critical faculty, and that attention which grows

⁵⁰. *Ibid*, p. 217.

more and more interested in exactitude ... In this way the mind of the child is prepared to control errors, even when these are not material and apparent to the senses.⁵¹

Furthermore, the educative act is based on the principle that the control of error lies in the material itself, and that the child has concrete evidence of his error. The complex work of the child's own intelligence leads the child to the desired correction.⁵² Montessori insists that the aim of auto-education is to lead the child in knowing how to perform an exercise.⁵³

- (b) The use of the apparatus implies the application of a rational gradation of stimuli

While the normal child would be subjected to stimuli that are more difficult to differentiate, for deficient children (currently termed "children with learning difficulties"), Montessori suggests that it would be necessary to start with exercises in which the stimuli were clearly and definitely contrasted. For children with learning difficulties, for example, the shortest rod is presented alongside the longest rod, the thinnest besides the thickest and the rough against the smooth. Only after many other initial and straight-forward exercises have

⁵¹. Montessori, *The discovery of the child*, p. 148.

⁵². Montessori, *Dr. Montessori's own handbook*, p. 33.

⁵³. *Ibid.*

been attempted, the "deficient" child will be allowed to perform exercises which contain stimuli which are less differentiated.⁵⁴

In the teacher's preparation for the lesson she needs to break the lesson into steps which follow each other in sequence, working from the easiest step in the apparatus to the most difficult. Montessori referred to this as the "isolation of difficulty"⁵⁵

- (c) The use of the apparatus implies a spontaneous repetition of exercises

In order for the didactic apparatus to be utilized to its fullest, the material has to lend itself to repetition. Herein lies the difficulty in the selection of the didactic material, for on the one hand the repetition of exercises must exercise the senses, while on the other hand the repetition must not annoy or bore the child to the extent that he loses interest in the apparatus.⁵⁶ The nature of the child will, however, determine the frequency of repetition. Montessori justifies this statement:

Normal children repeat such exercises many times.
This repetition varies according to the individual.
Some children after having completed the exercise

⁵⁴. Montessori, *The Montessori method*, p. 170.

⁵⁵. L.L. Gitter, *The Montessori way*, Washington: Special Child Publications, 1970, p. 55.

⁵⁶. Montessori, *The Montessori method*, p. 173.

five or six times are tired of it. Others will remove and replace the pieces at least twenty times, with an expression of evident interest.⁵⁷

In order for the function of repetition to be truly understood Montessori compares the function of repetition to that of a pianist, who through constant practice and repetition, masters the art of piano playing. The pianist must, however, learn to act for himself and the more his natural tendencies lead him to persist in these exercises the greater will be his success.⁵⁸

In addition Montessori was aware that the child, at certain and differing moments in the learning process, displays a love of repetition and gets immense joy from the repetition of exercises. He repeats what he has learned an indefinite number of times with evident satisfaction; he enjoys doing things, because in this he is strengthening his knowledge and building moral power [qualities] such as persistence and perseverance.⁵⁹ The outcome of such repetition is that he learns to make comparisons between objects, to form judgements, to reason and decide; and it is through the indefinite repetition of exercises of attention and of intelligence that a real development ensues.⁶⁰

⁵⁷. *Ibid*, p. 173.

⁵⁸. *Ibid*, p. 176.

⁵⁹. Orem (ed.), *Montessori: Her method and the movement - what you need to know*, p. 72.

⁶⁰. Montessori, *Dr. Montessori's own handbook*, p. 33.

Claremont,⁶¹ has much the same in mind when he says that through the action of doing lies the appeal (not the mere getting of it done). Only by repetition could unaccustomed muscles learn to act in unison, building up a dexterity that the child would be able to receive in no other way.

5.4.3.2 The role of the teacher

According to Montessori, the formal vocal instruction by the teacher is limited to the time when the child begins to use the didactic material. Montessori states that in these preparatory exercises the teacher may assist, even if this merely amounts to taking out the apparatus and arranging it on the table and then showing the child how he has to put it back, without performing the action herself.⁶² The teacher should make certain that the child's interest is engaged in his work. If not, she will wait for a better moment and proceed from the very beginning.⁶³ Montessori, however, does not explain what the child has to do while the teacher waits for a better moment.

Intervention, according to Montessori is not necessary, as children observe their peers at work and are thereby encouraged to imitate them. Because the didactic material promotes auto-education and the correction of errors is present in the didactic

⁶¹. Claremont, *Montessori education - the hope of the future*, fourth and fifth printed page.

⁶². Montessori, *Dr. Montessori's own handbook*, p. 31.

⁶³. Gitter, *The Montessori way*, p. 54.

material, Montessori suggests that there remains nothing left for the teacher to do, but to observe. The teacher must then assume the role of a "psychologist"⁶⁴ in her observations and mentally note her deductions with a view to future construction of the environment to correct any learning deficiencies she may have observed in any individual child. It therefore becomes imperative for the teacher to "teach little and observe much".⁶⁵ The measure of time by which the apparatus holds the attention of the child should, furthermore, be carefully monitored by the intelligent teacher.⁶⁶

It is interesting to note that Montessori mentions that the role of the teacher, as she demonstrates the sensory and motor exercises, is far from passive. It is only after the teacher has demonstrated the exercise, and the child is in direct contact with the material, that the child becomes free to proceed at his own rate without interference.⁶⁷

⁶⁴. See paragraph 5.5.5.1

⁶⁵. Montessori, *The Montessori method*, p. 174.

⁶⁶. *Ibid*, p. 173.

⁶⁷. R.C. Orem (ed.), *A Montessori handbook*, New York: G.P. Putnam's Sons, 1965, p. 82.

5.5 FUNDAMENTAL AND CRITICAL EVALUATION OF MONTESSORI'S VIEWS REGARDING THE TRAINING OF THE SENSES AND THEIR FEASIBILITY IN THE PRIMARY SCHOOL SITUATION

Because of the educational importance attached to the training and stimulation of the senses⁶⁸ (which constitutes the greater portion of Montessori's work), the implementation of Montessori's views regarding the senses in the primary school deserves serious consideration. It is interesting to note that the significance of Montessori's views on sensory training was already depicted in 1915 in a South African report by Wynsouw.⁶⁹ The valuable contribution of modern science in the field of sensory education and related concepts in past years will also be considered when discussing Montessorian principles that gained so much credibility in the years following the exposition of her theory.

Montessori's doctrine concerning sense training is often hindered by uncertainty, for her entire theory often lacks in simplicity, definiteness, and consistency, rendering research difficult. Fynne⁷⁰ generally agrees with this lack of thoroughness when he states that important statements of her views which would gain greater clarity in meaning and force by judicious collation and

⁶⁸. See, C.I. Sandstrom, *The psychology of childhood and adolescence*, translated by Albert Read, Great Britain: Penguin, 1966, p. 121.

⁶⁹. Wynsouw, *Report on the Montessori system of education*, p. 14.

⁷⁰. Fynne, *Montessori and her inspirers*, p. 332.

sequential discussion are found in widely separated portions of a book and even in different books⁷¹. Furthermore her exposition is often not logically ordered and developed, as will be indicated in the discussion that follows.

Keeping the above statements in mind, an attempt will now be made to evaluate the underlying principles of sense training with a view to establishing the feasibility of applying aspects identified as valid and essential in the primary school situation. The obvious starting point would be an evaluation of Montessori's aims regarding the training of the senses.

5.5.1 An evaluation of Montessori's aims with regard to the training of the senses

The primary (overall) aim of education, as previously mentioned by Montessori, is twofold - both biological and social in nature.⁷² This researcher agrees that this two-pronged primary aim, as well as her secondary (intellectual) aim can be served

⁷¹. The aspect of inconsistency and ambiguity was raised by the researcher at the anticipated opening of a Montessori primary school, in the Pretoria area. It was suggested by the directress that such contradictions that arise, are as a result of inaccurate translations from the original text. However, due to the frequency of the contradictions, the researcher is of the opinion that incorrect translations cannot be responsible for the majority of the ambiguities and contradictions and readers will have to concur that such inaccuracies invalidate the authenticity of Montessori's work.

⁷². See paragraph 5.3

by the training of the senses. In essence, the total development of the child is, highly dependent on sense training.

Fynne⁷³, a contemporary educationalist of the early twentieth century, although quoting Rousseau, confirms the validity of Montessori's intellectual aims as related to sense training, when he suggests that intellectual development is especially dependent on the training of the senses. The consequent need for this training in the primary school is therefore of vital consequence and can scarcely be exaggerated. Even though Montessori felt that sense training was to be applied in the "period of major transformation", this researcher is of the decisive opinion that it has a definite role to play in the primary school situation.

It must be borne in mind that, according to modern education, the "overall" aim of education is responsible, authentic adulthood, which implies adulthood in totality. Du Plooy⁷⁴ confirms this when he states that "educationalists the world over agree that the encompassing aim of all education is to educate the child to live his life as a child fully in view of preparing him to do so on all the levels of his becoming an adult."

Although Montessori accentuates the physical (biological), social and intellectual aim,⁷⁵ she fails to realize educational aims

⁷³. Fynne, *Montessori and her inspirers*, pp. 4-5.

⁷⁴. J.L. Du Plooy, J.L. Griessel and M.O. Oberholzer, *Fundamental Pedagogics for advanced students*, Pretoria: Haum, 1987, pp. 135-136.

⁷⁵. See paragraph 5.3

related to inter alia, the emotional and aesthetic functions of the child. However, it should be borne in mind that she could have focused merely on educational aims which she regarded as being significant in terms of pre-primary classroom education and especially those which sensory perception would best serve.

At this stage it is appropriate to mention that the introduction of the perceptual programme (introduced six years ago) in the first six weeks of the grade one year, is based almost entirely on the precepts expounded by Montessori in terms of her sense training theories.

Montessori's secondary aim with regard to sense training, is especially geared to the objective of acquiring intellectual adulthood and employs such dynamic terms as; "to form judgements", "to reason" and "make comparisons" and also to "lead the child to ideas"⁷⁶. Such terms emphasise that sense education is aim-directed,⁷⁷ which shows that Montessori's aims with regard to sense training are purposeful, purposive and authentic because the child is being motivated in the proper direction, namely that of acquiring intellectual adulthood.

Furthermore, the social aim, according to Montessori also plays a decisive role in sense training, namely, to prepare the child for interaction with his environment, while the biological aim

⁷⁶. See paragraph 5.3

⁷⁷. Du Plooy, Griessel and Oberholzer, *Fundamental Pedagogics for advanced students*, Pretoria: Haum, 1987, p. 135.

is to help the child to unfold as a physical being in his natural environment.⁷⁸ As already stated all educational aims can be realised through the senses.

5.5.1.1 The feasibility of applying Montessori's aims with regard to the training of the senses in the primary school situation

It has been established that the educational aims which Montessori indicated are pedagogically valid. As these aims, namely, biological and social, should be strived for from birth, they should certainly receive the necessary attention in the primary school situation. This researcher recommends that sensory training, by means of sensory apparatus be emphasised to enhance the attainment of these aims as suggested by Montessori. As all education is dependent on sense training, it is suggested that educational aims which Montessori did not accentuate, such as aesthetic education, could also be served by sensory apparatus.

5.5.2 An evaluation of Montessori's theory that the training of the senses implies differing developmental periods in the child's life

Modern day educationalists and psychologists agree with Montessori that the age between three and six years is the vital age in which the most serious learning of concepts must take

⁷⁸. See paragraph 5.3

place.⁷⁹ The stages of development outlined by Montessori in paragraph 5.4.1 can be compared to the cognitive stages of development delineated by the Swiss child psychologist Jean Piaget (1896-1980). The following stages are briefly identified by Piaget⁸⁰:

- The sensory-motor phase (0 to approximately 2 years). This period is characterised by the child's cognitive activities being oriented around the body and thinking is not separated from bodily actions.
- The pre-operational phase (approximately 2 to 6 years). During this period the child develops a sophisticated ability to use symbols, but thinking is irreversible.
- The concrete operational phase (approximately 6 to 12 years). During this period the child develops reversible thinking patterns and is able to classify and organise objects and events. Thinking is concrete and limited to the real world.
- The formal operational phase (approximately 12 years to adulthood). During this period abstract reasoning takes

⁷⁹. Personal interview with H.B. Ferreira (school psychologist from the aid centre of the Transvaal Education Department).

⁸⁰. J. Piaget, *The origins of intelligence in children*, New York: International Universities Press, 1952, p. 119. See also R. Leve, *Childhood: the study of development*, U.S.A.: Random House, 1980, p. 254.

place and the child is more fully able to perform mental operations on objects and events that are not real.

Having discussed Piaget's stages, which view the child's thoughts as developing in progressive stages, namely from the beginnings of perception to symbolic thought and leading to concrete operations and then finally to the beginning of formal thought in pre-adolescence, this researcher is drawn to the conclusion that Piaget's stages are generally consistent with Montessori's developmental periods and practice of leading the child through concrete experiences to progressively more abstract levels.⁸¹ Other cognitive theorists, namely Kohlberg (1927-), Jerome Bruner, (1915-) and Kagan (1929-) all focus on periods analogous to that of Piaget and have all made significant contributions to child development. There is therefore no reason to presuppose that Montessori's periods of development⁸² are invalid, but rather that they fall in line with the theories of many modern day psychologists.

5.5.2.1 The feasibility of applying Montessori's theory regarding developmental periods in the child's life in the primary school situation

Although Montessori lays such a great emphasis on sense training between the ages of three and six, this researcher is of the

⁸¹. P.P. Lillard, *Montessori - a modern approach*, New York: Schocken Books, 1972, p. 24. See paragraph 5.4.1

⁸². See paragraph 5.4.1

opinion that her theory also has definite validity in the primary school situation. This view is supported by Ferreira and Rautenbach⁸³ who suggest that it should take preference to all intellectual education and be viewed in a more serious light, especially as the child passes through different developmental phases of development each differing from the previous phase.

In the first grade teachers should be particularly aware of the period of "uniform growth" which Montessori defines as one in which physical growth is dominant. Special provision should be made for the physical development of the child by means of sport and play, even though Montessori did not accentuate these aspects, because she was more concerned with the implementation of sensory apparatus. As the pre-primary school child finds himself mainly in the "period of major transformation", sustained and concerted attention should be paid to general body development. Furthermore, a child from an educationally deprived background, attending primary school may find himself in a "lower" developmental period than his peers from a "more advantaged educational milieu". For such a child, the implementation of sensory didactic apparatus based on Montessorian principles may be significantly beneficial.

⁸³. Mr. H.B. Ferreira currently serves as the school psychologist at the aid centre for the Transvaal Education Department, while Mr. W. Rautenbach serves as an orthodidactician. Both have extensive experience working with primary school children.

According to Hadfield,⁸⁴ a contemporary psychologist, it is essential for educators (both at school and at home) to take careful note of various stages of development (especially as Montessori's periods have been determined to be valid) so that the child can be given the fullest opportunity for the development of each period as it emerges, since they could affect the child for the rest of his life. Hadfield suggests that educators need to understand developmental phases in order not to assume behaviour is abnormal when in fact it is normal for that particular stage. Furthermore, educators should have some knowledge of the stages of development so as to recognise abnormal behaviour when it occurs.

5.5.3 An evaluation of Montessori's views regarding sensitive periods

Montessori's concept of "sensitive periods", needs to be carefully evaluated in terms of its relation to modern generally accepted ideas of education. Plank⁸⁵, a contemporary educationalist agrees that sensitive periods are characterised by the ease and delight in specific learning and by being granted sufficient liberty to engage in a chosen task. Hadfield⁸⁶,

⁸⁴. J.A. Hadfield, *Childhood and adolescence*, Great Britain: Penguin Books, 1962, pp. 68-69.

⁸⁵. E. N. Plank, Reflections on the revival of the Montessori method, in the Publications Committee of the National Association for the Education of Young Children, *Montessori in perspective*, Washington: NAEYC, 1966, p. 44.

⁸⁶. Hadfield, *Childhood and adolescence*, p. 68.

argues that as the child matures there is a development of innate potentialities in ordered sequence. Duminy,⁸⁷ referring to education in general, points out that education situations do intrinsically provide moments (periods) of viable, normative and directed aspiration, creating in children a desire to construct their own knowledge. This researcher is of the opinion that these moments are not restricted to the pre-primary situation only, but also manifest themselves in the primary and secondary education situation. It could therefore be pointed out that Montessori's age breakdowns for the various sensitive periods need not always be consistent with actual sensitive periods. For example Montessori's sensitive period for learning to read is fixed between the ages of four and a half to five and a half years of age, whereas in current educational practice this sensitive period often occurs much later (six to seven years of age).

Standing⁸⁸ points out that Montessori's sensitive periods are of immense importance to the educator, and this researcher is of the decided opinion that they have definite validity for the primary school situation since the primary school child shows a remarkable sensibility to certain impressions and actions, which is merely the outward evidence of an inner need. Teachers should

⁸⁷. P.A. Duminy and W.F. Sohngé, *Didactics: Theory and practice*, Cape Town: Longman, 1980, p. 35. See also G. Geekie, *An innovative and integrative approach to the teaching and learning of mathematics at junior primary level*, M.Ed dissertation, University of South Africa, 1991, pp. 78-80.

⁸⁸. Standing, *The Montessori method. A revolution in education*, p. 38.

be aware of sensitivities, despite the fact that Montessori's theory regarding periods only include children up to six years.

It can be assumed that by preparing the environment, Montessori was in fact creating a situation in which the child could achieve a desire to learn a skill or activity because he was being motivated in the right direction (although this is contradictory to her theory concerning the sensitive stages which according to her, occurred spontaneously). According to Duminy⁸⁹, it seems logical that an attempt should be made to create such situations and bring educational material into the classrooms (preparing the environment) as it will display a summoning or valence character. However, the problem arising, relates to the practicability of permitting a class of children, all having sensitive moments at different times, with the need for fulfilment and the need for total liberty, to be educated. Obviously, logic and practicability suggests that there must be a limit to the capacity of the observer's tenacity, as well as the pupils freedom. However, Montessori fails to give any directives on exactly how this is to be achieved. Montessori merely suggests that the size of the environment must be controlled. If the environment is a "place where everything has its proper place, and where there is an exact, almost ritualistic, manner of carrying out every action", then the sensitive periods can be utilised to their fullest.⁹⁰

⁸⁹. Duminy and Sohngé, *Didactics: Theory and practice*, pp. 34-35.

⁹⁰. Standing, *The Montessori method. A revolution in education*, p. 43.

Standing⁹¹ in defence of Montessori, indiscriminately suggests that children who have worked with Montessori's apparatus develop a discrimination which many adults have never reached and will never reach because their sensitive period for such a development has passed. This viewpoint is supported by De Beer (see plate 5.3) writing an article for the Pretoria News, who states it is easier for the child to learn a particular skill during the corresponding sensitive period than at any other time in his life. There is thus much reason to believe that skills can be developed later in life, even if "sensitive periods" have been missed or overlooked.

Herein lies the great task of the primary school to train, educate and motivate the child as he shows and displays interest in a phenomenon. It could also be argued that a child from an educationally disadvantaged background may experience certain sensitive periods later than a child from a more educationally advantaged background and opportunities should therefore be created in the primary school situation to ensure that the needs of the child falling into the former group are catered for.

Although Montessori asserts that the psychic life of the child rests upon the foundation that these sensitivities make possible, she is once again guilty of vague and impetuous generalizations.

⁹¹. Standing, *Maria Montessori: Her life and work*, p. 110.

Plate 5.3 Details from the Pretoria News article showing the importance of Montessori's sensitive periods.⁹²

Education the Montessori way

DIANE DE BEER

THE Montessori method of education will be discussed as part of a series of lectures on child-birth and education.

Born in 1870, Maria Montessori became Italy's first woman doctor when she graduated from the Faculty of Medicine at Rome University in 1896. She returned to the university to do research work at the psychiatric clinic and children became her special interest.

In 1900 she became director of a school established for retarded children. Designing teaching materials best suited to their needs, she later submitted these same children for the public examinations for normal children with the astounding results that they achieved marks equal to or even above those gained by the normal school child in Italy at the time.

Experimenting

So successful was her work with these children that she became recognised as an educator rather than a physician. She then had her first opportunity to work with normal children when her first children's house was opened in the San Lorenzo slums of Rome. Here the children were provided with a prepared environment and were invited to explore and choose their own work thereby fostering their independence.

Dr Montessori was constantly experimenting, modifying and adapting her didactic material to suit the needs of the children.

In 1909 the first Montessori Training Course was given and private Montessori schools were being established all over Europe. She travelled extensively in the next few years, giving lectures and training courses and her method was endorsed and financially backed by people such as Alexander Graham Bell, Thomas Edison, Sigmund and Anna Freud and Ghandi.

Dual approach

Dr Montessori believed no human being was educated by another person. He must do it himself or it would never be done. She felt that the goal of early childhood education should thus not be to fill the child with facts but rather to cultivate his own natural desire to learn.

In the Montessori classroom this objective is approached in two ways; first by allowing each child to experience the excitement of learning by

his own choice rather than being forced; and second, by helping him to perfect all his natural tools for learning so that his ability will be at a maximum in future learning situations.

Montessori materials have this dual-range purpose in addition to their immediate purpose of giving the specific information. The use of materials is based on the young child's unique aptitude for learning which Dr Montessori identified as the "absorbent mind." The process is particularly evident in the way in which a two-year-old learns his native language (in this country sometimes two) without formal instruction.

Dr Montessori always emphasised that the hand was the most important teacher of the child. To learn there must be concentration and the best way a child can concentrate is by fixing his attention on some task he is performing with his hands. All the equipment in a Montessori classroom allows the child to reinforce his casual impressions by inviting him to use his hands for learning.

First years

She also believed the first years of the child were the most important. "At no other age has the child a greater need of intelligent help, and any obstacle that impedes his creative work will lessen the chance he has of achieving perfection," she explained.

Recent psychological studies based on controlled research have confirmed these theories.

Another observation of Dr Montessori's which has been reinforced by modern research is the importance of the sensitive periods for early learning. It is easier for the child to learn a particular skill during the corresponding sensitive period than any other time in his life. The Montessori classroom allows the child freedom to select individual activities which correspond to his own period of interest.

At the lecture, which is to be held on Tuesday August 9 at 7.30 pm in the Van der Bijl Hall, University of Pretoria, Sighe Fitzgerald of the Dublin Montessori Centre will be the guest speaker. Admission is R6 a person or R9 a couple and the evening is in aid of the Alexandra Nursery School.

For further details telephone Glaudin Kruger (44-9536).

⁹². D. De Beer, Education the Montessori way, Pretoria News, August 12, 1983.

A delay in their full realisation could, as she states, result in an imperfect relationship between the child and his environment⁹³ but will not necessarily hinder his entire psychic life. Lillard, defends Montessori's generalizations by stating that sensitive periods are blocks of time in a child's life when he is absorbed with one characteristic of his environment to the exclusion of all others and appears as an intense interest for repeating certain actions. If, according to Lillard, the child is prevented from following the interest of any given sensitive period, then the opportunity for a natural conquest is lost forever. Suffice it to say that the teacher must observe meticulously whether the child displays any tendency to a particular idea or attitude and continually be ready to assist.

5.5.3.1 The feasibility of applying Montessori's theory with regard to sensitive periods in the child's life in the primary school situation

From the evaluation it became clear that sensitive periods have feasibility in the pre-primary school phase. However, this researcher is of the opinion that sensitive periods also have definite feasibility in the primary school situation and posits that the characteristics of the sensitive periods, as typified by Montessori, in fact persist into the senior primary phase of the primary school and even into adulthood, where individuals display intense curiosity at certain times and desire to learn

⁹³. Lillard, *Montessori - a modern approach*, p. 32.

a skill more than at any other time in their life. Hadfield⁹⁴ confirms the notion that if a developmental phase is not given its opportunity for development, it tends to persist into the next stage.

The researcher wishes to point out that teacher training could provide valuable assistance in showing teachers how to construct a situation in the primary school situation that will arouse the child's enthusiasm and the full utilization of these sensitive periods especially when these periods are experienced later than expected in the child's life.

Duminy⁹⁵ correctly states that the closer education can be brought to life itself, the more success can be expected. He supports Montessori in saying that the role of the primary school teacher consists of the intentional creation of a specific learning situation corresponding to an existing "sensitive period" which will stimulate the child's desire to learn. Subject matter needs to be presented in such a way that it will create genuine interest in the topic or activity taking place. Educators with such enthusiasm create moments of profound interest in which the child is able to learn or acquire knowledge much more easily and readily than he would have in any other way.⁹⁶

⁹⁴. Hadfield, *Childhood and adolescence*, p. 69.

⁹⁵. Duminy and Sohngé, *Didactics: Theory and Practice*, p. 35.

⁹⁶. *Ibid*, pp. 33-35.

Contrary to Montessori's views, this researcher is of the opinion that the child should also be motivated by means of active teacher participation. In this regard Geekie⁹⁷ states that sensitive didactic accompaniment in the primary school can motivate the child to positive achievement. While on the one hand the researcher agrees with Montessori that educators must be aware of sensitive periods when they occur, educators in the primary school need to realise that motivation plays a significant role in ensuring that sensitive periods are utilised to their fullest in the child's life. Thus, Duminy⁹⁸ points out that given the intrinsic motivation, where pupils are motivated by purposes, goals and aspirations, such as is evident in effective teaching in the primary school situation, the child is lead to grasping what is expected of him in a remarkable way.

Furthermore, educators who approach their task enthusiastically and creatively make use of a great variety of materials, teaching-aids and techniques, in order to ensure that a sensitive period is experienced meaningfully. The teaching of creative skills, such as drawing, must be available if the child's sensitive period is aroused during a particular period.⁹⁹

⁹⁷. Geekie, *An innovative and integrative approach to the teaching and learning of mathematics at junior primary level*, p. 79.

⁹⁸. Duminy and Sohng, *Didactics: Theory and practice*, p. 33.

⁹⁹. Plank, Reflections on the Revival of the Montessori Method, in The Publications Committee of the National Association for the Education of Young Children, *Montessori in perspective*, p. 41.

With regard to Montessori's sensitive moments, the researcher shares the same sentiments as Claremont¹⁰⁰; that intense dangers lie in the neglect or frustration of any one of these sensitive periods, for the platform on which the next one should stand is thereby weakened. However, the far fetched notion of Montessori that these periods are lost forever if they are by-passed, or missed, is short-sighted and narrow-minded. Teachers should be made aware that these periods could also be induced. The principle of motivation therefore must be seen in correlation to Montessori's philosophy of sensitive periods.

5.5.4 An evaluation of Montessori's sensory didactic apparatus as related to the training of the senses

The secret to the training of the senses, according to Montessori, lies in the intelligent and untrammelled application of the sensory material by the teacher on the principles on which the apparatus has been designed, namely that of auto-education or self-education. It is not difficult to find support for the educational validity of self-education. Fynne¹⁰¹, agrees with Montessori that the education of the senses is necessarily auto-education when he states that a teacher cannot give a child powers any more than she can give him gymnastic ability. It is

¹⁰⁰. Claremont, *Montessori education - the hope of the future*, seventh printed page.

¹⁰¹. Fynne, *Montessori and her inspirers*, pp. 260-261.

critically important for the child to experience the environment himself. The only work for the teacher, according to Fynne, is to induce the pupil to use the material necessary for his self-education.

Duminy,¹⁰² also, is in agreement with the principle of auto-education and concurs with Montessori, that the child must become the seeker, the conqueror, the discover, the inventor, the creator. This inevitably produces children that are thinkers. However, the teacher as the trained specialist has to provide opportunities according to the educational needs of each individual child that will be most conducive to the child's formative unfolding.

With regard to graded stimuli, Montessori is once again theoretically correct in her assumption that the apparatus can only be used to their full benefit if they are graded. Thus her use of contrasting shapes and colours and objects lends itself to sense differentiation and allows the pupil to proceed from the easily understandable to the complex and the detailed. Such graded material is in total harmony with modern educational practice. It must also be pointed out that although Montessori's theory of "differentiation" was geared towards pre-primary education, educators in general (pre-primary, primary and secondary) are of the opinion that differentiation is a pedagogically valid

¹⁰². Duminy and Sohngé, *Didactics: Theory and practice*, p. 84.

principle. Van Rensburg¹⁰³ confirms such a belief when he states that such teaching takes into consideration the ability, aptitude and interest of the child. Duminy¹⁰⁴ notes that such instruction where differentiation is exhibited tends to view the teacher as more of an organizer. His leadership is more advisory than authoritarian and the dead silence of the traditional school will be replaced by the sound of children actively engaged in their activity.

Montessori also adhered to the principle of spontaneous repetition. When Montessori began her work, large groups of children were made to do the same thing at the same time and in the same manner according to the instruction of the teacher who was the active and directing part [participant]."¹⁰⁵

Montessori, however, later approached the concept of repetition in a more individualistic way than that depicted in the passage above. Children were taught to enjoy repetition, which was generally structured more in the form of a game, with much of the monotony removed, which could be considered to be more of a practical alignment than the traditional view previously

¹⁰³. C.J.J. Van Rensburg and W.A. Landman, *Notes of Fundamental-Pedagogic concepts*, fifth edition, Goodwood: N.G. Kerkboekhandel, 1988, p. 325.

¹⁰⁴. Duminy and Sohngé, *Didactics: Theory and practice*, p. 32.

¹⁰⁵. B. Schill, *The Montessori System*, in the Publications Committee of the National Association for the Education of Young Children, *Montessori in perspective*, p. 31.

described.¹⁰⁶ With regard to sense training, repetition is linked to the sensory-didactic apparatus and when considered against the background of the liberty of the child provides a clearer picture as to the purpose of spontaneous repetition. However, the principle of repetition also has relevance to the teaching of writing, reading and arithmetic, where Montessori applied repetition generously.¹⁰⁷ Duminy¹⁰⁸, (who does not necessarily only refer to pre-primary education but teaching in general), agrees that repetition has a place in the educative process and asserts that dull children require a generous amount of repetition, practice, and learning by rote, while bright children need a minimum of repetition.

Hadfield¹⁰⁹, a twentieth century psychologist, also supports repetition when he states that the repetitive process further develops into moral qualities such as persistence and perseverance.¹¹⁰ The repetitive process is thus one of the principle methods a child has of adaptation to life. Just as repetitive actions serve the purpose of giving practice to a function, so the desire to have things repeated enables the child to grasp and understand a problem.¹¹¹ He is thus in accordance

¹⁰⁶. See paragraph 5.4.3.1 (c)

¹⁰⁷. See paragraphs 6.4, 6.5 and 6.6 respectively.

¹⁰⁸. Duminy and Sohng, *Didactics: Theory and practice*, p. 29.

¹⁰⁹. Hadfield, *Childhood and adolescence*, pp. 65-67.

¹¹⁰. See paragraph 5.4.3.1 (c)

¹¹¹. Hadfield, *Childhood and adolescence*, pp. 65-67.

with Montessori's assumption that what strengthens any developing power is practice, which is still needed after the basic skills have been obtained,¹¹² Freud,¹¹³ the celebrated psychologist, speaks of a "repetition compulsion" which relates to what Montessori refers to as the need for repetition, routine and order. Fynne¹¹⁴ observes that polarisation and repetition do not as a rule take place unless the didactic apparatus (as is the case with Montessori's apparatus), helps the eye to perceive mistakes¹¹⁵.

However, with a bridging class (a concept discussed in chapter 7), repetition could play a decisive role in establishing concrete concepts as children with learning deficiencies or deprived children will require a generous amount of repetition.

While this researcher is of the opinion that sensory didactic material has a definite place in the formal primary school situation, certain problems related to the use of the material as related to Montessori, need to be highlighted.

¹¹². Montessori in, R.C. Orem (ed), *A Montessori handbook*, New York: G.P. Putnam's Sons, 1965, p. 83.

¹¹³. M.D. Schechter, *Montessori and the child's natural development*, in K. Edelson and R.C. Orem (editors.) *The Children's House parent-teacher guide to Montessori*, New York: G.P. Putnam's Sons, 1970, p. 79.

¹¹⁴. Fynne, *Montessori and her inspirers*, p. 284.

¹¹⁵. See plate 5.1

Firstly, it is necessary to clarify Montessori's position with regard to the correct use of the sensory material. Standing¹¹⁶ states unequivocally that Montessori insists upon the correct use of the apparatus and that the apparatus may not be played with or used in any other manner other than that demonstrated by the teacher. One cannot agree with Montessori's strict rules for the use of the apparatus. They are in contradiction to modern theories of child development¹¹⁷. Similar sentiments are echoed by other researchers who state that these restrictions are an unwarrantable curtailment of the child's liberty¹¹⁸.

Kilpatrick,¹¹⁹ argues that because the child is not allowed to play with the didactic apparatus, and because no other play material is furnished, the Montessori apparatus affords a meagre diet for the normally active child.

Given Montessori's sentiments regarding the liberty of the child, the fact that the child is unable to use the apparatus as he pleases,¹²⁰ appears to be in contradiction to Montessori's own philosophy regarding the child's total freedom. On the one hand

¹¹⁶. Standing, *The Montessori method. A revolution in education*, p. 35.

¹¹⁷. B. Schill, *The Montessori system*, in the Publications Committee of the National Association for the Education of Young Children, *Montessori in perspective*, p. 32.

¹¹⁸. Standing, *Maria Montessori: Her life and work*, p. 265.

¹¹⁹. W.H. Kilpatrick, *Montessori examined*, London: Constable and Company, 1915, p. 42.

¹²⁰. See paragraph 5.4.3

Montessori states that the child must not be pressurised into finding the correct solution, but must be at liberty to discover the solution at the right time, while on the other hand she insists upon the correct use of the apparatus. This dichotomy could possibly be interpreted as follows: Montessori probably meant that if the child could not master specific apparatus, he was not ready for it and should work with other (less advanced) apparatus until ready to attempt the material (apparatus) at a later stage. Fynne¹²¹, unequivocally states that through her failure to acknowledge frankly to herself and others the inevitable defects and limitations of much of her apparatus, she is withholding opportunities from the children for the enjoyment of greater freedom and for the fuller expression of individuality.

Throughout Montessori's works one is confronted with the idea of greater liberty for the child, yet in her own structured classroom the "rules" are rigidly enforced that it in fact inhibits the liberty of the child. Silence, so severely criticised by Montessori in traditional schools, plays a prominent role in her classroom and though it is not enforced through fear it is condoned as a principle necessary for the spontaneous use of the apparatus¹²². There is little validity in such rigid performance and an unauthentic education system therefore exists in the Montessori classroom based on her own criteria.

¹²¹. Fynne, *Montessori and her inspirers*, p. 330.

¹²². W. Boyd, *From Locke to Montessori - a critical account of the Montessori point of view*, London: Harrap and Company, 1914, p. 216.

Furthermore, Culverwell¹²³, an adherent of Montessorian philosophy, admits that because one can only purchase the complete set of Montessorian apparatus, it presents an undesirable situation and is therefore in contradiction to, and an infringement of, the principle of liberty, which should apply to the teacher as well as to the pupil.

Montessori's insistence on her material being the only material suitable for pre-primary childhood education has furthermore led to a limitation of the curriculum, which has resulted in the system being adjudged as incomplete as an instrument of instruction in the primary school phase. There is, however, no reason to suggest that on the basis of these reasons the sensory material must be rejected. This researcher is of the opinion that didactic sensory material has a definite and vital role to play in our present day primary school situation, which is characterised by an influx of culturally and educationally deprived children.

Further, the idea of self-correction is an important and essential aspect of Montessorian doctrine and most certainly valid in any teaching situation, including the primary school situation), as it affords the child the opportunity of not only learning basic skills but also of developing his self-image and self-esteem. This declaration is tantamount to the view that each individual child possesses the ability to learn and mould

¹²³. E.P. Culverwell, *The Montessori principles and practice*, London: G. Bell and Sons, 1913, p. xvi.

himself. Although the child who masters a task entirely on his own builds his confidence and esteem, the problem lies in the dogmatic belief by some adherents that only Montessorian apparatus can offer this education. Furthermore, the majority of Montessorian followers are of the opinion that only the material designed by Montessori in its original form for pre-primary education is valid. While the support of this view may have been valid at the time of Montessori, in the light of it being virtually the only material available, there is no reason for Montessori followers to adhere to that philosophy in our present era.

The fact that certain aspects that Montessori advocated in the presentation of the material are regarded as invalid by this researcher, (such as non-intervention on the part of the teacher, and the correct use of the apparatus being enforced), there is no reason to assume that the material must be rejected in its entirety. As previously pointed out the material is actually ingenious in its creation and wonderful in its application and has a definite role to play in the current South African primary school situation.

5.5.4.1 The feasibility of applying Montessori's sensory didactic apparatus in the primary school situation

Throughout this section it is imperative to note that much of the individualistic materials developed in recent years to stimulate or assist children in discriminatory exercises and in

sensory and motor perception in their formative years, which includes primary school education, borrow consciously or unconsciously, heavily from Montessorian theory.¹²⁴ Much of the material has been modernised in accordance with progress and changing times and much of the material is in similar form to the didactic apparatus used by Montessori. Plates 5.4 - 5.9 illustrate this point by comparing Montessorian apparatus with modern educational apparatus, showing the similarity in design and purpose. It must be pointed out, once again, that both modern apparatus and Montessori's didactic material also have relevance to primary school education because of the many educationally deprived children who could benefit from their use.

While not rejecting the function of Montessori's didactic sensory apparatus, which was intended for pre-primary education, but which can also be used in the primary school situation, this researcher is of the decided opinion that a much richer curriculum is found in modern, primary schools, as opposed to pure Montessori schools because contemporary schools have adapted and integrated sensory-didactic apparatus with the current educational programme of the child (which also stresses the active accompaniment of the adult-educator), thus providing the richness of the existing curriculum. The Introductory Teaching Programme, as it is known in the junior primary school

¹²⁴. Plank, Reflections on the revival of the Montessori method, in the Publications Committee of the National Association for the Education of Young Children, *Montessori in perspective*, p. 46.

Plate 5.4 Photographs showing the similarity between the Montessori pink tower (A)¹²⁵ and modern-day apparatus (B).

(A)

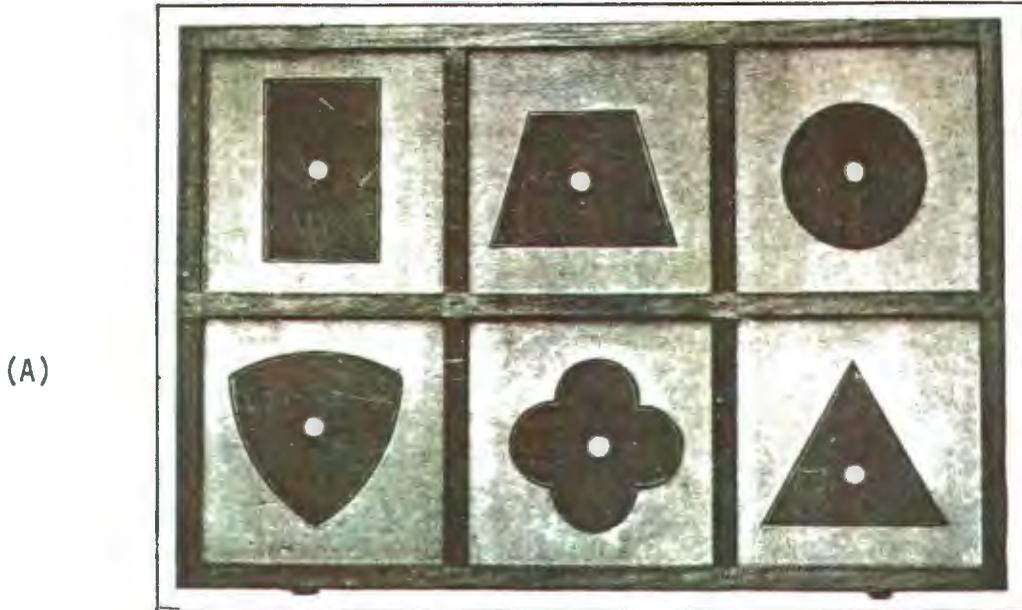


(B)



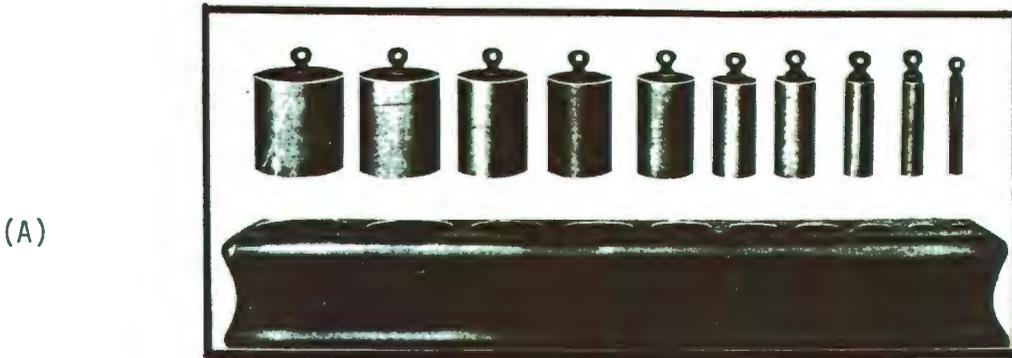
¹²⁵. Montessori, *Dr. Montessori's own handbook*, p. 31.

Plate 5.5 Photographs showing the similarity between Montessori's geometrical insets (A)¹²⁶ and modern-day apparatus (B).



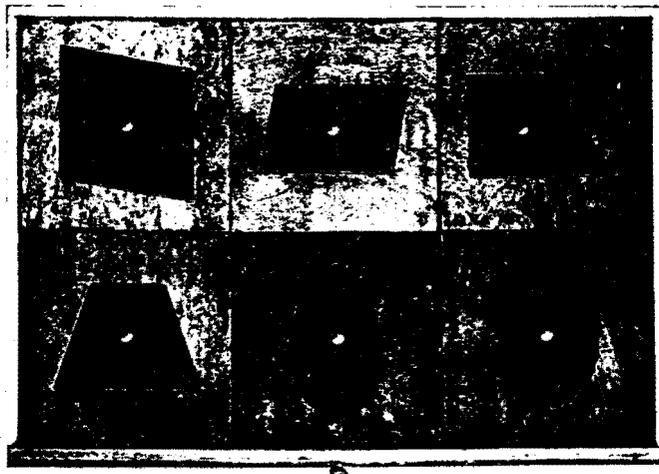
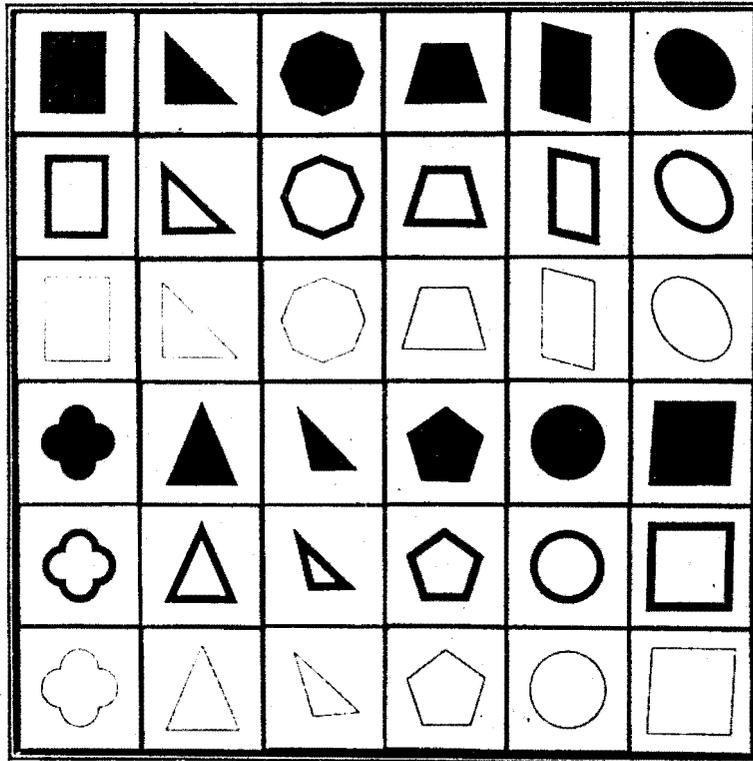
¹²⁶. Montessori, Dr. Montessori's own handbook, p. 48.

Plate 5.6 Photographs showing the similarity between Montessori's cylinders (A)¹¹⁷ and modern-day apparatus (B).



¹¹⁷. Montessori, *Dr. Montessori's own handbook*, p. 30.

Plate 5.7 Photographs showing the similarity between Montessori's geometrical forms (A)¹¹⁸ and modern-day apparatus B (overleaf).

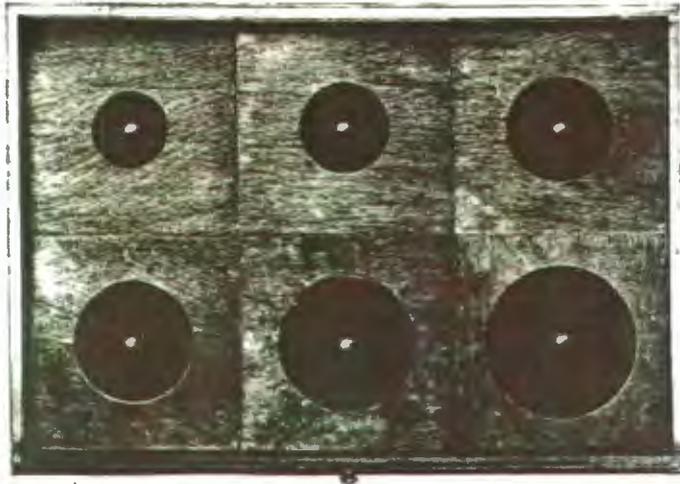


¹¹⁸. Montessori, *Dr. Montessori's own handbook*, pp. 46 and 54.



Plate 5.8 Photographs showing the similarity between Montessori's six circles (A)¹²⁹ and modern-day apparatus (B).

(A)

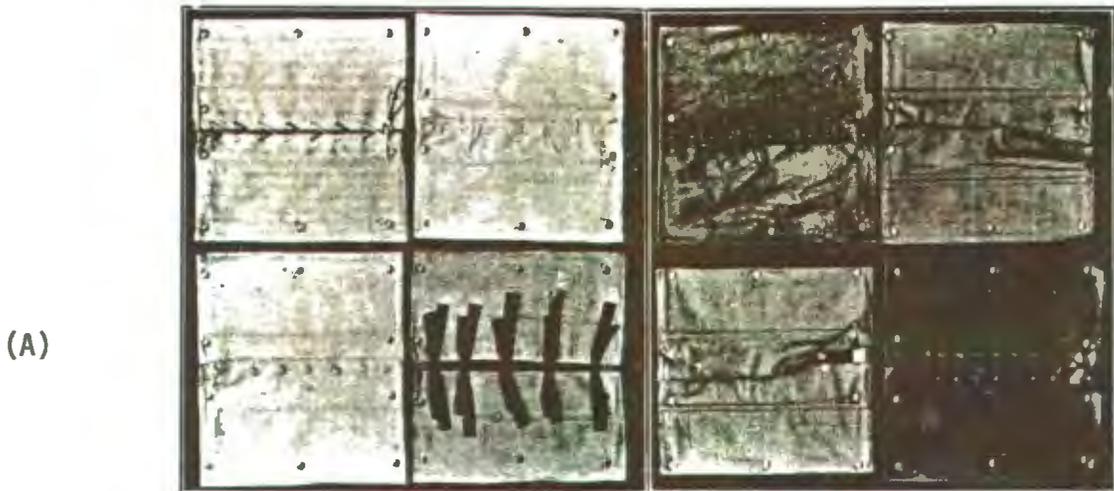


(B)



¹²⁹. Montessori, *Dr. Montessori's own handbook*, p. 44.

PLATE 5.9 Photographs showing the similarity between Montessori's buttoning and lacing apparatus (A)¹¹⁰ and modern-day apparatus (B).



¹¹⁰. Montessori, *Dr. Montessori's own handbook*, p. 22.

phase, is based on Montessorian sensory apparatus, yet presents a more integrated approach to the balanced education of the child as it caters for the majority of needs of the child, including aesthetic and emotional needs. Furthermore, the Introductory Teaching Programme focuses on the strengthening and improving of visual memory and visual sequencing through the use of didactic apparatus (see Plate 5.10).

Certainly many of the children entering the mainstream of education in our present era will come from culturally and educationally deprived education situations, and because of the economical climate which prevents children from attending pre-school education, many children would have been deprived of opportunities that their contemporary peers enjoyed. However, this researcher is of the opinion that most of the Montessori material, intended for pre-primary use, is generally speaking, already included in The Introductory Teaching Programme, designed for the junior primary phase and could therefore fulfil a vital role in the teaching of basic, concrete concepts.

In addition to the innovative approach of Montessori's sensory didactic apparatus which requires that the teacher structure didactic activities to promote constructivist, continuity learning based on pupil activity, Geekie¹³¹, adds another dimension, (contrary to Montessori's educational theory). According to Geekie, the teacher must become the facilitator and guide as children discuss and evaluate their own problem

¹³¹. Geekie, *An innovative and integrative approach to the teaching and learning of mathematics at junior primary level*, p. 97.

PLATE 5.10 Example of a page from the "Introductory Teaching Programme" showing the application of didactic material for the training of the chromatic sense as well as visual sequencing and visual memory¹³²

**EXAMPLES OF DIFFERENTIATION
DURING THE INTRODUCTORY TEACHING PROGRAMME**

PHASE TWO

AIM: VISUAL MEMORY AND VISUAL SEQUENCING

OBJECTIVE: To use unifix cubes to give the pupils practice in visual memory, visual sequencing and recognition of colour.

APPARATUS: Teachers: Wooden blocks which are painted different colours.

Pupils: 1. Unifix blocks, different colours.
2. Tape recorder and coloured chalk.
3. Computer paper or workbook.

The teacher will use the wooden blocks to build patterns with the group that is working with her.

1. The pupils observe.
2. She covers the example.
3. The pupils build the pattern.
4. The pupils "read" the teacher's pattern and correct their patterns (if necessary).
5. Further patterns are built.
6. Each pupil build's his own pattern and 'reads' it.

Differentiation takes place by the variation in number of blocks and the complexity of the patterns which are built.

Group 1. Blue, green, red on white, black, white.
Group 2. Red, white, white, green, black.
Group 3. Blue, green, yellow.

The activity takes place on the carpet using unifix cubes. To make classroom organisation easier the blocks should be placed on the carpet prior to the activity.

DIVISION OF GROUPS DURING THE ACTIVITY

One group is on the carpet with the teacher. This group is taught. The other groups practice the activity at their desks or in the media corner.

N.B. The model outlined below is merely an example. There are many other activities which the pupils can do when they are not with the teacher.

¹³². Transvaal Education Department, *Introductory Teaching Programme*, phase 2, Pretoria: 1988, p. 5.

solving strategies. The teacher is therefore required to evaluate her strategies through retrospective reflection and to structure and restructure sensory-didactic activities to promote learning continuity, whether they be remedial activities, normal continuum activities or extension work.

The serious problem regarding culturally and educationally deprived children could be addressed by the application of Montessorian based didactic apparatus especially if the view of Bilenker¹³³ is taken into consideration. If according to Bilenker the child's five senses are engaged in continuous and conscious involvement and he is allowed to express as much of his experience as possible through speech, (an aspect which was addressed by Montessori in her theory of writing and reading). If these aspects are integrated into education, the very roots of human experience are addressed. In this manner conceptual and language development can be achieved in remedial teaching.

The researcher agrees with Gitter who argues that materials in the primary school need not be exactly as Montessori suggested, but could be adapted to better suit the needs of the individual child and could successfully be utilised to achieve learning objectives.¹³⁴

¹³³. R.M. Bilenker, in L. Gitter, *The Montessori way*, p. 130.

¹³⁴. Gitter, *The Montessori way*, p. 131.

For example, the child in the primary school situation, could be trained to follow sound patterns present in the structured environment, thus sharpening the sense of hearing. This has great significance for the struggling child as it provides him with the mechanism necessary for improving speaking. By so doing the child is being prepared to follow the correct sounds of spoken language. Here the teacher has a significant role to play, for she must be careful to pronounce words clearly and completely so as to provide the correct example for the child to emulate.¹³⁵

Although it was previously discussed that the financial difficulties of the present economic climate makes it difficult for the child to attend nursery school, and because it is most unlikely that the present government would consider a compulsory intake of pupils at an earlier age because of the financial obligation it would incur, the researcher is of the opinion that the thrust of sensory training has to take place in the initial phases of the junior primary school and therefore the Introductory Teaching Programme has a vital role to play. The child would thereby integrate into the senior primary school situation more easily and the spontaneous liberty granted to him in the formative years would gradually be substituted for by the more formal teaching appropriate to later years. This would be to the benefit of the child who attended nursery school as well as those who did not.

¹³⁵. *Ibid*, p. 146.

Furthermore, sensory-didactic material of Montessorian basis could play a vital role in the training and improvement of sensory discrimination in the current **senior phase of the primary school situation**. Sadly there has been a tendency in recent years in the South African education situation to stop using apparatus as the child advances into the senior primary phase, however this researcher is of the opinion that the child in the senior primary phase is still concrete oriented and needs reinforcement through sensory stimulation to fully benefit from learning experience. Such concrete experiences can be best served through the use of both Montessorian and modern apparatus that has been designed in accordance with educational progress, thus helping provide much needed concrete reality experiences in the senior primary phase of the education situation.

5.5.5 An evaluation of the role of the teacher in the training of the senses

Having discussed the role of the teacher in detail in a previous section (see paragraph 3.4.4) the focus of attention in this section relates more specifically to the role of the teacher with regard to the training of the senses. It must also be remembered that Montessori was dealing with small children, using didactic apparatus, who do not need to constantly be interfered with every time that they make an error.

In agreement with Montessori's views, Du Plooy¹³⁶ is of the opinion that "a teacher (teachers in general, including pre-primary and primary school teachers) who wants to do everything for the child and constantly wants to tell the child what he should do and when to do it, deprives the child of the right to act voluntarily and independently and to accept responsibility. Furthermore the act of experiencing (in this case the senses) is a precondition for the encountering of the world or life-world (in this case the environment of the child). By actively assigning meaning to his experiences in the life world situation the child gets to understand reality and thereby builds his own reality relation. Du Plooy is nevertheless of the opinion that the child's experience must be accompanied by active adult assistance, which Montessori feels is unnecessary.

5.5.5.1 The feasibility of applying Montessori's views with regard to the role of the teacher regarding the training of the senses in the primary school situation

The establishing of a relationship of knowing, trust and authority (aspects which Montessori did not accentuate) is deemed by this researcher to be essential in developing the quality of a relationship that will determine the eventual success or failure of the entire occurrence of instructive

¹³⁶. Du Plooy, Griessel and Oberholzer, *Fundamental Pedagogics for advanced students, Supplementary booklet*, p. 1.

education, including instruction focusing on the training of the senses at primary school level. Furthermore, the only way to truly establish such a relationship is to interact with the pupils in a reciprocal relationship of trust. Fynne¹³⁷, seems to agree with this idea when he suggests that the child and especially those that are less gifted than their peers require clear precepts and principles of procedure." In contrast to Montessori's theory for pre-primary education, which prohibits intervention, our primary schools need more teachers that are willing to assist pupils that struggle, and to know the difference between when to intervene and which child is able to proceed on his own with regard to a particular task.

5.6 Concluding remarks

Under present educational circumstances there is no need to claim that the Montessorian system needs to be accepted in its entirety. The principles of graded stimuli and auto-education have direct relevance to the primary school situation as they are for the most part in harmony with accepted modern educational theory and practice and are therefore pedagogically justifiable. They seem to correspond to what is now known as childhood needs, different at various ages and stages of development.

The fact that Montessori stressed purposeful activity at an early age could mislead primary school teachers into assuming that the Montessori method will magically provide magnificent

¹³⁷. Fynne, *Montessori and her inspirers*, p. 334.

results as it did for her (in pre-primary education) without the educators active participation. Such educators may await high expectations and become disillusioned when children don't achieve as expected due to the lack of unfulfilled need of adequate adult accompaniment and intervention. Educators need to be thoughtful and critical with regard to the Montessorian system of education and not be impressed into believing that it has a special kind of success that all other systems lack. Children do not merely need intellectual skills pressured on them at an early age, but also need to enjoy a period of true childhood.

Furthermore, the Montessori system does not allow time or space for free creative activity with different sensory materials which is so essential for the child in the primary school situation. It is through such activities that children gain experience and knowledge, develop motor co-ordination, gain self-reliance, self-confidence and independence.

CHAPTER SIX

**CHAPTER 6 MONTESSORI'S VIEWS REGARDING THE TEACHING OF
WRITING, READING AND ARITHMETIC AND THEIR
FEASIBILITY IN THE PRIMARY SCHOOL SITUATION**

6.1 Introduction

Psychologists, educators and child developmentalists alike, have long been concerned with how a child learns and more specifically, how he acquires the spoken and written word, and learns arithmetic skills.¹ Montessori falls in line as one of the many educators who advocated a distinctive theory as to the teaching of the "three R's". While it is very easy to be critical of Montessori's approach, it must be borne in mind that her particular theoretical approach was unique in every respect, and that her influence has been a vital factor in many educationalists rethinking their original directives with regard to the education of the child.

The researcher thus feels the need to ascertain whether the Montessorian approach to the teaching of writing, reading and arithmetic presents any feasible solution to our particular problems as related to the teaching of the "three R's in a diverse classroom situation. Montessori correctly perceived the need for concrete reality experiences and because her approach to the teaching of writing, reading and arithmetic has been

¹. C.I.Sandstrom, *The psychology of childhood and adolescence*, translated by Albert Read, Great Britain: Penguin, 1966, p. 61. See also, J.A. Hadfield, *Childhood and adolescence*, Great Britain: Penguin Books, 1962, pp. 17-21.

tested with positive results², we can study and extract from them, those aspects which can feasibly and viably be applied in South Africa's current, problematic, primary school situation.

6.2 Historical overview with regard to Montessori's views on the teaching of writing, reading and arithmetic

The particular theory devised by Montessori with regard to the teaching of reading, writing and arithmetic was successfully implemented by Montessori in the Children's Houses with pupils up to the age of seven. This led to a stage of development where the children could write words and even sentences.³ This success led Montessori to formulate a theory relating to the teaching of the aforementioned concepts to children in the early primary school years, namely seven to eleven years of age, with the continuation of an almost identical process.⁴ The material, which could therefore be considered an extension of the material used for the teaching of writing, reading and arithmetic in the formative, pre-primary years, is recorded in one of her other major works, namely, *The advanced Montessori method. The Montessori elementary material.*

With regard to the approach adopted for the teaching of writing,

². See paragraph 2.4.2

³. M. Montessori, *The advanced Montessori method. The Montessori elementary material*, translated by Arthur Livingston, Massachusetts: Robert Bentley, 1965, p. 4.

⁴. *Ibid*, p. 5.

reading and arithmetic to the child in the early primary school years, (7-11 years of age) Montessori admits that it is not always possible for the child to discover things by himself and that he may need assistance. She clarifies this by stating that this does not necessarily mean that a rigorous method must guide the child at all times and in every step that he takes. Rather, it implies that the child must be given the means to understand and then must be given the liberty to discover things for himself.⁵ This does, however, appear to be in slight ambiguity to Montessori's earlier statement where she states that the teaching of writing, reading and arithmetic in the elementary school (primary school) are "the continuation of an identical process,"⁶ as that followed in the programme with children between the ages of three and six.

6.3 The correlation between writing and reading according to Montessori

It is evident from Montessori's theory that the method of teaching writing, greatly facilitates the task of teaching children to read.⁷ Montessori alludes to this order frequently, and although she argues that it should not be a concern to the educator as to whether the child learns to write or read first,

⁵. *Ibid*, p. 201.

⁶. *Ibid*, p. 5.

⁷. M. Montessori, *The Montessori method. Scientific pedagogy as applied to child education in "the children's houses"*, translated by A.E. George, London: William Heinemann, 1937, pp. 298-299.

as is evident in the statement below, she is often found to contradict herself in later works or further statements:

We do not trouble ourselves as to whether the child in the development of this process, first learns to read or to write, or if the one or the other will be easier. We must rid ourselves of all preconceptions, and must await from experience the answer to these questions.⁸

According to Montessori, generally all children of four are intensely interested in writing, and display a keen interest in learning how to write even sometimes earlier than the age of four.⁹ Although, as previously mentioned, Montessori clearly states that educators should not unnecessarily concern themselves as to whether the child first learns to read or write, Montessori, in her major works places the aspects of reading and writing in definite categories by which reading is theoretically preceded by writing.¹⁰

6.4 THE TEACHING OF WRITING

Because of the definite interrelatedness between writing and reading, it is essential to investigate exactly how Montessori proceeds in her approach to the teaching of writing. The child

⁸. *Ibid*, p. 283.

⁹. *Ibid*, p. 295.

¹⁰. *Ibid*, pp. 273-311.

is in fact initially prepared for reading by the teacher providing extensive practice in writing first. To this end the visual-motor and auditory-verbal modalities are used in presenting a new word. The preparatory exercises are structured so as to prepare the child's eye, hand, ear, and speech development and co-ordination for sound analysis, writing, blending, incorporating all the skills of reading. Montessori, therefore, places great emphasis on fine co-ordination and left to right progression.¹¹ The phonic system (study of sounds) endorsed by Montessori in an innovative word-building approach, is unique in that writing appears to precede reading, but in actual practice writing and reading are in fact taught concurrently.¹²

6.4.1 The teaching of writing to children from three to six years of age

According to Montessori, the entire writing process is based on a distinction between the elements (such as pattern formations etc) of which writing is composed and learning them through varying and interesting exercises, which may by themselves constitute motives to induce activities in children with a rational end in view. With regard to the process of writing, Montessori recognises two phases. Firstly, the process is

¹¹. Orem (ed.), *Montessori: Her method and the movement - what you need to know*, New York: Capricorn Books, G.P. Putnam's Sons, 1974, p. 168.

¹². R.J. Fynne, *Montessori and her inspirers*, London: Longman's, Green and Company, 1924, p. 338.

dependent on motor mechanisms, namely, the management of the child's pen or pencil. Secondly, the process is dependent on what Montessori terms "the real work of the intellect" which she defines as the drawing of the various letters of the alphabet - a process that will be defined within the context of this chapter.¹³

An assumption can be deduced from Montessori's writings that the two phases mentioned above are inseparably connected to three distinct periods for the preparation of writing.¹⁴ It is however, difficult to grasp the exact meaning of this relationship between periods and the two phases because of the laborious language that Montessori uses, which renders clarity difficult.¹⁵ Often passages have to be scrutinised and assumptions made with regard to what Montessori really had in mind, thereby casting a personal slant to the passage in question.

The three periods alluded to in the previous paragraph for the preparation of writing, according to Montessori, contain the entire method for the acquisition of written language.¹⁶ These three periods will thus be outlined in order to present a logical

¹³. M. Montessori, *The discovery of the child*, translated by M.A. Johnstone, India: Kalakshetra Publications, 1958, p. 257.

¹⁴. For further discussion on the three periods outlined by Montessori for the preparation of writing, see paragraph 6.4.1.1

¹⁵. Fynne, *Montessori and her inspirers*, p. 287.

¹⁶. Montessori, *The Montessori method*, p. 287.

presentation of facts with regard to Montessori's approach to the teaching of writing.

6.4.1.1 First period: Didactic material and exercises related to the muscular development necessary for the holding of the instrument of writing

Montessori categorically states that in the [formative years] of childhood the child's motor mechanism is in its sensitive stage, and the child is able to improve and master fine motor skills with relative ease (what Montessori terms the hidden order of nature).¹⁷ Through various exercises the child firstly learns how to hold the instrument of writing, and then learns how to write. The direct preparation for writing consists of exercises related to movements of the hand, and is an extension of the sensory exercises that he was previously involved in while using the sensory didactic apparatus.¹⁸

In this regard it is essential to examine the didactic material, propagated by Montessori, necessary for the management of the instrument of writing. The specific didactic material for the preparation of writing is given to the child in a specified manner. The child is first given a sheet of white paper and a box of ten coloured pencils. He is then given the opportunity of choosing one of the ten metal insets (representing different

¹⁷. Montessori, *The discovery of the child*, p. 258.

¹⁸. See paragraph 5.4.3

symmetrical patterns), and placing it on the paper, after which he draws the outline of the inside of the geometrical figure. Taking another coloured pencil and a different shaped inset, the child repeats the exercise over the first geometrical outline. The chromatic sense is stimulated by the result of a pattern displayed on the white paper. The beauty and success of the outline entices the child to repeat the exercise and fill in the outline and thus the preparatory movement of writing begins. According to Montessori, the exercise of filling in a single figure, demands that the child should carry out and repeat hand movements, in order to co-ordinate the muscular contractions necessary for the work of writing preparation. The child thereby becomes involved in the "management" of his own pen or pencil.¹⁹

Montessori, however, insists that the child must do it of his own free will and in any way he pleases, whilst under his eye there comes to life a big, beautifully coloured figure.²⁰ The number of exercises which the child can perform is unlimited and will later lead to the child being able to write on the narrow lines of an exercise book.²¹

6.4.1.2 Second Period: Didactic material and exercises

¹⁹. M. Montessori, *Dr. Montessori's own handbook*, U.S.A: Robert Bentley, 1964, pp.86-90. See also, Montessori, *The Montessori method*, pp. 273-274.

²⁰. Montessori, *The discovery of the child*, p. 264.

²¹. Montessori, *Dr. Montessori's own handbook*, pp. 91-92.

tending to establish the visual-muscular image of the letters.

The didactic material used for this exercise consists of cards covered with smooth paper to which have been attached letters of the alphabet, cut out in sandpaper. There are also larger cards containing groups of the same letters.²² The vowels are in light-coloured sandpaper and are mounted on dark cards, while the consonants and groups of letters are in black sandpaper mounted on white cards. The distinct shades help the form of the letter to stand out more distinctly from the background. According to Montessori, the grouping is arranged in such a way to call attention to contrasts and analogies.²³

Montessori identifies three stages in which teaching must proceed. A brief discussion of these stages will now be presented.

- (a) Stage 1: Association of the visual and muscular-tactile sensation with the letter sound

During this stage the child is presented with two cards upon which different vowels or consonants are mounted. The child is given the sound of the letters and is then required to trace it by moving the index finger of his right hand over the sandpaper letters in the act of writing. His mistakes are easily rectified

²². Montessori, *The Montessori method*, p. 277.

²³. *Ibid.*

by the fact that he will no longer feel the texture of the sandpaper if he exceeds the boundaries of the letter. The tactile and muscular senses are once again brought into play through the child visually sensing and touching the letters in order to associate them more definitely in the child's mind.²⁴

(b) Stage 2: Comparing the letters according to associated sounds (perception)

During this perceptual period the child is required to recognise letters as the directress asks the child for them. For example the directress may ask the child to give her an "a", and then the child must be able to recognise the letter and present it to her. Montessori insists, however, that if the child does not recognise the letter by looking at it, he must trace it with his finger. If the child is still not able to recognise the letter then the lesson is ended and may be resumed on another day.²⁵

(c) Stage three: Recollection (language)

During this third stage of teaching writing, the directress attempts to get the child to recall the letters in order to ascertain whether he has mastered the final stage of learning. The letters remain on the table for some time and then the directress proceeds to ask the child to name various letters as she picks them up. Following this, the directress unites the

²⁴. *Ibid*, pp. 278-279.

²⁵. *Ibid*.

consonant with a vowel, pronouncing the syllable thus formed and alternating the exercise by the use of different vowels, for example, "ma" and "me". The child first sounds the consonant separately and then the vowel, before sounding it together. Following this procedure the child can begin to compose simple words.²⁶

The latter process forms the initial preparation for writing, as it is evident that the child through touching the letters performs the motor action necessary for developing the action of writing. Significantly, when the child recognises letters and later words, he is involved in reading.

6.4.1.3 Third period: Didactic material and exercises for the composition of words

The didactic material consists mainly of loose movable alphabets, (letters that can be shifted around to form words) identical in form and dimension to the sandpaper letters previously described, except that they are cut out of cardboard and not mounted. The vowels are cut out from blue cardboard, while the consonants are cut out from red cardboard.²⁷

Once the child has mastered some of the vowels and consonants he is ready for the next step in the writing process, which could also possibly be considered the first step in the reading

²⁶. *Ibid*, pp. 279-280.

²⁷. *Ibid*, pp. 283-284.

process. It could even be argued, as previously stated, that writing and reading take place simultaneously. The directress pronounces a simple word carefully, such as "mama", ensuring that the child understands the separate letters of which the word is composed.²⁸ The child is then expected to build the word. According to Montessori these exercises play a significant role in the process of writing:

The child analyses, perfects, fixes his own spoken language,- placing an object in correspondence to every sound which he [the child] utters. The composition of the word furnishes him with substantial proof of the necessity for clear and forceful enunciation.²⁹

A further significant implication of this process of reading and writing is that it lays the foundation for accurate spelling.³⁰ Following this, the child can compose words which he thinks of himself. As the child follows this pattern he learns how to read the words as well. According to Montessori, "in this method ... all the processes leading to writing include reading as well."³¹

²⁸. *Ibid.*

²⁹. *Ibid*, p. 285.

³⁰. *Ibid.*

³¹. Montessori, *Dr. Montessori's own handbook*, pp. 95-96.

Orem³² suggests that after working with the initial movable alphabet the child is suddenly able to form entire words in succession. He suggests that this sudden, spontaneous outburst of writing takes on the characteristics of a natural process in the child.

6.4.2 The teaching of writing to children from seven to eleven years of age

According to Montessori the education received in the grades (grade 1 and grade 2) with regard to writing is not separate from the Children's Houses but is a continuation of the same process.³³ This formed a foundation for the teaching that the child was to obtain on an elementary (primary school) level. The didactic material is initially also an extension of the material previously used for the teaching of writing.

6.4.2.1 The didactic apparatus and exercises

Two sets of didactic apparatus are used for the teaching of writing. The first set of didactic apparatus consists of three complete movable alphabets constructed of plain glazed paper and each of these alphabets is coloured in either red, black or white. Each alphabet contains twenty specimens of each letter, thus comprising a total of sixty copies of each letter of the

³². R.C. Orem (ed.), *A Montessori handbook*, New York: G.P. Putnam's Sons, 1965, p. 141.

³³. Montessori, *The advanced Montessori method. The Montessori elementary material*, p. 5.

three coloured alphabets. These movable letters are designed in model hand-writing so as to be an example of correct writing to the child. These alphabets are furthermore accompanied by separate movable punctuation marks.³⁴

The second set of didactic apparatus consists of small coloured cards containing different parts of speech, namely black cards for nouns, red cards for verbs, pink cards for adverbs and continues with each part of speech being allocated a specific colour. These cards are placed in eight boxes, each holding one part of speech. The child is expected to pick cards from these boxes, so as to provide for the study of two or more parts of speech simultaneously.³⁵

In addition to the various didactic material, the child is presented with charts, that list various aspects of grammar such as prefixes, suffixes, compound words and other grammatical aspects in a specific order (similar to a textbook). Using the study of prefixes and suffixes as an example, Montessori firstly highlighted a selected prefix (or suffix) in a particular coloured movable alphabet, and then the child was encouraged to choose words from the provided chart, to compliment this prefix (or suffix). Hence, all the prefixes and suffixes that the child has listed will be in the same colour, while the rest of the word will be in another colour.³⁶

³⁴. *Ibid.*

³⁵. *Ibid*, pp. 10-11.

³⁶. *Ibid*, p. 14.

Further grammatical exercises are solely based on the small coloured cards, previously described, on which specific parts of speech are written. For the first exercise, the child may be given boxes with adjectives (describing words) and nouns (naming words) shuffled together, and there are just enough adjectives to go with each respective noun so that the process that the child is involved in becomes both challenging and fascinating to him. The child is required to place, for example, the correct adjective in front of the correct noun.³⁷ The child uses the cards and the charts as he would use a text book³⁸ and all the work may then be copied into his personal workbook.

The eight boxes with their respective cards are used for many other exercises in order to teach the various parts of speech. In addition the teacher is expected to familiarise herself with all the charts and lists in order to be able to present them to the children in an orderly and structured manner.

6.5 THE TEACHING OF READING

6.5.1 The teaching of reading to children from three to six years of age

Montessori perceived that many children demonstrated, that when exposed to systematic motor, sensory, and language activities in

³⁷. *Ibid*, p. 23.

³⁸. All the charts and lists are to be found in Montessori's work entitled, *The advanced Montessori method. The Montessori elementary material*, under the grammar section.

the prepared environment, they would readily learn to read before the age of six.³⁹ According to Montessori, the principles adhered to in the process of writing, namely that the child, through touching the letters and looking at them, fixes the image in his mind. This is brought about through the stimuli of interrelated sensory perceptions which enables him to differentiate between the various letters. Montessori suggests that the two facets of this exercise, namely sight and touch - that the "looking" could be considered reading, and "touching" could be considered writing. According to the ability of each individual child, some may learn to read first, while others may learn to write first.⁴⁰

The Montessori approach to language therefore prepares a child for reading by first mastering the exercises related to writing. Hence the philosophy adhered to by educationalists today, that reading does not begin with books, can be traced back to Montessorian theory.⁴¹ Reading, according to Montessori, is furthered using a series of apparatus designed to stimulate and initiate the processes for writing and reading which is already latent in the child.

6.5.1.1 The didactic material necessary for exercises in

³⁹. Orem (ed.), *Montessori: Her method and the movement - what you need to know*, p. 72.

⁴⁰. Montessori, *The Montessori method*, p. 268.

⁴¹. M. Montessori, *The formation of man*, translated by A.M. Joosten, India: Theosophical Publishing House, 1969, p. 132.

reading

The didactic material for the teaching of reading consists of slips of paper, or cards, on which are written, in clear, large, script, the names of "familiar objects" (such as a variety of toys) in the child's immediate surroundings. These objects are well-known to the child because they have been pronounced many times by the child in his everyday encounters in the "prepared" environment.⁴²

In order to proceed with the task of reading the child is given one of the slips of paper, or cards and he must then sound the word written on the card and attempt to recognise the object which the word represents. In order to achieve this aim, Montessori proceeds in the following manner. If his sounding of the word is correct, the child is told to read it more quickly. The child repeats the word still more rapidly repeating the same group of sounds. When the child has repeated the word several times, he places the card against the object that it represents and the exercise is finished.⁴³ According to Montessori:

In this consists the whole reading exercise, a very speedy exercise, and one which presents to the child, already prepared through writing, very little difficulty.⁴⁴

⁴². Montessori, *The Montessori method*, p. 299.

⁴³. *Ibid*, pp. 300-301.

⁴⁴. Montessori, *The discovery of the child*, p. 289.

(a) Game for the reading of words.

An interesting discovery made by Montessori revolves around a reading game devised in order to learn words more easily. A large variety of toys, accompanied by a card upon which the name of each toy is written, are displayed on a table. These cards are then folded and placed in a basket and drawn by each child who can read. The child is then expected to return to his desk, unfold the card, and read it mentally, without showing it to those around him. Following this, the child is then required to proceed to the table of the directress and collect the toy, while at the same time pronouncing the name of the toy clearly and then presenting the card to the directress for verification. The child is then given the opportunity of playing with the collected toy for as long as he likes.⁴⁵ According to Montessori:

We not only do not force a child, but we do not even invite him, or in any way attempt to coax him to do that which he does not wish to do.⁴⁶

According to Montessori, it sometimes happens that the child, not having spontaneously presented himself for the exercises and games, is left in peace to his own devices. No compulsion is made to enforce the child to read or write before the age of six.⁴⁷

⁴⁵. Montessori, *The Montessori method*, p. 301.

⁴⁶. *Ibid*, p. 304.

⁴⁷. *Ibid*.

(b) Game for the reading of phrases

For the reading of phrases, Montessori insists that silence needs to be established before the game starts. For this game, a basket is presented to the child with slips of folded paper indicating an instruction. The child is then required to read the instruction and carry out the action.⁴⁸ Thus, communication between the directress and the child is initiated and thoughts are transmitted without words being spoken. Montessori contends that the child who begins to read should read mentally⁴⁹ (silently), as reading aloud is much more complex than silent reading, and requires, what Montessori terms, two mechanical forms of language, namely, articulation and interpretation of graphic symbols.⁵⁰

6.5.2 The teaching of reading to children from seven to eleven years of age

With regard to the teaching of both writing and reading in the elementary school (primary school), Montessori feels that formal schooling should begin with a child that knows how to write and read as well as children who possess a mastery of the articulate language. The ability to read written language in an elementary

⁴⁸. *Ibid*, pp. 308-309.

⁴⁹. *Ibid*, p. 309.

⁵⁰. *Ibid*. It must be pointed out that although Montessori considered these two processes as mechanical, the researcher does not consider the interpretation of graphic symbols as "mechanical".

way, is the beginning of the conquest of logical language which can be defined as the ability to communicate either orally or in a written manner so as to convey thoughts and feelings accurately.⁵¹

The child between the ages of seven and eleven in the Montessorian elementary school, similarly makes use of interpretation and audition.⁵² Although Montessori does not provide a great deal of information on the process of reading for the child between the ages of seven and eleven,⁵³ these two concepts will be discussed to facilitate continuity.

6.5.2.1 Interpretation

The didactic material proposed by Montessori for the object of interpretation is composed of a graded selection of cards consisting of seven stages or series. The child is expected to select a card and execute the action indicated on the card, after he has read the instruction mentally. The instructions increase in difficulty from the first series to the seventh series.⁵⁴ The process of executing an instruction, led to a stage where the

⁵¹. *Ibid*, p. 310.

⁵². Montessori, *The advanced Montessori method. The Montessori elementary material*, pp. 182-198.

⁵³. The section that deals with reading between the ages of seven and eleven, constitutes a mere twelve pages (pictures and charts excluded). See, Montessori, *The advanced Montessori method. The Montessori elementary material*, pp. 171-202.

⁵⁴. *Ibid*, pp. 182-196.

discovering the process of reading aloud for himself, after having listened to the model reading of the teacher. In order for the child to eventually articulate effectively, the teacher needs to be able to absorb the child into the world of the book, because reading could be considered the gateway to all learning experiences.

With regard to reading aloud, the teacher has an important role to fulfil in deciding exactly when to start reading the selected book aloud. Montessori suggests that a good time to initiate this process is when the child is busy with something that does not require a great deal of concentration, such as during a drawing activity when the child is quietly going about his work.⁵⁷

6.6 THE TEACHING OF ARITHMETIC

6.6.1 The teaching of arithmetic to children from three to six years of age

6.6.1.1 The teaching of numeration as an introduction to arithmetic

The didactic sensory material used by Montessori in the preparatory work of sensory training⁵⁸, (which at this stage should be familiar to the child) could be considered the first material used by the child in the teaching of numeration, as it provided the child with countless opportunities to be involved

⁵⁷. *Ibid*, p. 197.

⁵⁸. See paragraph 5.4.3

in counting activities. As most children at the age of three can already count, the concept of numeration does not pose a serious problem. Although Montessori rightfully acknowledges that there are many different ways to approach the task, she initiates the process with the counting of money and similar objects.⁵⁹ Montessori does not explain in exact detail the approach that she advocates, but it can be assumed from her writings that the money is used in counting and providing change.

Following these simple exercises relating to counting, the series of ten rods are utilised in order to teach and consolidate numeration more effectively and introduce simple arithmetic operations.⁶⁰ The first rod is ten centimetres long, the second rod consists of two units of ten centimetres each, the third rod consists of three units of ten centimetres each, until the tenth rod which is ten units of ten centimetres each (one metre). The second rod is therefore twice the first, the third rod is three times the first and the tenth rod is ten times the first rod. The sections, which join on to each other, are painted alternately red and blue. As previously explained, the rods are initially used for various numeration (counting) exercises. For example the rods may be mixed up and the child has to place them in order, starting with the single rod and placing them in order until the last rod, which is ten rods joined together. The rods may again be mixed up. The directress then selects one rod (for example the rod with five units joined together), and the child must find the

⁵⁹. Montessori, *The Montessori method*, pp. 328-329.

⁶⁰. *Ibid.*

next one in length. He selects the rod and the directress allows him to verify his choice by placing the two rods side by side and then counting the sections.⁶¹ Later, the same rods are used for arithmetical operations such as addition, subtraction, division and multiplication.

Montessori devised a very simple game in which numbers from an old calendar are cut out. Following this the child is required to draw these numbers out of a box, return to his seat where he unfolds it and looks at his number. The child then goes to the directress's table and selects the quantity of small objects (corresponding to the number drawn) that have been placed on the table of the directress. Because the child is required to leave the slip of paper at his desk he must remember his number not only during the movements to and from his desk, but also while he collects and counts his pieces (small objects). The child then returns to his desk and places the small objects on his desk in columns [groups] of two. Having done this the directress then comes to the child's desk and verifies the child's answer.⁶²

6.6.2 The teaching of arithmetic to children from seven to eleven years of age

6.6.2.1 The didactic apparatus and exercises

The majority of children in the Children's Houses had already

⁶¹. *Ibid*, p. 330.

⁶². *Ibid*, p. 332.

performed the four arithmetical operations of addition, subtraction, division and multiplication in their simplest forms, before they had reached the age of six. Because the children had advanced to the stage where they had been initiated into simple forms of arithmetic, smaller and more abundant didactic material (outlined below) had to be prepared, in order to be more accessible to a larger number of children working at the same time.⁶³

(a) The beads on wires

The initial didactic material that the child uses, consists of beads strung on wires. The beads are of different colours. The ten bead bar is orange, the nine bead bar is dark blue and this process of colour switching is continued until the two bead bar which is green. Each child has five sets of these beads at his disposal. The fact that the rods are small and so easily handled permits them being used at smaller tables.⁶⁴

In addition the child is given cards on which numbers are written. The child is then required to place the number of beads to correspond with the number on the card. Mental calculation develops spontaneously and the child eventually calculates up to multiples of ten. By superimposing these cards on each other many different numbers can be formulated. Eventually it leads the

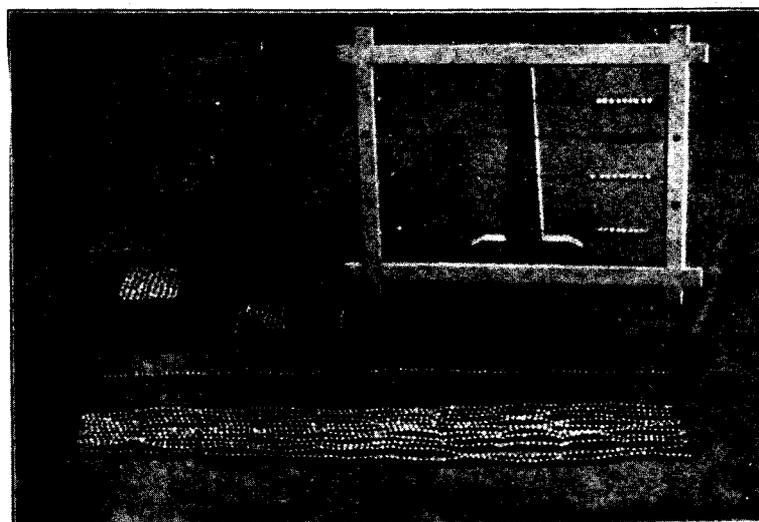
⁶³. Montessori, *The advanced Montessori method. The Montessori elementary material*, pp. 205-206.

⁶⁴. *Ibid*, p. 206.

child to count by colours instead of beads. By being given various extra amounts of beads the child is granted the opportunity of placing the ten bead rods together and forming hundred and thousand bead links. In this way various counting procedures are followed.⁶⁵

(b) Counting frames

This material consists of a very simple bead counting frame which is arranged with the longest side as base and has four parallel metal wires each of which is strung with ten beads. Next to the top wire, on the left hand side, a one is marked on the wood (representing units). Next to the second wire is marked 10 (representing groups of ten), next to the third is 100 (representing groups of a hundred) and next to the fourth is 1000, which similarly represents groups of a thousand. The whole frame has the appearance of an abacus. (See diagram below)⁶⁶.



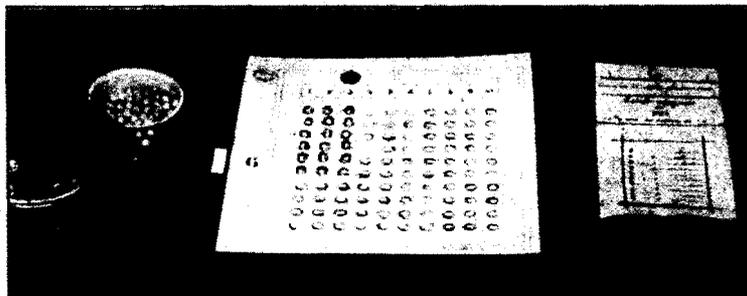
⁶⁵. *Ibid*, pp. 206-210.

⁶⁶. *Ibid*, pp. 210-211 and p. 215.

(c) The multiplication and division charts

The multiplication chart consists of a piece of square cardboard with a hundred pockets (ten rows with ten pockets in each of the ten rows). The multiplicands are written on separate pieces of cardboard and numbered from one to ten. The child is then required to place the card bearing the multiplicand in the pocket at the top of the table (numbered from one to ten) and then filling up the vertical column with beads underneath the area up to the number being multiplied. All that is left is for the child to add the beads and record it in his workbook.

For the operation of division a similar operation is carried out except the child is expected to fill each pocket until no remainder is left by which the child knows what the quotient is. (See diagram below)⁶⁷.



⁶⁷. *Ibid*, pp. 217-224. See also diagram opposite p. 239.

**6.7 CRITICAL EVALUATION OF MONTESSORI'S VIEWS REGARDING
THE TEACHING OF WRITING, READING AND ARITHMETIC AND
THEIR FEASIBILITY IN THE PRIMARY SCHOOL SITUATION**

Having presented an overview of the approach used by Montessori regarding the teaching of writing, reading and arithmetic, an attempt will now be made to show what contribution the Montessori approach could provide for the existing primary school situation. Secondly, an attempt will be made to show to what degree the Montessori system may be capable of modification and innovation and whether these changes could benefit the existing educational structures.

It is, however, obvious from the research undertaken that Montessori never intended to include the teaching of writing, reading and arithmetic in her original curriculum. Montessori's approach, relating to the teaching of the "three R's", appears to be hastily undertaken in an effort to satisfy the many people who looked to her wisdom in search for an improved method. One gets the impression that she was coerced into formulating an approach and that she was not entirely convinced that her approach was correct. With regard to the teaching of writing and reading, she lacks the conviction that was so powerfully displayed in her general approach to the training of the senses.⁶⁸ Fynne⁶⁹, appears to agree with this assessment when he states that "writing and reading found no place in her

⁶⁸. See paragraph 5.4 which deals with sense training.

⁶⁹. Fynne, *Montessori and her inspirers*, p. 265.

original scheme for the work of the Children's Houses", but came about as a result of continuous pressures and demands made by parents.⁷⁰

Furthermore, the reader is reminded that such a task is hindered by ambiguities as Montessori's facts are often unclear, hence the researcher had to refer to works by other authors in order to compare their understanding of what she is aiming at. Often, however, instead of clarifying Montessori's statements, opposing interpretations complicate matters even further, and it is often left to the researcher to decide as to what Montessori really had in mind.⁷¹

According to Squelch,⁷² of the University of South Africa, since the opening up of "whites only" schools, classrooms around the country have become increasingly diverse and teachers now face the challenge of teaching pupils from diverse cultural, linguistic, socio-economic and educational backgrounds. The significance of this problem is the pressing need to find practical solutions to the diverse problems now experienced by teachers. A study of Montessori's approach to the vital aspects of writing, reading and arithmetic could have great relevance to the unique South African education situation, especially if one considers the many cultural, social and ethnic problems

⁷⁰. Montessori, *The Montessori method*, pp. 269-327.

⁷¹. Fynne, *Montessori and her inspirers*, p. 287.

⁷². J. Squelch, Language diversity in the multicultural classroom, *The Transvaal Educational News*, Volume 90, (number 1), February, 1994, pp. 5-6.

encountered in the educational scenario.

Furthermore, the tremendous disparity in the levels and standards of education of children who are now being thrust into a common educational situation, presents a problematic situation. Squelch⁷³, contends that teachers need to develop and employ teaching strategies which will enhance and facilitate language development which are suitable for multicultural and multilingual classes and thus teachers have a crucial role to play in helping children overcome learning difficulties, and to create opportunities and experiences that will enhance their language development, as well as an understanding of basic arithmetic operations. The practicalities of dealing with this diversity and disparity in a classroom situation are formidable, and the only way in which gaps can be bridged is by providing and applying concrete realities and experiences to formulate language and perceptual development.

6.7.1 EVALUATION OF MONTESSORI'S VIEWS REGARDING THE TEACHING OF WRITING AND READING

In terms of current practices at junior primary level, a brief analysis and assessment of the influence of Montessorian theory regarding the acquisition of the skills of writing and reading are relevant to this study. On the positive side, Montessori's recognition of the importance of intersensory stimuli, particularly the interrelated nature of the tactile, visual and

⁷³. *Ibid.*

auditory functions in initial symbolic letter identification, have become a well established and respected principle of word building and initial reading. Certainly, the actual writing of letters and words follows later, but particularly the tactile stimulus of letter formation provides an important foundation for the fine muscle, and eye-hand co-ordination required for writing.

A surprising, and almost contradictory feature of Montessori's theory is the presupposition that children should be exposed to grammatical structures while learning to write and read. In fact Montessori posits that the child should begin the study of grammar between the ages of five and a half and seven and a half, or even eight.⁷⁴ Certainly it must be questioned as to whether a child of five, or even eight years can comprehend the intricacies of formal grammatical structures. Montessori's whole argument is based on the fact that the child in this age group shows a keen desire to learn words, and that the learning of words is linked to a study of grammar.⁷⁵

While Montessori is correct in her deduction that grammar is acquired through usage rather than mere rote learning, she is found to be in contradiction of her own promulgations with language teaching to the child falling in the seven to eleven age group, where Montessori provided lists of words, rather than draw on the child's natural, real-life experiences and activities so

⁷⁴. Montessori, *The advanced Montessori method. The Montessori elementary material*, p. 9.

⁷⁵. *Ibid.*

characteristic of her approach to the three to six year old child.⁷⁶

In some ways it is a contradiction in terms of Montessorian theory that she structured learning exercises contrary to the natural, investigatory skills and analytical abilities of the five to eight year old child. Indeed, grammatical structures intrinsic to actual literature content, are eventually analysed and "taught", but only at senior primary and high school level in the South African education situation.

It must be pointed out that in terms of current educational practice, the recognition of groups of letters has been moderated to accommodate word recognition by the "look and say" technique - a method used by Montessori in terms of the existing practices of her time. This applies specifically to high frequency words that cannot be sounded according to phonics, but are nevertheless an essential component in all initial reading material. Such sight words include, inter alia, they; are; here; their etc.

On the whole it appears that the Montessori approach has not got the capacity to make a significant contribution to the existing approach to the teaching of reading in contemporary education, and although it must have made a significant contribution at the time of Montessori, it is the opinion of this researcher that the present value of her contribution in the present era is probably not equal to the general work presently being done in many South

⁷⁶. See paragraph 6.4.1

African schools and can therefore make no monumental improvement to the current primary school situation.

6.7.1.1 The feasibility of applying aspects related to Montessori's views regarding the teaching of writing and reading in the primary school situation

The fact that certain of Montessori's ideas related to the teaching of writing and reading are currently in use in the primary school situation implies that they are regarded as feasible by current educators. For example, the spelling study guide of the Transvaal Education Department endorses Montessori's initial idea that sandpaper letters must be felt and traced in order to fix and establish the image in their minds. The tactile sensation thereby becomes the means of associating the letter with the sound.⁷⁷

6.7.1.1.1 Didactic material and exercises related to the holding of the instrument of writing

One of the most meritable factors that could be taken cognisance of by educators in the primary school situation, with full awareness of the current educational climate, which is characterised by a large sector of the population having been deprived of an adequate education in their formative years, is

⁷⁷. Subject Committee for English first language, Administration: House of Assembly, *Teaching spelling in context, Study guide number 55*, p. 6, 1992.

Montessori's philosophy of leaving nothing to chance or assumption. The principle of ensuring that the child starts off by holding his pen correctly, is therefore a sound principle in acquiring basic skills (before proceeding any further with the process of writing) for ensuring the later adequate development of all processes related to the act of writing. Educators in the primary school situation (and more specifically the junior primary phase) cannot chance to overlook this aspect, as it forms a basis for the proper development of writing in the senior primary phase of education and in later years. Furthermore, this problem is compounded by the fact that many pupils who will enter the primary school situation in the near future will have a definite inability to manage their pens or pencils correctly.

The fundamental importance of this guideline can be stressed by the fact that much of the theory related to the proper handling of the pen or pencil, based on Montessorian theory is currently practised by many occupational therapists⁷⁸ who employ various strategies and utilise apparatus similar to geometrical insets, in order to correct the child's handling of the instrument of writing. Such didactic apparatus could play a definite and valuable role in assisting the individual child to correctly handle his instrument of writing while at the same time guiding him to improve his ability to develop the fine motor skills necessary for his elementary education.

⁷⁸. Personal interview with occupational therapist, Sarah Holland, 14 April 1994.

In addition, the educational field has provided education with a great deal of other didactic material to correct deficiencies with regard to the individual's handling of the instrument of writing in the primary school situation, of which peg-boards, dart-boards and other fine motor co-ordination exercises such as those used by Montessori in the Children's Houses, namely threading, sewing, and buttoning apparatus should be included in the year plan of the junior primary phase, so that learning deficiencies may be corrected as they occur.

6.7.1.1.2 The use of the movable alphabet in the
teaching of basic concepts

Another aspect of Montessorian education that warrants careful consideration for feasibility of application in the primary school situation, is Montessori's movable alphabet. Montessori's approach, whereby, the various consonants and vowels are cut out of cardboard, in contrasting colours, is an ingenious concept for the teaching of spelling. Furthermore, with the aid of a series of pictures of everyday objects, the movable alphabet can be applied to teach the child various soundings and spellings. Gitter,⁷⁹ for example, suggests that the child should start with monosyllabic three-letter words until ten or more examples of each vowel sound have been built or the child tires of the exercise. Poly-syllabic words could follow as the child increases in his ability to cope with more difficult words. By following

⁷⁹. L.L. Gitter, *The Montessori way*, Washington: Special Child Publications, 1970, p. 174.

such exercises the child is not only building on the basics of writing, but is also reinforcing spelling and reading skills already learned.

While the above-mentioned movable alphabet has definite validity in the primary school situation, it is Montessorri's alphabet geared for older children, that is even more ingenious in its construction and applicability, as it allows more detailed grammatical work to be learned, and it holds value for the teaching of many skills such as spelling and language skills in the senior phase of the primary school. Furthermore the concept of teaching language skills can be greatly enhanced through the application of a movable alphabet.⁸⁰ Montessori is correct in her deduction that the preparatory exercises that the child is involved in, namely that of using the movable alphabet, prepares and forms a foundation for the child in his learning of reading. The visual process by which Montessori introduces children to the concepts of prefixes and suffixes⁸¹ (as one identified aspect of grammar) holds considerable value for the study of grammar in the senior primary school years.

The idea of having movable alphabets in different colours is also a most resourceful concept in being able to teach root words, whereby a series of different words could be built up with the root word spelt in a single colour and the rest of the word spelt in another colour. Such a process is especially valid in South

⁸⁰. See paragraph 6.4

⁸¹. See paragraph 6.4.2.1

African primary schools for the teaching of phonics and spelling.

The movable alphabet holds merit for many aspects of the primary school situation, including remedial and bridging classes where the extension of utilising such an alphabet could valuably assist primary school pupils suffering from learning difficulties. The present influx of pupils struggling to understand English could successfully be taught the rudiments of grammar following the basic ideas outlined by Montessori, using the movable alphabet.

From the building of words using the movable alphabet the child can move on to various games related to already formulated words, representing specific objects with vowel sounds. This has special relevance for the educationally deprived child entering a school in which the standard is much higher than that to which he was previously accustomed. The principle adhered to by Montessori is a sound one and is related to classification and cognitive retention skills. Montessori is correct in her assumption when she argues that children like and remember classifications. This confirms the idea that it is natural for children to collect words, and have their minds focused on a sense of understanding words.⁸²

It must, however be pointed out that many various stimulating and worthwhile games related to the mental order of retention and classification, in which the child is required to make matches

⁸². Montessori, *The discovery of the child*, pp. 294-295.

and recognise objects while matching them to words, are currently available on the educational market and present a feasible means of enhancing basic language skills.

6.7.2 AN EVALUATION OF MONTESSORI'S VIEWS REGARDING THE TEACHING OF ARITHMETIC

In reviewing the Montessori approach to the teaching of arithmetic, the researcher is drawn to the conclusion that there is no major contribution that could be made to the existing South African primary school situation. Kilpatrick⁸³ is similarly of the opinion that Montessori's approach to the teaching of arithmetic provides no fundamental suggestion for the improvement of education.

However, the new constructivist approach for the teaching of mathematics, currently used in the senior primary phase, incorporates the most valid aspects of Montessori's theory as will be shown in paragraph 6.7.3.1.1

6.7.2.1 The feasibility of applying aspects related to Montessori's views on the teaching of arithmetic in the primary school situation

With regard to the teaching of arithmetic to the child between

⁸³. W.H. Kilpatrick, *Montessori examined*, London: Constable and Company, 1915, p. 80.

the ages of three and six,⁸⁴ the Montessori apparatus has very little to offer that has definite value for the South African primary school situation and there is certainly no major fundamental suggestion that could improve the present situation, because of its limited applicability as a result of similar material currently in use or because better material has shown to provide more successful results. However, the self-discovery approach that Montessori designed for the child between the ages of seven and eleven⁸⁵ has applicability and is currently in use in the existing South African primary school situation. Much of the approach as well as the didactic material is similar to that utilised by Montessori and therefore one can assume that it is based on Montessori's ideas.

6.7.2.1.1 The new constructivist approach for the teaching of mathematics currently used in the primary school phase incorporates aspects of Montessori's theory

In 1993 new directions for the teaching of mathematics were implemented in the junior primary phase of the primary school, while in 1993/1994 a similar programme for the teaching of mathematics was implemented in the senior primary phase. The approach known as the constructivist approach to the teaching of mathematics, is problem centered in that the pupil must find solutions through self-discovery and the use of didactic

⁸⁴. See paragraph 6.6.1

⁸⁵. See paragraph 6.6.2

apparatus in greater measures than in the past. The concept of self-discovery as outlined by Montessori in the present chapter, features more prominently in the South African primary school situation, by virtue of its allowing the child to discover mathematical relationships for himself and thereby gaining a more firm knowledge of the concept.

There is a striking resemblance to the didactic material devised by Montessori for the child between the ages of seven and eleven, and that described in the new Mathematics curriculum. The abacus, which the pupils are expected to handle themselves bears resemblance to the counting frame that Montessori made use of, while the so-called spray cards bear resemblance to Montessori's cards that she uses to superimpose numbers on.⁸⁶ The two most significant and essential pieces of Montessorian apparatus are therefore currently in use indicating their definite feasibility in the primary school situation.

In addition the new mathematics syllabus provides additional apparatus in the form of tape measures, number lines matching number cards, number flash cards and various games such as dominoes, bingo and multiplication games to teach numeration skills.⁸⁷

The Montessori number rods, as one part of Montessori's didactic

⁸⁶. See paragraph 6.6.2.1 (a)

⁸⁷. Transvaal Education Department, An experimental mathematics curriculum for the junior primary school phase, p. 6.

apparatus, could be successfully implemented in the new mathematics curriculum, as additional apparatus in the junior primary phase of the primary school as it would help to eliminate the child's fear of mathematics⁸⁸ and could assist with developing number concepts. The rods also hold validity for the teaching of children with arithmetic deficiencies related to number concepts as they are in fact, specifically designed for developing and reinforcing number concepts.⁸⁹ The rods may be used for various manipulations but more specifically for counting, comparing, and other minor calculations.

Gitter⁹⁰ suggests that the number rods could also be used for many exercises, including putting two of them together and finding them equal in length to a third rod or to another pair, thus conducting a remedial exercise. They could also be used by forming them into steps or even for serial counting. When the rods have become familiar to the children they can easily be used to perform various interesting mathematical operations, such as quantitative relationships, spatial relationships, measurements, sequencing, teaching of fractions, and addition operations can also be undertaken in an attempt to assist educationally deprived children to enter the mainstream of mathematical classes, thereby forming a bridge to the higher levels of numerical abstraction.

As the essential points related to the Montessori approach are

⁸⁸. Gitter, *The Montessori way*, p. 208.

⁸⁹. *Ibid*, p. 214.

⁹⁰. *Ibid*.

presently in practice there is no further need to dwell on these issues except to state that the Montessori approach, can be valuably utilised in the primary school situation.

6.8 Concluding remarks

Montessori's approach the three R's is the one aspect of her methodology in which she perhaps fails to convince her many adherents as to the importance of her unique approach. Montessori admits that in many instances a thorough study of these aspects was not made, but rather propounded an incomplete philosophy.

It is very easy to uncover words and phrases from Montessori's writings on the teaching of the "three R's", to suggest that she places less emphasis on the teaching of writing, reading and arithmetic than on the training of the senses. It is therefore little wonder that her critics are so adamant in their criticism concerning her approach to writing, reading and arithmetic, which often lacks the conviction and fibre so often seen in her approach to self-development through sensory stimulus. The exposition, however, does allow the reader to consider the possibility of adapting or extending Montessori's ideas to suit current educational needs in the primary school situation.

CHAPTER SEVEN

CHAPTER 7 SYNTHESIS**7.1 INTRODUCTION**

In this chapter a final conclusion to the stated problem,¹ namely, whether the Montessorian approach can provide effective guidelines that will contribute to the improvement of existing educational structures in the primary school situation, is provided. It is therefore essential for the results of this research, which reflected on the Montessori approach from a critical standpoint, to provide adequate and innovative recommendations for the present day primary school situation in order to improve the standard of education.

Hence, on the basis of these considerations, the parameters of this research are briefly reviewed and expounded on.

**7.2 RESUME OF THE MAIN POINTS OF THIS RESEARCH WITH
 SPECIFIC REGARD TO THEIR IMPLEMENTATION IN THE
 PRIMARY SCHOOL SITUATION****7.3 THE LIBERTY OF THE CHILD****7.3.1 Synopsis**

According to Montessori, liberty is a prerequisite for self-education; freedom for both the educator and the child is rooted

¹. See paragraph 1.3.1

in the view that the child can choose his or her own activities within a structured learning environment, move around the classroom, engage in spontaneous activity and become independent.² Montessori is of the firm conviction that the child growing under laws of natural development achieves greater independence and expresses greater individuality than a child governed by restrictive discipline.³

Montessori is furthermore of the assurance that discipline must come through liberty.⁴ However, discipline is not to be equated with the old time absolute and undiscussed coercion to immobility, which rendered the child silent through threats of punishment.⁵ The individual becomes a self-disciplined entity only when he can take responsibility for his own actions and conduct and hence achieve the dignity of accountability. He thus becomes master of himself and can regulate his own conduct.

7.3.2 Evaluation and recommendations regarding
Montessori's views on the liberty of the child and
their possible implementation in the primary school
situation

7.3.2.1 The orderliness within the environment that

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2. See paragraph 3.3.1
 3. See paragraph 4.3.3
 4. See paragraph 3.3.3.1
 5. See paragraph 3.2

Montessori ascribes to is a prerequisite for effective classroom teaching⁶

In evaluating Montessori's views on the liberty of the child and the role of orderliness in the prepared environment, a number of conclusions can be drawn. Firstly, an orderly classroom and well-structured environment geared to the level of the child is essential for the development of the individual child.⁷ Furthermore the idea that nature gives children an intrinsic sensibility to order, is significant for authentic educational practice and is an aspect which is emphasised by Montessori.⁸

Secondly, the orderliness that Montessori advocates within a structured or prepared environment,⁹ is regarded by this researcher as a crucial aspect for implementation in our present primary school situation, due to the child's need for structure.¹⁰ With this premise in mind, educator's should re-examine their mandates, and be prepared, in an innovative spirit, to restructure the classroom so that the child will internalise the experiences that take place in the prepared environment. Montessori, as well as this researcher, is of the opinion that once this phase is reached, the child's conduct is supported by

⁶. See paragraph 3.3

⁷. See paragraph 3.3

⁸. See paragraph 3.3

⁹. See paragraph 3.3.1

¹⁰. See paragraph 3.3

an orderly environment. In this way the child is thus helped to internalise external discipline into self-discipline.¹¹

7.3.2.2 The liberty to which Montessori ascribes negates the authority of the adult educator

The researcher posits that Montessori, in her desire to liberate the child, led to an overemphasis of freedom which resulted in a lack of recognition of authority which manifests itself in later years when the child is involved in more formal education and finds difficulty in accepting the authority of the adult-educator.¹² This, coupled with the concept of non-intervention on the part of the adult educator presents a narrow-minded approach to the total education of the child. For this reason any educator who promotes liberty or authority at the cost of the other is engaged in inauthentic educative practice. The only authentic education situation is therefore one where there is a balance between the liberty of the child and the authority of the adult in a mutual relationship of trust and understanding.¹³

The major recommendation with regard to the implementation of an authentic balance of liberty and authority is therefore obvious; without the presence of authority in some valid form, a true educative situation cannot exist and authentic education cannot take place. Hence, the teacher must submit to the chaos that may

¹¹. See paragraph 3.3.3.1

¹². See paragraph 3.4.3

¹³. See paragraph 4.4.2 and 4.4.2.1

ensue. Freedom, not overaccentuated as an investigation of Montessori's theory revealed, however, must also be present to ensure that authority is not abused.¹⁴ It is the recommendation of this researcher that if primary schools are to implement this balance, then the tyranny and the artificiality of the short period and of over-assistance by the teacher must go. Authentic thinking and accountable conduct, as suggested by Montessori, demand freer reign and this will afford a fuller opportunity for genuine self-expression.¹⁵

Furthermore, the notion that the child can educate himself¹⁶, (self-education or auto-education) may be considered beneficial as one of many approaches, but at primary school level the child is, contradictory to Montessori's views, also highly dependant on the adult-educator to guide him in acquiring responsible adulthood.¹⁷ The child looks to the adult-educator as one who exemplifies the norms and standards of acceptable social behaviour. It must also be remembered that the child is not necessarily always attracted into the absorbing educational environment of which Montessori gives such eloquent accounts. The liberty that Montessori ascribes to could eventually lead to confusion, especially in the still developing and immature

¹⁴. See paragraph 3.4.3.1

¹⁵. See paragraph 3.4.5.1. See also W.H. Kilpatrick, *Montessori examined*, London: Constable and Company, 1915, p. 31.

¹⁶. See paragraph 4.3.6 and 5.4.3.1 (a) respectively.

¹⁷. See paragraph 3.4.3

child's mind. The liberty ascribed to by Montessori will be abused by pupils who through peer pressure and lack of motivation will take advantage of a situation to do nothing.¹⁸ Such liberty should perhaps be withdrawn as the dynamic situation evolves and the need for intervention is identified by the empathetic educator. The child could in these circumstances be guided or coerced into a particular piece of apparatus, or involve himself in a group activity. In terms of Montessorian principles, this can be interpreted as a violation of the individuality, spontaneity and liberty of the experiencing and learning child.

On the other hand if a need (or the involuntary appeal for guidance which children manifest) is observed, and then ignored by the educator, because of hidebound adherence to a theory, the educator in effect, is abdicating his professional mandate.

7.4 THE PRINCIPLE OF INDIVIDUALITY¹⁹

7.4.1 Synopsis

Montessori explicitly recognised that the child has an individuality of his own, which cannot be overlooked without irretrievable damage to his developing personality.²⁰ Montessori's definition of individuality is encompassed by the biological viewpoint that depicts the child as developing from

¹⁸. See paragraph 3.4.3.1

¹⁹. See chapter 4.

²⁰. See paragraph 4.3

a fruitful germ progressing to the biological destiny fixed by heredity.²¹ This declaration is tantamount to the firm belief that each individual child possesses the ability to learn and mould himself if his specific needs are catered for.²² Montessori is of the opinion that it becomes the duty of the teacher to personally obtain a definite physical knowledge of each individual child in her care, so that the child will be able to develop his latent potentialities to their fullest²³. The learning environment must therefore be prepared and structured in such a way that the child is given the opportunity to educate himself by actively and spontaneously interacting in an orderly and well structured environment.²⁴

7.4.2 Evaluation and recommendations with regard to Montessori's views on individuality and their possible implementation in the primary school situation

7.4.2.1 Montessori's emphasis on individuality as related to the independence of the child negates the role of the educator

Individuality as viewed by Montessori is upheld by the belief that assistance given to the child in an attempt to help him gain

²¹. See paragraph 1.1 and 4.3.2 respectively

²². See paragraph 5.5.4

²³. See paragraph 4.3.4

²⁴. See paragraph 3.3.1

his independence often forms an impediment rather than an assistance to the child.²⁵ This researcher, however, concurs with the viewpoints of modern educators who ascribe to the fact that the child is very dependent and destitute and eager to be assisted because of a desire to become independent.²⁶ Teachers, however, need to realise that too frequent and unnecessary interference can limit the child's ability to solve problems for himself. Isaacs²⁷ states that although emphasis is placed on individual teaching, no allowances are made for individual differences and every child is expected to conform to the same pattern of behaviour and learning. This results in limited opportunities for the child to express himself individually in any kind of work.

7.4.2.2 The use of Montessori's apparatus with modification and extension has definite validity for the individuality of the child

Aspects of Montessorian apparatus can be fused with our eclectic system of education particularly with our present educational system characterised by individuals who have sensory or learning difficulties and will assist in problematic areas that will make them more socially at ease. The Montessori apparatus is also extremely valuable if coupled with more and varied material for

²⁵. See paragraph 4.3.5

²⁶. See paragraph 4.4.4.1

²⁷. S. Isaacs, Critical notice, in, *Journal of Child Psychology and Psychiatry*, Vol.7, Great Britain: Pergamon Press, 1966, pp. 155-158.

the exercise of creative and constructive activities.

7.4.2.3 Montessori's negation of the need for socialization and play is an unacceptable premise as regards the life of the primary school child

In the Montessori approach little provision is made for play and the child was not encouraged to engage in unstructured play. Only the controlled games outlined by Montessori were allowed. The joyous play of the child makes no appeal to Montessori. His toys are 'foolish and degrading', his games are 'meaningless' and 'void of thought', the stories commonly told him are 'silly'. Montessori's ideal child never plays - except at her games; and then he is eager for knowledge.²⁸

Many progressive educators have criticised the Montessori method for failing to encourage sufficient socializing²⁹. The Montessorian concept is too intellectually orientated and makes little provision for aesthetic and emotional development of the child. Social activities such as dramatization, singing, and unstructured play did not feature prominently in the Montessorian approach. Indisputably, imaginative and constructive play need to feature prominently in the primary school situation in order for the child to learn to subordinate his own interests to those of his peer group, thus learning pro-social behaviour and

²⁸. W. Boyd, *From Locke to Montessori - a critical account of the Montessori point of view*, London: Harrap and Company, 1914, p. 247.

²⁹. See paragraph 4.4.5

educators need to recognise this aspect as vitally significant for the full development of the child in the primary school. Teachers at classroom level need to assess the situation of structured and unstructured play in terms of the daily activity of the child. It is well known that spontaneous play serves the important function of releasing repressed emotional energy.³⁰ In addition the child gives vent to natural innate tendencies which if suppressed will result in unnatural patterns of behaviour in later years.³¹

7.5 THE TRAINING OF THE SENSES

7.5.1 Synopsis

The principle of individuality is very closely linked to the education of the senses³², for the senses are the means by which the child obtains individual knowledge. Sharpening, exercising and refining the senses was seen by Montessori as essential for the development of the child's general ability to discriminate. Montessori, however, made it quite clear that the formal training of the senses was not to be confused with the informal gathering of concrete ideas that may be generally absorbed from the environment by means of the senses.³³ Montessori believed that

³⁰. J.A. Hadfield, *Childhood and adolescence*, Great Britain: Penguin Books, 1962, p. 176.

³¹. See paragraph 4.4.5

³². See paragraph 4.1

³³. See paragraph 5.3

practice in sensory perception was the basis of the child's general intellectual development, and was a prerequisite for the eventual mastery of writing, reading and arithmetic.

Further, Montessori is of the conviction that at certain times in the child's life he is more receptive and ready for the mastering of certain skills and knowledge. During these sensitive periods³⁴ certain inherent powers and abilities are able to develop. When such periods occur, suitable educational aids (didactic apparatus) must, according to Montessori, be provided thus allowing the child to keep busy without undue interference from the adult.³⁵ Hence, one can see the interrelatedness of individuality, freedom and the training of the senses.

7.5.2 Evaluation and recommendations regarding Montessori's approach to the training of the senses and their possible implementation in the primary school

7.5.2.1 The concept of "sensitive periods"³⁶ as propagated by Montessori could be valuably applied in the primary school situation

Montessori's principle of sensitive periods warrants attention as this principle is still considered to be essential by current

³⁴. See paragraph 5.4.2

³⁵. See paragraph 5.4.3.2

³⁶. See paragraph 5.4.2

pre-primary educationalists.³⁷ Her identification of sensory periods is perhaps the most valuable contribution that Montessori made. However, as posited by the researcher³⁸, the characteristics of sensitive periods as typified by Montessori, persist into the primary school and are revealed even beyond the primary school. (In fact, Montessori herself stated that a sensitive period for culture existed from 6-12 years of age.³⁹) Urgent attention must be given by educational authorities, curriculum developers and training institutions to the crucial need of addressing the idea of sensitive periods as a means of helping educators reconsider their didactic strategies with regard to innovative and integrative approaches to the education of the pupils placed in their care. Teachers should be taught to recognise sensitive periods when they appear in order to give the child an opportunity for learning when the urge is present. The author concurs with Standing,⁴⁰ who confirms that when the education of the child is considered in the light of these sensitive periods, and educators adapt themselves to them, it is truly surprising what a rich mental and moral development the child attains naturally and without effort - and at a very early age.

The application of sensitive periods therefore merits credence

³⁷. See paragraph 5.5.3

³⁸. See paragraph 5.5.3

³⁹ See 5.4.2.2

⁴⁰. E.M. Standing, *The Montessori method. A revolution in education*, California: Academy Library, 1962, p. 45.

as an acceptable approach to the acquiring of skills and knowledge and it is strongly recommended that primary school teachers also take cognisance of sensitive periods related to aesthetic functions such as singing, drawing and painting as they arise. It must be reiterated that innovative classroom practice has to ensure that aesthetic needs (which were not considered as being significant by Montessori), are not only encouraged and developed but also taught as there are some children who can only be creative if they have been taught a skill.⁴¹ Furthermore, this will ensure that when a sensitive period arises the child will reach out spontaneously for it.

The primary school can do this best by getting to the roots of human experience: by engaging the child's five senses in continuous and conscious involvement in the various aesthetic experiences. Such involvement can sharpen the child's sense perceptions in steady progression from the very real and concrete to the increasingly abstract.

7.5.2.2 The Montessori apparatus is feasible in the primary school situation if used in conjunction with modern-day apparatus

The didactic material that Montessori devised was constructed in such a way as to represent objects which first attract the

⁴¹. E.M. Plank, Reflections on the revival of the Montessori method, in, *Montessori in perspective*, edited by the Publications Committee of the National Association for the Education of Young Children, Washington: NAEYC, 1966, p.41.

spontaneous attention of the child and secondly contain a rational graduation of stimuli.⁴² Although there are inherent limitations in the Montessorian approach to the use of the apparatus, such as Montessori's idea that the child may not play with the apparatus and that it may only be used in one way in order to fulfil the correct lesson they were designed to teach,⁴³ the didactic apparatus still has a vital function in the training of the senses in the primary school situation.

Although, generally speaking, Montessorian apparatus has been successfully used in pre-primary and junior primary education for many years,⁴⁴ it has been adapted to keep pace with progress in modern evolving educational theories, as well as manufacturing technology. With regard to the South African educational situation, there has been a tendency to stop using apparatus as the child advances into the senior primary phase. Two guidelines in this respect are therefore provided by this researcher:

- * That Montessori's didactic apparatus be used in conjunction with modern-day apparatus and be integrated more fully into the senior primary phase of the school programme. This researcher is of the decided opinion that the child entering the senior primary phase is still concrete oriented and needs reinforcement through the senses to fully benefit from

⁴². See paragraph 5.4.3

⁴³. See paragraph 5.5.4

⁴⁴. See paragraph 5.5.4.1

learning experiences. This can be best served through the constructivist and investigatory approach that Montessori advocated.⁴⁵

- * That the child, apart from using the apparatus in a prescribed way, also be allowed to use the apparatus as he pleases, both individually and in a group context in order to promote adequate social experience and opportunity to rise above social deficiencies.

The new Introductory Teaching Programme in the junior primary phase, as pointed out in chapter five,⁴⁶ is generally based on Montessori's theory but is used in conjunction with other modern didactic apparatus to provide a sound training of the senses. However, as pointed out, more varied and similar material can easily be utilised to assist in providing adequate experience in the training and stimulation of the senses and the enrichment of the curriculum. These recommendations are supported by Gander,⁴⁷ who states that Montessori's ideas are being fully appreciated and applied now because of improved knowledge of development and learning psychology.

The primary school child must also be given constant exercises

⁴⁵. See paragraph 5.4.3

⁴⁶. See paragraph 5.5.4.1

⁴⁷. Gander in S. de Leon, *Imaginative Learning Aids*, in, K. Edelson and R.C. Orem, (editors), *The Children's House parent - teacher guide to Montessori*, New York: G.P. Putnam's Sons, 1970, p. 230.

and responsibilities in the occupations of everyday life before he is atrophied by the customary idling in childhood such as the constant watching of television resulting in the abstraction from essential, everyday household and school chores. Hobbies should have a place in every child's life as they express his individuality and are of particular value to an individual who otherwise lacks prestige either in work or in play and primary school educators should motivate and encourage the child to pursue worthwhile hobbies.⁴⁸

7.6 WRITING, READING AND ARITHMETIC

7.6.1 Synopsis

The processes of writing, reading and arithmetic follow immediately on the various exercises related to the training of the senses and could therefore be considered an extension of the sensory exercises. Theoretically, Montessori first teaches the rudiments of writing after which reading is taught, although in actual current practice, the skills of learning to read and write take place simultaneously. Montessori devised a special technique for the teaching of the "three R's" based on didactic apparatus devised to impart specific learning skills, thereby enabling the child to move from rudimentary motor-sensory achievements to more advanced cognitive and emotional achievements.⁴⁹

⁴⁸. J.A. Hadfield, *Childhood and adolescence*, Great Britain: Penguin Books, 1962, p. 176.

⁴⁹. See paragraphs 6.4, 6.5 and 6.6

7.6.2 Evaluation and recommendations regarding Montessori's views on the teaching of writing, reading and arithmetic and their possible application in the primary school situation

In discussing the validity of Montessorian theory the researcher specifically pointed out after a careful scrutiny of Montessori's views related to the teaching of the "three R's", that Montessori's approach to the teaching of writing, reading and arithmetic has limited applicability in the present primary school situation.⁵⁰ What the Montessori approach can offer us has little in the form of innovation or novelty and falls short of the work presently being conducted in the primary school situation. The researcher, however, singled out two aspects that warrant implementation as they could contribute in improving the existing educational situation. These are the exercises related to the holding of the child's pen or pencil and the use of the movable alphabet. It is recommended that educational authorities take note of these two salient aspects with the view of immediate application as they present themselves as feasible for the existing, current educational scenario.⁵¹

7.6.2.1 Montessori's exercises related to the holding of the instrument of writing could be valuably applied in the primary school situation

⁵⁰. See paragraph 6.7.2.1.1 and 6.7.2.1.2 respectively

⁵¹. See paragraph 6.7.2.1

Because the present educational situation is characterised by the influx of pupils from diverse and disadvantaged backgrounds and linguistically impoverished home situations, it is the recommendation of this researcher that one of the first steps to be undertaken is a return to the basics. The significance of this guideline is vested in the fact that more educators will be confronted by situations in which pupils will display a marked inability to hold their pens or pencils correctly. The researcher therefore recommends that teachers be equipped with the knowledge and skills to train pupils in the correct handling of their pens or pencils.

For this purpose Montessori's geometrical insets provide significant scope for the training of the muscles necessary for the correct handling of the child's pen or pencil. In addition, a great deal of apparatus similar to Montessori's apparatus can be utilised such as peg-boards, sewing and buttoning frames, stencils and fine motor apparatus. Teacher training institutions will have to accept greater responsibility for equipping students with the basic skills necessary for coping with education in a multicultural classroom and specifically to problems related to the management of instruments of writing.

7.6.2.2 The movable alphabet has definite validity in the primary school situation

The movable alphabet, as outlined by Montessori in chapter six⁵² is ingenious in its construction and could lend itself to major improvements in the existing educational structures and therefore has definite validity in the South African primary school situation. The researcher, however, recommends that educators grasp the vital advantages that Montessori's alphabets⁵³ used in the teaching of writing to children from seven to eleven years of age holds for the teaching of children in the primary school situation.

The researcher posits that two of the major problems facing children in South Africa today are firstly, an inability to understand and comprehend the language of instruction fully, and secondly a lack of basic concepts on which this language is built. With these two problems in mind, the movable alphabet can play a very significant and vital role.

Furthermore, in our present education system there has been a growing concern among educators and parents alike regarding the grammatical inadequacy of the present educational system. In particular the dissatisfaction relates to poor grammatical ability and a retardation in spelling skills. In order to advance and improve so many skills lacking in our children in the primary

⁵². See paragraph 6.4.1.3 and 6.4.2.1

⁵³. See paragraph 6.4.2.1

school situation the movable alphabet could provide the answers to grammatical improvement and correction of spelling problems. This could result in innovative classroom practice and could unlock the doors to creative spelling, grammar games, sentence construction and word-attack skills. Furthermore as a remedial function it could provide struggling children with the means of re-entering the mainstream of contemporary education.

7.7 Concluding remarks

In the foregoing chapters the researcher has succeeded in showing that there is a discernible need for teaching of individual, basic, concrete concepts related to culturally and educationally deprived children entering our educational structures, in a differentiated and rapidly changing South African education scenario. Because certain aspects of Montessorian education were resolved to be feasible, urgent attention must be given by educational authorities and curriculum developers to address the identified aspects that are feasible in the primary school situation, as it will inevitably burgeon in the evolving, and rapidly changing South African educational scenario.

The present primary school situation, characterised by academic deprivation, as a result of an influx of children from culturally and educationally deprived situations⁵⁴, presents a condition in which the child has an inability to adjust to the educational demands expected of him in the primary school. The researcher is

⁵⁴. See paragraph 1.3.1

thus drawn to the conclusion that options are sought whereby individual children can benefit from instruction that is grounded on concrete reality and the ground structures of formal education, which constituted the basis of Montessori's theory and the success which she achieved in the education of deprived and disadvantaged children.⁵⁵

Significantly, many nursery and primary schools are currently using the fundamental ideas of Montessori with apparent success, but they have modified the specific techniques of the orthodox Montessori school.⁵⁶ The Montessori system does not have to be a rigid, doctrinaire way of approaching education, but should be an open-ended system that allows each teacher to build creatively on the foundation already laid down by Montessori and her first followers.⁵⁷

⁵⁵. See paragraph 2.4.2

⁵⁶. See paragraph 5.5.4.1

⁵⁷. L.L. Gitter, *The Montessori way*, Washington: Special Child Publications, 1970, pp. 9-10.

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