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## Redesigning & rethinking montessori adolescent education: A hybrid model for the 21st Century

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Redesigning & Rethinking Montessori  
Adolescent Education: A Hybrid Model for the  
21st Century

A thesis submitted in fulfilment of the requirement for the  
award of the degree

**Doctor of Philosophy**

From the  
University of Wollongong

By

**Stephanie Gambrill**

Masters of Education 2001,  
University of Wollongong

School of Education Faculty of Social Sciences

2015

## **Declaration**

I, Stephanie Gambrill declare that this thesis, submitted in fulfilment of the requirements for the award of Doctor of Philosophy, in the School of Education, Faculty of Social Sciences, University of Wollongong, is wholly my own work unless otherwise referenced or acknowledged. The document has not been submitted for qualifications at any other academic institution.

Stephanie Gambrill

28<sup>th</sup> August, 2015

## **Dedication**

This thesis is dedicated to my Nana,

**Hazel Bowen**

**(1903 – 1994)**

who, although she never had the chance to attend high school, through experiential learning and dedicated study, was the first woman in South Australia to graduate with a Bachelor of Pharmacy.

To my paternal grandmother,

**Katherine Abotomey**

**(1905 – 2000)**

who learned the Montessori method of education from Maria Montessori in the Montessori Teacher Training Course of 1925, London.

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## **Abstract**

The study of Montessori early adolescent education principles and practice has been the subject of minimal research to date, in part because most Montessori middle schools have only been in existence for the past ten to twenty years in the USA. Montessori's vision for adolescent education, dating from 1929, was founded on her notion of the farm school as the ideal learning environment for adolescents. Until recently, the realisation of students boarding at a farm school was found to be practically untenable. Mario Montessori Jnr's suggestion of the introduction of Pedagogy of Place principles in 1973 permitted alternative possibilities for Montessori adolescent educational settings.

With approximately three hundred Montessori schools currently developing adolescent programs in the USA, and several in Australia, New Zealand, and Europe also, this study examines the influence of place-based education principles on the transition of Montessori adolescent education models to twenty-first century contexts. The aim is to exemplify viable solutions to emergent complexities in Montessori and place-based education models.

This qualitative multiple case study rooted in an ethnographic approach, examines four Montessori middle schools in the United States. The research investigates the shared principles of Montessori adolescent education and place-based learning across a variety of geographical, educational, and socio-economic contexts. Interviews and observations constitute the predominant forms of data collection.

A theoretical framework is proposed for examining place-based principles in practice, derived from the Place Based Education Portfolio Rubric (out of a collaboration of the Rural School and Community Trust, Harvard Graduate School of Education, and the US Educational Testing Service) and Montessori adolescent education principles combined. This framework integrates community-based schooling practices with Montessori and place-based principles to promote critical thinking, independence and social justice as catalysts to social and educational transformation.

Key findings suggest that firstly, school leadership and Montessori teacher training are paramount in visualising and adapting Montessori principles to place-specific practice. Secondly, Montessori's writings on the subject provide guidelines to the education of adolescents with respect to human development theory, but the practicality of developing curriculum to meet those guidelines was found to be possible through the framework presented in the PBEPR. Thirdly, the combined Montessori and Place-based principles that emerged from this study are presented as a valuable means for Montessori adolescent schools to create curriculum and to evaluate their programs in Montessori terms. These combined principles allow any school to adapt the original farm-school principles to any place at all, which ensures that Montessori and place-based adolescent education principles are applicable to twenty-first century contexts.

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## **Glossary of Montessori Terms**

### **AMI**

Association Montessori Internationale is the association instituted by Maria Montessori and her son, Mario Montessori in 1929 to safeguard the integrity of her educational method, techniques, teacher training and the didactic materials. This amounted to a de facto trademarking of her 'brand'. It currently operates in a similar function.

### **AMS**

The American Montessori Society was founded in 1958, as a professional organisation to promote Montessori education in the USA.

### **Cosmic Education**

Cosmic Education is a universal syllabus for the study of all that composes the cosmos in time and place, and the place of humanity from its very beginnings to the present. The study of such a broad field requires the integration of all the recognised subjects, both as a means to understanding, and also as details of the whole. In the study of cosmic education, Montessori intended that the child would understand his place in the whole harmonious pattern of the universe, and that the result would be peace [“one universal harmonious society”] (Montessori 1967/1997:131).

### **Erdkinder**

German for “child of the earth,” this term describes a Montessori learning environment for adolescents ages 12 – 15 that connects them with nature and encourages them to form a society of their own, often designed as a working farm school.

“We have called these children the “Erdkinder” because they are learning about civilisation through its origin in agriculture. They are learning of the beginning of civilisation that occurred when the tribes settled on the land and began a life of peace and progress while the nomads remained barbarians and warriors” (Montessori, 1948/1994: 68).

### **Human Development**

According to Montessori, development is achieved through activity, and leads to freedom. She saw development as the construction of the personality, achieved through one’s efforts and experiences. For the child, development is realised through ‘normalisation’; in the adolescent, through ‘valorisation’ of the personality. These constitute Montessori’s signposts of the fact of self-development.

“The child’s conquests of independence are the basic steps in what is called his ‘natural development.’ In other words, if we observe natural development with sufficient care, we see that it can be defined as the gaining of successive levels of independence. This is true not only in the mental field, but also in the physical; for the body also has its tendencies toward development, impulses and urges so strong that only death can interrupt them” (Montessori, 1939/1995: 84).

## **Independence**

The drive towards independence, and the opportunity to realise successive levels of independence results in human development, according to Montessori. Freedom and independence combine, Montessori says, resulting in human development. Independence is achieved by “work”, that is, by effort, practice, perseverance and the experience of acting upon materials, or in the world.

“Independence is not a static condition; it is a continuous conquest, and in order to reach not only freedom but also strength, and the perfecting of one’s powers, it is necessary to follow this path of unremitting toil” (Montessori, 1939/1995: 90).

## **Materialised Abstractions**

Materialised abstractions refer to the material things, the concrete didactic materials that Maria Montessori employed to assist the child to understand abstract concepts. Thus, the sensorial materials developed the child’s natural ability to concentrate, to categorise, to order and to catalogue, with increasing precision and exactitude, and with increasingly finer distinctions.

At the adolescent level, the experiential learning activated by the micro-economy becomes a materialised abstraction for morality and values, in addition to empathy, equality and justice, among others.

## **Micro-Economy**

The micro-economy comprises a variety of occupations that emerge from the students’ interaction with the natural environment. These occupations provide students with opportunities to explore the economic world and future roles, creativity, personal dignity and social justice.

The micro-economy refers to all revenues and expenses related to activities of the student community. In the micro-economy the students work together on projects or occupations where they make products to be sold through the local market place, or consumed by members of the school community. The occupations include managerial positions, individual and group work opportunities, and allow the students to take on different roles in the various projects.

These occupations flow from the interaction of students with their ‘prepared environment’: the land, their peers and teaching staff. Through the micro-economy, students learn business management, math, finance, leadership, conflict resolution, marketing, value-adding, moral, and communication skills.

## **Mixed Age Group/Three Year Cycle**

One of the features of Montessori education is that children of mixed ages work together in the same class. Age-groupings are based on Montessori’s developmental planes. Children from 3 to 6 years of age are together in the Children’s House. Six to 9-year-olds share the lower elementary, the upper elementary is made up of 9 to 12-year-olds, while ‘erdkinder’ describes the group of 12 – 15 year olds.

According to Montessori, these age groupings result in co-operation, and peer-teaching and -learning, rather than competition between individuals.

“...there is truly something which reaches the level of emotion and action, and it resolves a great number of practical problems...it is counter to nature to divide children by age and to have all children of the same age together. It creates boredom, and spiritual exchange becomes difficult. Why? Because they all have the same tastes, the same level of development, and the result is strife...Also intellectual development is very difficult among people of the same age, and the consequence is a type of intellectual competition...”(Montessori,1938/2001: 200, 201).

### **Moral Development**

Montessori ties morality with movement, because of her essential theory that the head/mind does not act alone, but in tandem with movement. For Montessori, morality is inextricably bound up with work, and with exchange represented by money, as a form of materialised abstraction representing moral development.

“Today however, it is not by philosophising nor by discussing metaphysical conceptions that the morals of mankind can be developed: it is by activity, by experience, and by action.” (Montessori, 1948/1994: 87).

“The very foundation of social morality is bound up with money...Social morality has this basis; this is the material part of morality, a real material by which we can understand how an error in distribution is a moral fact, which brings a social disease.” (Montessori1936/2001: 184-186).

### **Museum of Machinery**

The Museum of machinery was to provide an opportunity for young adolescents to learn about the workings of machinery, by stripping down simple mechanical forms, such as bicycles, to discover and understand the physics, the mathematical fundamentals, and the systems of related machinery. Through this activity, another of her materialised abstractions, the adolescent would eventually understand the analogy of the workings of machinery to the interdependent cooperation of a peaceful society. Montessori viewed machinery as a reflection of the greatness of human invention, as purpose and creativity realised in an advanced material form. Furthermore this greatness was of a collective nature, whereas she saw art as the product of genius in the isolated individual. Machinery represented, to Montessori, the way forward into a communicative, scientific, and knowledgeable culture.

Thus, Montessori cautioned against the misuse of machinery, and therefore, that “a new morality, individual and social, must be our chief consideration in this new world. This morality must give us new ideas about good and evil, and the responsibility towards humanity that individuals incur when they assume powers so much greater than those with which they are naturally endowed” (Montessori, 1948/1994: 78)

### **Occupation**

Montessori adolescent programs provide a real-life project-based approach to

education that puts the students in charge of their environment, taking on occupations such as gardening, bee keeping, and food preparation, as well affording them the tools for economic independence through the micro-economy.

As they take on adult-like roles and responsibilities within the various areas of the program, they learn the science, math, and practical skills necessary for them to become progressively more independent in their ventures. They learn how to view an occupation mathematically by taking measurement, calculating or collecting data, and tracking change. They learn the science behind their occupation, chemistry, biology, and physics. They read about and discuss social or historical issues related to this occupation, they write and journal about issues related to their occupation, while simultaneously taking responsibility for something in the real world.

At this point they are working with an increased number of adults, in side-by-side real-world activities. Lesson blocks are long to accommodate the deeper engagement required by this ‘curriculum of society’. *Erdkinder* students have no need to ask about the relevance of their studies, because the academic work emerges from the practical life of production.

Occupations are defined as engagement through community, involving real responsibility and shared decision-making. The point of departure is the embodied curriculum. The micro-economy is the glue for the occupations, because it brings the occupations more sharply into reality.

### **Odyssey**

An odyssey is generally a trip away in the company of classmates and guides in which the students are challenged physically and psychologically in various ways to move beyond their comfort zone in order to discover more about themselves, while learning the interdependence of living in their student community. It is a 21<sup>st</sup> century substitute for the bonding and social challenges of the boarding experience.

### **Peace Education**

Peace education consists of providing opportunities and experiences for the children to help them understand the source of peace within themselves, and learning to live harmoniously with other people, cultures and the environment. Harmony and interrelationships are nurtured through a sense of community and interdependence. Trust, co-operation, and conflict-resolution are encouraged as necessary qualities in the making of a peaceful community. The young child strives for independence, while developing inner self-discipline. The elementary student continues on this path with heightened awareness of working together socially and establishing lasting relationships. The adolescent is ready to integrate interdependence and build relationships of integrity and reliability. A global vision of peace and harmony is established as Montessori students realise their own inner peace and relationships with others. This, in sum, encompasses Montessori’s ideal of spiritual development.

### **Personality Development**

Montessori sees this aspect of adolescent development as dependent upon the social life within the small community. The individual discovers self through interaction with others, through reflection in the peer group, through creative and economic cooperative ventures, through group learning and peer-teaching, interdependence and social responsibility. Reflection and work, the micro-economy and community work nurture the emerging adolescent personality through a variety of activities, growing competence and spiritual awareness to a deeper understanding of self and community.

“Let us therefore unite our efforts to construct an environment that will allow the child and the adolescent to live an independent, individual life in order to fulfill the goal that all of us are pursuing – the development of personality, the formation of a supernatural order, and the creation of a better society” (Montessori, 1949/1992: 106).

### **Planes of Development**

The planes of development constitute a framework for the development of the child from birth to maturity. It is a holistic view of the developing human being, based upon the psychological, physical and mental development of the child, and indicates that the development of the human being proceeds in periods or planes, rather than as a linear progression.

“...there are different types of mentality in the successive phases of growth. These phases are quite distinct one from another, and it is interesting to find that they correspond with the phases of physical growth. The changes are so marked -- speaking psychologically --that the following picturesque exaggeration is sometimes used: ‘Development is a series of rebirths’.” (Montessori, 1939/1995: 18 -19).

“The changes from one level to the other at these different ages could be compared to the metamorphoses of insects...But the changing traits are not so clearly defined in the child as in the insect. It would be more exact to speak rather of ‘rebirths’ of the child. In effect, we have before us at each new stage a different child who presents characteristics different from those he exhibited during preceding years”. (Montessori 1948/1994:1).

### **Planes of Education**

Education based on and corresponding to the periods of human development.

Four distinct periods of growth, development, and learning that build on each other as children and youth progress through them: ages 0 – 6 (the period of the “absorbent mind”); 6 – 12 (the period of reasoning and abstraction); 12 – 18 (when youth construct the “social self,” developing moral values and becoming emotionally independent); and 18 – 24 years (when young adults construct an understanding of the self and seek to know their place in the world).

“Successive levels of education must correspond to the successive personalities of the child. Our methods are oriented not to any pre-established principles but rather to the inherent characteristics of the different ages. It follows that these characteristics themselves include several levels.” (Montessori, 1948/1994:1).

### **Prepared Environment**

The prepared environment enables the child to have his/her needs met according to the sensitive periods and his/her particular stage of psychological development. The prepared environment is composed of the materials, the space, the adult/s, and freedom to act spontaneously within limits in that prepared environment.

“It is, however, precisely up to the adult to assist the child’s development by creating an environment adapted to his new needs.” (Montessori, 1948/1994: 11).

“We must not only offer children personal help; we must also provide them with the right environment, for their proper development depends on vital activity in and on the environment. Science has taught us that the aim of the new pedagogy must be to create the proper environment for development” (Montessori, 1932/1972: 106)

### **Social Development**

Social development for the adolescent is inexorably tied to work and economic exchange in the context of living with adolescent peers in the ‘*erdkinder*’ environment. Montessori says that the child is a ‘social newborn’ and that the ‘*erdkinder*’ is like a cocoon that enables him/her to be gently introduced to the realities of social life in adult society.

“...this is the time, the ‘sensitive period’ when there should develop the most noble characteristics that would prepare a man to be social, that is to say, a sense of justice and a sense of personal dignity. It is just because this is the time when the social man is created, but has not yet reached full development, that in this epoch practically every defect in adjustment to social life originates” (Montessori, 1948/1994: 62).

### **Socratic seminar**

The Socratic seminar is a formal discussion, based on a text, in which the leader asks open-ended questions. Within the context of the discussion, students listen closely to the comments of others, thinking critically for themselves, and articulate their own thoughts and their responses to the thoughts of others. They learn to work cooperatively and to question intelligently and civilly (Israel, 2002: 89).

### **Specialist**

A specialist is an instructor specialising in subjects outside of the general school curriculum. Montessori employs the term, "technical instructors", and exemplifies instructors for gardening and agriculture, a handyman, a business manager, crafts, and instructors specially qualified in practical work such as cooking, needlework, carpentry, and mechanics.

### **Valorisation**

The implication is that the young adolescent grows in responsibility, independence and self-esteem through conscious interaction with the environment (including the social environment), based on increasing knowledge and activity. Indeed, valorisation can be promoted in any environment where there are opportunities for shared engagement and responsibility in community, where the commitment and contribution of its members is acknowledged.

“...he would still derive great personal benefit from being initiated in economic independence. For this would result in a “valorisation” of his personality, in making him feel himself capable of succeeding in life by his own efforts and on his own merits, and at the same time it would put him in direct contact with the supreme reality of social life” (Montessori, 1948/1994: 64).

## **Work**

The word “work” carries meanings related to intellectual and manual work in the writings of Montessori. She wrote of the noble nature of work, and its sacramental character. With regard to young children she refers to their work as the self-construction of personality; for the adolescent, work itself is of greater import than the type of work undertaken.

“The integral organisation of work, which affords the opportunity for self-development and provides an outlet for energy, gives each child a pleasant and reassuring sense of satisfaction. And under the conditions in which the child works, his freedom leads him to perfect his abilities and to learn excellent discipline, which itself develops from that new quality, stillness, which has developed within him. Freedom without organisation of work would be useless...” (Montessori, 1967/1997: 102).

“Real earnest work and the exchange of its products constitute the mechanism or working of social life, because the aggregate of human society is based on the division of labour. Labour is requisite to carry on the production essential to the existence of mankind...” (Montessori, 1936/2001:180).

# **Chapter 1**

## **Introduction**



In 1929, Maria Montessori (1870-1952), an Italian doctor, anthropologist, and educator, wrote disparagingly of secondary schooling as “adapted neither to the needs of adolescents nor to the times in which we live” (1948/1994: 59). She considered adolescent education as the very key to social reconstruction. Her conceptualisation of the reform of secondary education was based on the development of the adolescent personality, through work, economic exchange, personal adaptability, and self-esteem. In this regard, Montessori stated that,

The reform of the secondary school may not solve all the problems of our times, but it is certainly a necessary step, and a practical, though limited, contribution to an urgently needed reconstruction of society (1948/1994: 59).

For Montessori, social reform constituted world peace and social justice (including the rights of the child), in order to ensure the shared benefits of advancements in human knowledge, technology, and the creative arts.

Montessori’s notions of education were based upon her observations of the natural tendencies and developmental characteristics of children and adolescents. She is best known for her writings and influence on the tenets of early childhood education. Her principles of education eventually covered all ages and grades of schooling, although her publications concerning adolescent education were comparatively sparse since most of her energies were devoted to the early years of childhood education.

All of Montessori’s educational ideas were linked to the developing independence of the child from birth to adulthood. With the advent of early adolescence, Montessori’s observation was that the young person had attained sufficient maturity and independence that separation from the family, “not completely but so that he [sic] can hear the call from the collective spirit...” (1937/2001:196), was the optimal pathway for development of the personality as a means to discovering one’s individual role in society.

Montessori’s focus for secondary school education was on farm-based boarding schools for adolescent students aged 12-18 years. She called these students *erdkinder*, meaning ‘children of the earth’ (1948/1994: 68), although English-speaking practitioners frequently use the term *erdkinder* to refer to the Montessori farm-school

*style* of education, and sometimes, they mean ‘Montessori adolescent education’ in any setting, not necessarily the farm. Nevertheless, given Montessori’s description of the 1920s, as “characterised by the progress of science and its technical applications” (1948/1994:61), the question is raised as to why she suggested educating adolescents in the relative isolation and simplicity of the farm.

With more than three hundred Montessori schools developing adolescent programs in the US, (Montessori Secondary Education Centre figures)<sup>1</sup> several beginning in Australia, and many in Europe, this study sought to explore the principles and practice of Montessori adolescent education in the 21<sup>st</sup> century, with a view to understanding the application and relevance of Montessori’s ideas in the current socio-cultural milieu.

## **Significance of the Study**

Empirical studies incorporating a variety of Montessori adolescent educational settings, as alternative interpretations of the seminal principles of the *erdkinder* model, are sparse. The significance of this study resides in the documentation of a variety of locally-responsive interpretations and practices of Montessori middle-school educational principles, as representative of attempts to conform to current schooling demands while simultaneously maintaining fidelity to the Montessori ethos.

There is much conflict amongst rival schools of Montessori teacher trainers with regard to ‘authenticity’ of pedagogical practices and philosophy (Hultqvist, 1998; Böhm, 2011; La Rue, 2010). In part these rival interpretations of Montessori theory are due to the history of the Montessori movement, in which Montessori strictly limited the application of the name ‘Montessori’ to those who had studied her educational principles under her personal guidance (Kramer, 1976). Montessori educationists in the US, however, sought to adapt Montessori principles of teacher-training and practice to a model that was more culturally compatible, which resulted in a schism between European adherents and American outliers. (Rambusch, 1977;

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<sup>1</sup> Montessori Secondary Education Centre. Retrieved from <http://msec.org.au/montessori-method/montessori-adolescent-programs-around-the-world/>

Whitescarver & Cossentino, 2008). This study will address such issues by acknowledging the evolving and co-dependent nature of theory and practice in response to current situational, cultural, and social influences. This approach is used to interrogate the ideal of rigid adherence to received interpretations of Montessori theory from the position that in fact Montessori's notion of individualised education was that it was experimental in nature, based on scientific observation:

The possibility of observing the mental development of children as natural phenomena and under experimental conditions converts *the school itself* in activity, to a type of scientific experiment devoted to the psychogenetic study of man (Montessori 1976:120 in Röhrs, 1994: 6-7).

Mario Montessori Jnr's suggestion of pedagogy of place principles to assist in the adaptation of Montessori's *erdkinder* concepts to late 20<sup>th</sup> century concerns could be described as an experimental bid to ensure the growth of the adolescent sector of Montessori education (Stephenson & Joosten, 1976/2001). This intersection of place-based pedagogical elements with Montessori's adolescent education principles has the potential to contribute to a more apposite model of education for young adolescents in current social contexts. Both models feature elements that show promise by mutual incorporation to various degrees, depending on the setting. Surprisingly, comparative research in middle-school incorporations of Montessori education and place-based learning remains uninvestigated.

## **Purpose Statement**

The overall purpose of this research study was to explore and understand the specific criteria and possibilities that the principles of Montessori adolescent education and place-based learning tenets contribute to the development of a model of adolescent education designed for current social and environmental contexts.

In view of this purpose, the aim of the study was to identify the degree of alignment between the shared principles of Montessori adolescent education and the tenets of place-based learning.

In order to explore the actualities of Montessori adolescent education in the 21<sup>st</sup> century, and its affiliation to place-based education, a multiple case study was carried out in four Montessori middle schools in the United States. The rationale for this exploration was to determine the shared principles of Montessori adolescent education and place-based learning.

The following questions were raised to focus the investigation:

### **Research Questions**

1. How are Maria Montessori's principles of adolescent education actualised within the 21<sup>st</sup> century North American context?
2. How do the tenets of the Place-Based Education Portfolio Rubric (PBEPR) align with Montessori adolescent education principles and practices?
3. What can we learn from the participating schools that might contribute to the continuing relevance and applicability of Montessori education and to place-based education theory for adolescent education in the 21<sup>st</sup> century?
4. How might the participating schools reflect Montessori's intention of education as a catalyst for social change?

### **Montessori's Farm-School Model: A brief introduction**

Montessori's plans for *erdkinder* education essentially described a farm school, in which the students did the work of growing food and raising animals, caring for the land and the buildings, developing themselves as individuals in the context of a small community, and learning the economics of production and exchange of goods and services through personal experience.

The practicalities and the knowledge necessary for successful farming were intended to provide the stimulus for broader and deeper academic studies across all disciplines, although Montessori appeared to consider academic studies as less pivotal than social and personal development in the first three years of secondary schooling. During these years, Montessori placed strong emphasis on the development of the creative expression of personality through language, drama, art and music.

All of this, according to Montessori's view, was preparation for life in adult society, both as individuals, and as members of an international community based on social interaction and economic exchange.

The essay containing these ideas is only 24 pages in length, appearing as an appendix in one of her later books, *From Childhood to Adolescence* (1948/1994). Nevertheless, Montessori regarded adolescent education as integral in the continuum of the educational development of children from infancy to adulthood:

The secondary school is not a part of education and teaching. I believe it represents the very centre of all education, the centre where one must look for the key to give to humanity (1937/2001: 189).

Many of Montessori's ideas about adolescent education are based on her ongoing development of ideas in the area of children's independence and education in the pre-pubescent years.

Montessori never actually tested her *erdkinder* ideas, nor did she ever see them realised in practice, despite her continuing development of adolescent education principles throughout her life, particularly in the years between her first address on the topic, in 1920, and her *erdkinder* education conference addresses in 1936, 1937, and 1938.

None of the earliest three Montessori farm schools that were successfully established in the early 1970s in the USA and Australia, remains in existence. One of these was a school established in Wanneroo, Western Australia, in 1962, extending its curriculum to include a farm school in 1972 (O'Donnell, 1996; Gebhardt-Seele, 1995/2001: 275). Two other Montessori *erdkinder* were established in the USA, early in the 1970s: The Montessori Farm School in Half Moon Bay, California, and the Erdkinder School near Atlanta, Georgia. Neither of these latter two schools seems to have left any trace<sup>2</sup>.

Pedagogy of Place Theory in the Montessori Context

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<sup>2</sup> ([http://www.montessori.org/sitefiles/montessori\\_way\\_HS.pdf](http://www.montessori.org/sitefiles/montessori_way_HS.pdf)).

Transforming *erdkinder* theory into practice proved to be expensive and difficult (Jordan, 1970/2001:260). Maria's grandson, Mario Montessori Jnr., therefore suggested a simpler and more convenient alternative in 1973. The 'urban compromise', as it came to be known in the US, involved the implementation of Montessori middle schools in the cities and suburbs, with the details of *erdkinder* education adjusted accordingly (Grazzini & Krumins-Grazzini, 1996). As justification, a new 'theory' was added by the American group of the Association Montessori Internationale (AMI): that of 'pedagogy of place', so that the Montessori principles of adolescent education could be adapted to individual school settings. This allowed for adolescent schools to be established in urban, semi-urban, semi-rural and rural settings as appropriate responses to available conditions.

Montessori pedagogy of place theory was developed, based in part, on Aldo Leopold's eco-education principles dating from 1949 (Knapp, 2005). In fact, although Maria Montessori never used the words, all of her educational philosophy is rooted in the principles of pedagogy of place, in which environmental surrounds are the determinant for learning opportunities, the basis of curriculum, and central to the developmental, social, and educational outcomes of schooling (La Rue, 2010; Ludick, 2001; Lehman, 1993). Accordingly, the farm-school ideals suggested by Maria Montessori incorporate the fundamental principles of place-based education. These include integrated and experiential learning, the importance of relationships and community, a range of assessment strategies related to collaborative learning, a strong emphasis on the local-area, nature-based studies, and critical thinking (La Rue, 2010; Gutek, 2004; Ludick, 2001; Lehman, 1993).

Initially, it was found that pedagogy of place meant something different to every Montessori practitioner, and that even among pedagogy of place theoreticians, there were wide differences of opinion regarding the nature of place-based education, in part because of the latter's evolution from the beginnings of environmental education and adventure-education theory. The concept of 'place' itself is still vigorously debated, as is the relationship between space and place (Relph, 1976, 1992; Seamon, 1979; Massey, 1994; Lippard, 1997; Cameron 2003; Read 2003). In essence, the principles of pedagogy of place were found to be as fluid as notions of place.

## **Place-Based Education**

Place-based education, place-based learning, and pedagogy of place are employed as interchangeable terms in this study. Place-based education can be defined as learning that is concentrated on local particulars, such as the history, environment, commerce, community, and arts associated with a bounded area, with implications extended to the global community (Rural School and Community Trust 2004).

The Rural School and Community Trust described the implementation of place-based education as reflexively and mutually dependent on community, in which,

The community provides the context for learning, student work focuses on community needs and interests, and community members serve as resources and partners in every aspect of teaching and learning (2004: n.p.).

In this way students become aware of the interdependence of the community and its environment, and their own part in sustaining the relationship between them. To this extent, learning is rendered the more meaningful as it is personalised through local concerns and interests.

Accordingly, in 2003, the Rural Schools and Community Trust, in collaboration with the Harvard Graduate School of Education and the Educational Testing Service, developed a resource for educators and students, called the Place-Based Education Portfolio Rubric (PBEPR)<sup>3</sup>. This resource, developed as a tool to assist rural schools and communities in the process of revitalisation, contained numerous guidelines in the form of a rubric. It was designed with the idea that students themselves would evaluate the interaction between their school and the local community, assessing their own roles in the application of place-based education principles within the community.

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<sup>3</sup> Retrieved from <http://portfolio.ruraledu.org/index.htm> on 27/11/2013. This link appears to be no longer active. See Appendix B for details of PBEPR.

The PBEPR, as described above, was availed in this study as a means to assist in a detailed exploration of place-based education practices and their relation to Montessori adolescent education principles.

Many recent research studies indicate that place-based learning increases achievement levels, and contributes to students' understanding of the natural world (Sobel, 2004). Demands for academic accountability in education however, can prove to be an impediment in attempts to change the practices of adolescent education so that adolescents can be more invested in their own learning. As Greenwood (2010:139) explained:

The fundamental purpose of education in the U.S. and elsewhere is not to educate young people to better understand themselves and their relations to others with whom they share the planet...but to prepare them for the economic marketplace, an enterprise that has always been grounded in questionable intentions and has always produced questionable results for people and places worldwide.

Incredibly, a century ago, Maria Montessori discussed this problem in extraordinarily similar terms:

The secondary schools as they are at present constituted do not concern themselves with anything but the preparation for a career ...They do not take any special care for the personality of the children...So study becomes a heavy and crushing load that burdens the young life instead of being felt as the privilege of initiation to the knowledge that is pride of our civilization (1948/1994:62).

Current attempts to adapt Montessori farm-schooling to 21<sup>st</sup> century cultural and educational contexts in the US, are beset by difficulties related to demands for academic accountability required by national and state education boards, as well as child-protection issues, financial insufficiency, community and parental expectations, among others.

Thus, this study was designed to explore the influence of place-based education theory for its role in the processes of transition of *erdkinder* education models to twenty-first century contexts.

## Research Approach

The four US middle schools that were investigated in this multiple case study (Stake, 2006; Yin, 2003) represent a cross-section of curricular and local solutions to the *erdkinder* model. A purposive sampling of settings and environments yielded a selection distinguished by size of school, location, and classification. A qualitative case-study (Patton, 2002; Mertens, 1998; Maxwell, 2005; Cohen, Manion & Morrison, 2000; Guba & Lincoln, 2000) approach was established as appropriate to the study problem.

Semi-structured interviews with teachers and school administrators, student focus group discussions, and parent surveys, comprised the predominant means of obtaining participants' perspectives of their particular education experience (Fontana & Frey, 1995). A research journal provided an ongoing observational record of the researcher's experiences and responses in the field, in addition to supplying a source of observational commentary to interview transcripts (Merriam, 2002).

Other strategies that were employed to enhance the foregoing evidence included review of documents produced by the school for parents and public dissemination of school updates and reports, in addition to website information incorporating school background, history, statistics and Montessori theoretical interpretations (Mason, 1996; Maxwell, 2005). These strategies, to be detailed in Chapter 3, together ensured that evidence was triangulated from a variety of informational avenues in order to support the credibility of the research data (Guba & Lincoln, 1998; Maxwell, 2005; Cresswell, 2009; Marshall & Rossman, 2011).

## The Motivation

In 2007, the centenary of the opening of Montessori's first Casa dei Bambini was celebrated worldwide. In Sydney, the Centenary Conference<sup>4</sup> included a workshop on Montessori adolescent education. Having previously studied for the Primary (3-6 years), and the Elementary (6-12 years) teaching diplomas, I was interested in the shape and form of Montessori adolescent education. One of the American Montessori

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<sup>4</sup> (<http://www.montessori.org.au/events/2007Events/2007WSRCBrochureA4.pdf>)

experts attending the Sydney Centenary Conference, David Kahn, was the initiator and director of the Hershey Montessori Farm School in Ohio. He was also the director of the North American Montessori Teachers Association (NAMTA).

The following year, in 2008, I visited the Hershey Montessori Farm School, situated on 97 acres in rural northern Ohio (USA). It represents an attempt to follow as closely as possible, the tenets of Montessori's *erdkinder* plan, as she described in the "Erdkinder" appendix to her book, *From Childhood to Adolescence*.

Enrolment in 2009 in the 'Montessori Orientation to Adolescent Studies' course conducted by NAMTA<sup>5</sup>, prompted much thought about the myriad ways and means of creating the curricular connection between *erdkinder* and place. The 'Montessori Orientation to Adolescent Studies' course was conducted over five weeks as a live-in study seminar on the campus of the Hershey Montessori Farm School. Studies included theory and practice of Montessori education in general, and Montessori adolescent education specifically, with 60 teachers from Montessori adolescent schools worldwide, attending in order to receive instruction and certification in the application of Montessori's ideas of adolescent education. There was, at the time, no other available teacher-training course in Montessori adolescent education principles and practice.

In addition, my attendance at six Montessori education conferences between 2007 and 2009, facilitated introductions to a wide variety of teachers, instructors, and visits to Montessori middle schools in the USA.

During those initial preparatory months, I visited 16 Montessori middle schools across the USA, by invitation or by making requests to visit. Essentially, attendance at the conferences and the study course in the Hershey Montessori Farm School prompted the initial motivation to undertake this study. Opportunities to gauge the interest of other teachers and Principals in the idea of such a study, as well as opportunities for requesting admission to schools for the purpose of conducting research, were readily available.

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<sup>5</sup> Brochure for 2015 Orientation to Adolescent Studies can be viewed here:  
<http://www.montessori-namta.org/PDF/2015AdolCLEBrochureWEB.pdf>

## **Researcher**

At the time of conducting this study, I was acquainted with a number of US Montessori school teachers and administrators. This situation gave rise to expectations, with respect to the interpretation and analysis of data, which produced a conflict of interest. The Montessori world is small, often sundered by disagreements about interpretation and training, and can be unforgiving of criticism from outside. Therefore, care was maximised to ensure that data were triangulated, member checks were conducted for assurance, and anonymity was ensured in order to secure dependability of respondents' opinions. Several schools declined to participate in the study for fear of compromise or controversy.

As a certificated Montessori teacher undertaking research that would presumably benefit professional understanding of Montessori theory, my entry and observation to many schools was welcomed. As an Australian Montessori researcher, not associated with any particular US Montessori networks, the welcome was perhaps even more effusive. Expectations were raised, and staff members were generous in giving time, assistance, accommodations, transport, and other kindnesses. Within schools that agreed to participate, some teaching staff assumed a defensive attitude to the researcher's observation and interview inquiries. Such reticence was respected in every case.

The dilemma of the research anthropologist was also considered: the etic perspective of an Australian researcher in the US, reliance on cultural assumptions and interpretations that remained implicit, misunderstandings that might produce a distortion effect in the collection and analysis of data. For these reasons, member-checking was an obligatory consideration extended to all interview participants, and documentary interpretations.

The etic/emic perspective of a Montessori-trained researcher in Montessori adolescent schooling appears to be unique in the field of Montessori research. Previous research in the US Montessori field has been carried out by American Montessorians, or by Americans untrained in Montessori theory and practice. George Spindler's (1982) ethnographic notes revealed that in the absence of an outside observer, natives are unable to "realize the full implications of their own cultural knowledge and social

behaviour” (p.490). From this perspective the observations revealed in this research should amount to a potentially useful contribution to the research literature.

As a trained Montessori teacher, and in my capacity as a mainstream secondary school teacher, I had a broad general knowledge of the subject. Despite entering the field with the perception drawn from Montessori’s writing and conference impressions, that farm-schooling was the optimum setting for Montessori adolescent education, my perspective on this point was rapidly altered by observation and the experience of visiting a large variety of middle schools reflecting a panoply of interpretations of Montessori’s adolescent education plans.

### **Overview of the Thesis**

In order to achieve the research aim outlined above, Chapter 2 examines the literature concerning Montessori education, including Maria Montessori’s principles of adolescent education, and the developments that emerged from attempts to convert Montessori’s principles into practice in the late 20<sup>th</sup> century. The issues of applying Montessori’s concepts to a variety of settings are explored, together with the import of place-based education in the implementation of middle-schooling in 21<sup>st</sup> century USA, as documented in the literature. In addition, the chapter investigates existing theories of place-based education and their applicability to the practice of Montessori adolescent education. The importance of an integrated approach to middle-schooling is explored as a means to incorporate Montessori educational principles in the reality of current educational requirements and expectations.

Chapter 3 explains the adoption of an ethnographically based multiple case-study approach as a research method to explore a variety of implementations of Montessori adolescent education theory in four diverse middle school settings in the USA. The data from each school are examined against current interpretations of Montessori principles, for indicators of thoughtful compliance, innovation, and integrity as a whole system heeding the *purposes* of Montessori education, rather than to rigid adherence to Montessori’s theoretical ideas. Additionally, the framework of the Place-Based Education Portfolio Rubric (PBEPR) is applied to demonstrate compliance in each school’s educational practice.

In Chapter 4 the four middle school cases are described. Montessori adolescent education principles are compared to those of place-based education from the PBEPR to establish the terms of analysis in Chapter 5.

Given that Stake's (2006) multiple case study methodology provides the analytical template across the whole study, the themes elicited from the PBEPR are examined in relation to the four case-studies, in Chapter 5. An exploration of the Montessori principles evidenced in each of the four schools is juxtaposed with the place-based education principles derived from the PBEPR with the intent of revealing the shared values of a selection of current models of US Montessori middle schooling and place-based education theory. The degree of alignment between the Montessori *erdkinder* programs and place-based education principles is discussed in a cross-case analytical examination with the intention of revealing how each school has been able to apply Montessori principles, and the extent to which place-based education theory is evidenced in practice. The Montessori place-based hybrid model is introduced and explicated as a proposed framework integrating community-based schooling with Montessori and place-based learning principles to promote critical thinking and social justice as a pathway to global peace.

Conclusions are drawn in Chapter 6, with respect to the degree that Montessori theory and practice has been adapted to adhere to 21<sup>st</sup> century US conditions, and the relative success of these adaptations. The extent of convergence of Montessori adolescent education principles and place-based education theory is also discussed, together with the contributions that the participating Montessori schools make to current place-based education theory. To conclude this chapter, suggestions are made with respect to directions for further research in current adolescent educational approaches.

Maria Montessori was a product of her time, and although she spoke of her pedagogical method as "a revolution in education" in the early 1900s (Kramer, 1976: 109), the crucial question is whether her notions of the education and socialisation of adolescents are entirely applicable to current adolescent educational and socio-cultural imperatives.

# **Chapter 2**

## **The Literature Review**



## **Introduction**

The Montessori story is riddled with controversies, as vigorously debated by educationalists in the early years of the twentieth century as they continue to be in current times. These debates are often focused on the ‘accuracy’ of interpretation of Montessori’s prescriptive writings. Essentially, Montessori theory and practice are the central elements of disagreement, and in part, this continuing conflict is the result of Montessori’s insistence on controlling the instruction and dissemination of her pedagogical ideas (Kramer, 1976; Burstyn, 1979).

Following her lead, Montessori’s most devoted disciples were determined to set her educational principles in stone, unchanging in response to new technologies, different cultures, and the inevitability of changing times and preoccupations. For others, however, Montessori’s ideas provided inspiration rather than a rigid master-plan. There is some suggestion that there is no Montessori theory and that this is the source of the instability (Feez, 2007). Additionally, the question of the originality of Montessori’s ideas, her insistence on the scientific basis of her pedagogical approach, and the applicability of Montessori education to current circumstances are matters of conflict. In the broader domain of progressive education the paradox remains that although many of the components suggested by Montessori were also promoted by her contemporaries in the educational field, Montessori’s principles as a whole, remain controversial, or were simply dismissed. (Gutek, 2004; O’Donnell, 2013). All of these issues are pertinent to the questions addressed in this study.

In order to furnish the background to Montessori’s adolescent educational tenets in the European social context of her time, the first part of this chapter will cover a brief biography of Montessori together with the history, basic principles, and development of Montessori education. In the late 1950s, when Montessori education was re-introduced to the USA, some modifications to Montessori principles became necessary for the adaptation of a specifically European idea to American situational requirements. Other adjustments will also be considered, with a view to increasing awareness of the point that adaptation was essential to the transmission and diffusion of Montessori’s educational precepts as they shifted over time and place.

The notion that *place* determines the “prepared environment”, a central element in the triad of “student, environment, and teacher” upon which the whole of Montessori’s learning principles rest, will be explored. Given the changes from Montessori’s prescribed farming basis for (adolescent) *erdkinder* learning, to urban and other variations suggested by the adoption of pedagogy of place theory, this question of the significance of environmental aspects is crucial.

The second part of the chapter will examine the origins and evolving permutations of place-based education. Current theories and their struggle for acceptance in the twenty-first century climate of educational accountability in the United States will also be discussed. Efforts to merge place-based learning with prescribed academic markers will be explored, particularly because Montessori education also faces similar hurdles. The criteria of the Place-Based Education Portfolio Rubric (PBEPR) will be discussed in terms of its affiliation to current notions of place-based education and the genuflection that is made therein to standards-based educational requirements.

## **The Montessori Literature**

The literature devoted to Montessori education is extensive although widely variable, due in part to the fact that it has developed as an interpretive attempt at understanding ideas that continue to challenge pedagogical thought. In addition, Montessori’s style of inspirational writings and orations in Italian in the early twentieth century, and the problematic translations of these have created disparities of opinion with respect to her intentions, meaning and content. This presents one of the many challenges of researching Montessori’s philosophy and educational ideas.

In order to retain control of the approach, the materials, training and publicity, Montessori insisted that any means of dissemination concerning her method of education, without exception, would require her approval (Kramer, 1976). This limitation has resulted, even in recent decades, in strict controls on publication of material concerning Montessori education.

Rather than resulting in the effect of unifying the Montessori method and its applications, the outcome of these attempts at control were contradictory to such expectations. Perhaps, because there was no accessible theory to rationalise the

practices, and because there were schisms and naysayers from the very first; perhaps Montessori's idea that her education principles were universal, when in actuality, practitioners in the USA and in India (Röhrs, 1994; Kramer, 1976; Feez, 2007; Chisnall, 2011) were advocating culturally apposite versions; and perhaps the direct 'master-class' mode of teacher-training, were all factors responsible for the suspicion and innuendo that was promulgated throughout the movement. The conclusion one might draw is that without a written theory there was no manual to which one might point for verification of a rationale for particular ideas and practices in Montessori education. For these reasons, the literature is divergent in its meanings and interpretations.

### **The Primary Literature**

The primary literature, consisting of all Montessori's writings before 1920, and works attributed to her after 1920 and compiled by her followers from her lectures, presentations, interviews, and articles, is found in variable English translations in most cases. Montessori herself did not speak English, although she retained final approval of the translations.

The initial publication of Montessori's pedagogical ideas, *The Montessori Method*, was first published in 1909. It was reportedly written in less than a month (Kramer, 1976), and reads in the style of an inspirational rhetorical presentation. It was published in English translation in 1912. In total, five editions of *The Montessori Method* were published between 1912 and 1950, illuminating Montessori's changing ideas about educational and developmental processes. Through a detailed examination of each edition of *Il Metodo* (the Italian version), Trabalzirini (2011) revealed and discussed changes in Montessori's life and outlook, as reflected in the progressive changes of the text.

In 1914, *Dr Montessori's Own Handbook* was published in English for a chiefly American readership (following Montessori's first visit to the USA in 1913). Two years later, *The Advanced Montessori Method* was published in two volumes, with an English translation appearing in 1918.

The many publications that followed these initial writings were wrought from an amalgam of students' lecture notes, reports of Montessori's speeches and addresses,

and derived from the notes and translation of followers and reporters. This fact also contributes to the supposition of the ‘unscientific’ and haphazard arrangement of the Montessori publications.

### **The Secondary Literature**

The secondary literature relating to Montessori pedagogy is substantial, continuous for over a century, and spread over many languages. It consists of two biographies, a published memoir, research literature, professional publications concerning pedagogic practice, as well as myriad less scholarly articles from the Internet and the popular press (Feez, 2007; Chisnall, 2011; Keith, 2014).

Of the biographies, the first, published in 1957 (five years after Montessori’s death) is the Montessori-approved account, written by E.M.Standing,<sup>6</sup> a close friend and collaborator of Montessori. This biography includes excerpts from Montessori’s confidante, Anna Maccheroni, in addition to details elsewhere unpublished, among the pages of unsubstantiated anecdotes and enthusiastic hagiography that constitute the book.

Rita Kramer’s 1976 biography<sup>7</sup> is a more objective and judicious record, containing well-researched biographical detail, and historical references to the development of Montessori’s pedagogical ideas. Montessori’s character and personality are described without prejudice, and her rationale for decisions that appear paradoxical are discussed from a reasoned and logical stance.

The title of Anna Maccheroni’s memoir, *A True Romance: Dr. Maria Montessori as I knew her*, (published in 1947) is indicative of the close friendship between the two women. Anna Maccheroni dedicated her life to teaching in Montessori’s schools, and developing her pedagogical principles, particularly in the area of the Montessori music curriculum (Kramer, 1976).

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<sup>6</sup> Standing, E.M. *Montessori: Her Life and Her Work*, 1957.

<sup>7</sup> Kramer, R. *Maria Montessori: A Biography*, 1976.

## **Limitations of Past Research**

One of the main limitations to empirical research involving Montessori education is that of attaining sufficient theoretical perspective. Almost all of the research is currently being undertaken by ‘policy captives’, due to Montessori Association funding of research, or to funding from well-known Montessori philanthropists (such as Lillard and Hershey/Guren). For example, NAMTA<sup>8</sup> and AMS/AMI<sup>9</sup> papers are generally funded by their own Montessori organisations, and all have powerful reasons for desiring positive evaluations of Montessori settings and initiatives.

A further challenge for researchers of Montessori schooling is that because the name ‘Montessori’ is in the public domain, there are no fixed determinants that secure the name to any particularity of practice. Therefore, any school may nominate itself as Montessori, regardless of whether teachers are Montessori trained, or whether Montessori methods/materials are involved in the pedagogical process (Stern 2007, Feez, 2007; La Rue, 2010; Chisnall, 2013; Keith, 2014). It follows, therefore, that if a researcher is Montessori trained, then schools that most closely adhere to the tenets of Montessori will be identifiable, and thus yield more reliable studies for the information of Montessori practitioners. On the other hand, as a Montessori trained practitioner, the notion that the researcher would not be disinterested in the outcome is recognised as a limitation. Generally, however, most Montessori research is funded by philanthropists known to support and promote Montessori educational efforts (e.g., Lillard, Kahn, Hershey/Guren). Other sources of funding support originate from Montessori professional associations, due to the advantages to be gained for the whole movement when research outcomes are guaranteed. (For example NAMTA and AMS-funded research). The implications of such industry-invested funding are clear.

Nonetheless, one of the basic areas of disagreement between AMI (Association Montessori Internationale) members and AMS (American Montessori Society) members lies in the fidelity of adherence to the details of traditional Montessori

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<sup>8</sup> NAMTA North American Montessori Teachers Association

<sup>9</sup> AMS American Montessori Association/ AMI Association Montessori Internationale

principles as represented by the AMI. The AMI was instituted by Montessori to secure the name and to ensure the continuing “purity” of Montessori’s teachings (Kramer, 1976). Improvisation on those principles in order to render Montessori education more relevant to current cultural demands is generally supported by AMS members (Rambusch, 1977; Whitescarver & Cossentino, 2008). Both associations regard themselves, and are regarded by their own teachers, members, and parents, as the gate-keepers of “authentic” Montessori education, implying that they are opposed to those that trade on the name of Montessori without seeking to uphold the inherent educational principles (Whitescarver & Cossentino, 2008).

Although there are over 8000 Montessori schools in operation in the United States (Seldin, 2008), comparatively little research on the approach and its efficacy has been completed by mainstream researchers (Cossentino, 2005). Furthermore, because the past 100 years has seen a marked emphasis on the Montessori education of primary school aged children, there has been little in the way of empirical research in the area of Montessori adolescent education.

Much of the most recent research in Montessori education has been carried out in the elementary arena (ages 6-12) (Seldin & Epstein, 2003) since this has been an area in which Montessori research has been most urgently required in order to support continued enrolment in successive grades of Montessori education.

### **Montessori Adolescent Education Literature**

Three relatively significant theses based on Montessori adolescent education in the United States were written in the late 1980s during the major resurgence of interest in Montessori education in the USA. The earliest was Paul Epstein’s 1985 PhD thesis that dealt with social relations of adolescents in a Montessori Junior High School. He found these were not significantly different from those observed amongst teenagers attending non-Montessori schools, in terms of social development. The significance of the study lies in the fact that it was the first devoted to Montessori adolescent education. Another study by John Bodi, in 1987, attempted to designate an effective curriculum for students in a Montessori high school “founded in natural human development”, as Montessori prescribed for all the planes of education. It must be said that an “effective” working curriculum is still being reinvented in every Montessori

middle school. Elisabeth Coe detailed the implementation of a Montessori adolescent program for a new junior high school in her PhD thesis of 1988. In this work she documented her attempt to bring the Montessori “Erdkinder” writings to life in 1986, in a school she named the Blackwood Land Laboratory.

More recently, La Rue (2010) examined four USA Montessori *high* schools through the lens of Vygotsky’s cultural-historical activity theory. She found that place-based education was a shared characteristic in all of the participant schools. She concluded that the consistency of the Montessori approach across a diverse range of locations and circumstances could be seen as an inspiration to educational reform in US high schools. In 2011, Broome submitted a PhD thesis investigating the social politicisation and civic engagement of adolescents in a Montessori school, through analysis of the curriculum and teacher interviews. He found that there was ample opportunity for civic engagement in the Montessori program through service learning, school governance and participation in a democratic classroom, despite the apparent lack of a formal civics course in the curriculum. Although he described the school as a Montessori *erdkinder* middle school, he omitted the detail of Montessori’s farm-based learning for adolescents, in favour of a definition of *erdkinder* as learning that focusses on civic life and economic independence in an experiential model (Broome, 2011: 7). Also submitted in 2011, Cauller’s doctoral dissertation argued that the significant similarities between Montessori’s principles of education and Popper’s evolutionary epistemology for optimal learning suggested a combining of the two in a model for education reform that he described as, creating “learning environments that cohere with and support the patterns and proclivities of human learning” (2011: 151). This model, which he called the Education-as-Evolutionary Epistemology (EEE), remains untested at this point.

In 2014, Keith submitted a doctoral dissertation concerning the longterm effects of Montessori education programs on college age students subsequent to their first year of tertiary education. The cohort of 13 students she interviewed had experienced at least six years of Montessori schooling between kindergarten and high-school graduation. Through analysis of their epistemological development and an examination of 21<sup>st</sup> century societal skill requirements, Keith concluded that the Montessori students’ level of epistemological understanding was found to be at “a more advanced level than usually achieved by comparably aged college students”

(2014: i). She concluded that more extensive research on the longterm effects of Montessori education programs was required.

As a resource pertaining to the Montessori epistemological framework of learning, the literature represents a range of paradoxes that confound the search for definitive understanding. Additionally, the fact that by tradition, Montessori teacher training has been reliant on a master-class framework that is dependent on oral modes of transfer, has created significant complexity for the field (Feez, 2007).

### **The Scarcity of Peer-Reviewed Literature**

There is an extensive volume of writing on the subject of Montessori adolescent development and education to be found in the publications of the North American Montessori Teachers Association (NAMTA), an Association Montessori Internationale (AMI)-based organisation. Most of the published material concerning Montessori adolescent education emanates from NAMTA; from its journal articles and conferences, and from *Montessori Life* (the Journal of the American Montessori Society), though only the latter, a professional journal, is peer-reviewed. Both represent arch-rival organisations, but they form the bulk of the current writings describing the practice of Montessori adolescent education. Therefore it is suggested that research in this area will be useful in not only providing an unaffiliated overview of the field as it currently stands, but also a view from the outside (Australian view of the American interpretations of Montessori adolescent theory). This appears to be a valid stance, since the Americans have essentially created an interpretation of Montessori education that is peculiar to American socio-cultural values and educational benchmarks. Whether this is an interpretation that translates well to other cultural contexts remains to be explored.

The chapter so far has described the complexities of the available literature surrounding the emergence of the Montessori model. It is timely at this point to understand the woman and her circumstances in the development of the Montessori model of education.

## **Montessori: Educational Foundations**

Maria Montessori was born in Chiaravalle, a small town in Italy in 1870. She was an only child, raised by educated middle-class parents. Her increasing interest in a variety of feminist causes (equal pay for women, female suffrage, education for women) ensured that she persisted in her ambition to become a doctor of medicine, despite bureaucratic and social barriers. It was unusual for girls to be educated much beyond primary school at that time in Italy, and in 1896, Montessori was one of only a half dozen of female medical graduates in the whole country. That same year, Montessori represented Italian women at the International Women's Conference in Berlin, and thereafter, she became a celebrated speaker in the cause of feminism (Povell, 2009).

For Montessori, feminism, politics, and medicine were interwoven as a pathway to social reform (Babini, 2000). In service of these passions she began to work with physically and intellectually disabled children at the Orthophrenic School of Rome. Montessori focussed on the observation of children's behaviour, and then, influenced by her studies of the works of Johann Pestalozzi (1746-1827, Swiss pedagogue of orphaned children), Jean Itard (1774-1838, French physician, specialist educator of deaf-mute patients) and Édouard Séguin (1812-1880, physician, specialist educator of children with cognitive disabilities), she began to develop manipulative puzzles and sensorial educational aids for the disabled children in her care (O'Donnell, 2013).

From 1897 to 1898, Montessori audited classes at Rome University in pedagogy, and studied "all the major works on educational theory of the past two hundred years" (Kramer, 1976: 61). She later wrote in her first book, "I felt that mental deficiency presented chiefly a pedagogical, rather than mainly a medical, problem" (Montessori, 1909/1964: 31). During the years 1896 to 1901 Montessori travelled, lectured, studied and published in support of women's rights and the education of intellectually disabled children. At about this time, Montessori's focus for the achievement of social reform began to shift, from public health as a prime concern, to an emphasis on her radical approach to the education of children (Babini, 2000). As Montessori declared, "Pedagogy will become the new social medicine" (1903:22).

In 1901, after leaving the Orthophrenic School, Montessori commenced studies in moral and theoretical philosophy, in addition to psychology, at the University of Rome. Independently, Montessori also studied anthropology and educational philosophy, revisiting the works of Itard and Séguin, while she formulated the notions of extending their ideas to the education of ‘normal’ children (O’Donnell, 2013). In 1904, Montessori was qualified as a lecturer in anthropology, and offered employment at the University of Rome in the Pedagogic School, where she remained until 1908. *L’Antropologia Pedagogica* published in 1910<sup>10</sup>, was a compilation of her lectures in pedagogical anthropology and represented the beginnings of her developing ideas concerning scientific pedagogy (Foschi, 2008).

Meanwhile, in 1907, Montessori was able to assess the practicality of her educational ideas for normal children, when she was invited to open a school for the children of factory-workers in a new apartment complex in the San Lorenzo district. Montessori’s preoccupation with her research, academic teaching, and writing was such that the tenement porter’s daughter was assigned to the role of directress (teacher) in the Casa dei Bambini (Children’s House), with instructions to refrain from interfering with the children’s spontaneous auto-education (Kramer, 1976). Montessori herself observed the children’s activity in the prepared environment of the school from time to time, although she was not involved in the actual process of the children’s education (Kramer, 1976). From this experimental beginning, Montessori further refined her ideas, adding new forms of self-correcting equipment for the children’s use, developing a freely accessible indoor/outdoor area for learning, and providing child-sized chairs and tables that the students were easily able to move.

Montessori also developed new materials to promote the acquisition of literacy, providing a progressive scaffolded sequence of learning activities initially dependent on the use of manipulative materials as the basis for the development of abstract ideas.

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<sup>10</sup> Kramer (1976: 97) described *L’Antropologia Pedagogica* thus, “It is hard to find a book more dated in its style, more obsolete in its factual content, and yet the general principles on which it is based – that the nature of education should follow from an understanding of the nature of the child to be educated – was a significant innovation at the time.”

All of this was in service of the rights, welfare, and freedom of the child, embryo of ‘the new man’ [sic], to create a new world community founded on peace, justice, and freedom. Montessori elucidated her vision in this way:

The present day importance assumed by all the sciences calculated to regenerate education and its environment, the school, has profound social roots and is forced upon us as the necessary path toward further progress; ...[it] must result in a correspondingly transformed man; or else civilization must come to a halt before the obstacle offered by a human race lacking in organic strength and character (Montessori, 1909/1913: vii-viii).

Montessori’s stated aim in her educational philosophy was “to follow as nearly as possible, as all-inclusively as possible, the needs of growth and of life” (1948/1994: 58). She asserted that the key to social reform lay in the reform of education. Since she interpreted the basic unit of society as the individual, then the development and education of each individual constituted the beginnings of social reform. Hence individualised child-centred education was at the heart of her ideal of social action.

### **Changing Educational Paradigms in the Early 1900s**

Montessori described her educational approach as “the science of observation” (Montessori Jnr., 1976:125) at a period when scientific education was considered a radical new paradigm in educational circles. Montessori’s idea of scientific education, however, diverged significantly from the academic view of educational reform of the times (O’Donnell, 2013).

The concept and implications of a scientific education were vigorously debated from the late nineteenth century and well into the twentieth. Nineteenth century values generally described a scientific education that was based on arguments about the conflicting roles of nature and nurture in child development, combined with theories about the ethical destiny of humanity (Feinberg, 1975). The perspective, argued Alexander Bain (1870), that education as a science could produce new understandings with respect to general principles of psychology and physiology in human development (O’Donnell, 2013).

By the early twentieth century, educationalists’ ideas were predominantly founded on the influence of Social Darwinism, with the view that education would become the

catalyst for the social reform of a new technologically based society in the wake of the industrial revolution. With competition and utilitarian ideals as the rationale, children could be educated to meet the requirements for uniformly industrious workers in a climate of economic efficiency. This was thought to be achievable by centralising school administration and curricular recommendations in the style of corporate business management (Shortridge, 2007).

The theories of a group of educationists known as ‘the Connectionists’, supported by animal research, confirmed ideas about stimulus-response methods of acquiring knowledge, using rewards and punishments as part of the conditioning of learners (Elkind, 1999). Edward Thorndike (1874-1949), John Watson (1878-1958), and Edwin Guthrie (1896-1959) were proponents of such theories. Alfred Binet’s (1905) theory of intelligence and its measurement was also representative of the attempt to apply scientific method to educational understanding (O’Donnell, 2013). Thorndike’s view of ‘scientific’ education adroitly summarised the positivist attitudes of early twentieth century educationalists:

A true science of education . . . must rest upon direct observation of, and experiments on, the influence of educational institutions and methods made and reported with quantitative precision (Thorndike, 1906, p. 163).

Montessori’s ideas, in contrast, although also reliant on direct observation and experimentation, were based on a developing humanistic attitude, with natural individual self-development founded in freedom and self-discipline as the basis for social reform. She rejected the idea of intelligence testing, having already demonstrated with the children from the asylums that intelligence could be raised (Hunt, 1964).

Montessori’s writings on education, at first glance, do not correspond to anything that might be considered ‘scientific’ by current standards, despite her initial ideal of establishing a scientific educational framework that would be governed by anthropological measurements (the necessary quantitative ingredient) and applied psychology (Montessori, 1909). The social, political and religious climate in which these ideas were developed, however, was influential in the progression of Montessori’s educational reference points. The radical social movements in which she was deeply involved at that time included feminist concerns focussing on social attitudes regarding unmarried mothers, and female suffrage, in addition to the rights of

the child, the rehabilitation of young criminals, the secularisation of primary school education, secondary schooling for girls, and literacy as a social issue, against a background of Italian Catholic political conservatism (Foschi, 2008). All of these issues had a profound effect on Montessori's approach to education, which she saw as the essential impetus to social change.

### **Montessori's Epistemological Influences**

Montessori's innovative principles of education were influenced by a complex tapestry of ideas from Aristotle, Saint Thomas Aquinas, and the Abbé de Condillac, whose theories are reflected in the work of the doctors, Itard and Séguin, both of whom profoundly influenced the work and ideas of Montessori. In addition, writings of Sergi, Locke, Rousseau, Pestalozzi and Owen were also examined by Montessori during her studies of pedagogical psychology and educational theory in 1901 (Kramer, 1976). Montessori also drew inspiration from Luigi Fantappie, an Italian mathematician, and she mentioned the philosophical concepts of Sir Percy Nunn, and Henri Bergson, a close friend of William James (Chattin-McNicols 1992: 36). The essence of Montessori's ideas, however, emerged from the work of Itard, Séguin, and Sergi, pedagogue-philosophers whose approaches incorporated ideas of the development of the whole child, careful observation and recording of individual student responses, kindness and care in child education, and social reform as a consequence of the adoption of these measures.

Jean Marc Gaspard Itard (1775-1838) was a French physician and philosopher specialising in the treatment and education of children with hearing difficulties. While working at the Paris Institute for Deaf Mutes, he became responsible for training Victor, 'the wild boy of Aveyron', a twelve-year old boy found abandoned in the forest after the disorder of the French Revolution. The boy was unable to speak and completely unsocialised. In his focus on the basic needs of the child, Itard found that by creating appropriate environments, he could galvanise Victor's attention, and thereby attract him to focus his senses, and thence to hone them, in learning through spontaneous activity rather than by compulsion. Victor, was eventually taught to read, and to sign communicatively in social situations. Although he never learned to

speak<sup>11</sup>, he learned to recognise many spoken words (Cole, 1950). According to Montessori, Itard was ‘the first educator to practise observation of his pupil in the way the sick are observed in hospitals, especially those suffering from diseases of the nervous system’ (Montessori, 1909/1964:34).

Montessori employed these same steps and observational records in her innovative principles for child education, utilising the principles of the liberty of the child, and the child’s spontaneous activity in a prepared environment. The child was encouraged to self-educate via the senses and concentration of attention, according to progressively finer degrees of difference in the stimuli.

Edouard Séguin (1812-1880), a student of Itard, developed a program for teaching intellectually disabled children using a system based on sensory education and didactic objects. Furthermore, he focussed on the moral development, that is to say, socialisation, of children in education. His principles were centred upon two critical factors: the role of the environment in the education of the individual, and social relationships in the development of the personality (Cole, 1950). In addition Montessori incorporated Seguin’s notions of muscular education as a precursor to more sophisticated sensorial responses involving mental recognition of the information transferred through the senses. Montessori’s commitment to peace-education was also adopted from Seguin’s concepts of democratic freedom particularly with respect to classroom democracy and social harmony, which he considered would precipitate more harmonious relations in the wider community (Montessori, 1909/1964). He considered education as ‘not individualistic, but a preparation for an ideal society’ which he derived from the philosophy of the Comte de Claude de Saint-Simon (Boyd, 1921:363-5).

Giuseppe Sergi (1841-1936) an Italian anthropologist, promoted the theory of

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<sup>11</sup> Itard was the first to speculate that ‘sensitive periods’ existed for the acquisition of skills. While sensitive periods were transient in nature, the child was acutely focused ‘with special psychic powers’ (Montessori, 1936/1978:2) and an insatiable desire to master a particular skill during that developmental window. The sensitive periods could be enhanced by providing the appropriate experiences in the prepared environment during the period of particular sensitivity. Because Victor had missed that essential sensitive period for the acquisition of speech (beginning at about 10 months of age), Itard explained that he was unable to help the boy in that regard.

Scientific Pedagogy as the basis for ‘the principles of a new civilization based upon education, leading to the science of forming man’ (Montessori, 1909/1964:2). He suggested that ‘a methodical study of the one to be educated...under the guidance of pedagogical anthropology<sup>12</sup> and experimental psychology’ would ‘establish natural rational methods’ in education (Montessori, 1909/1964:2). Montessori adopted his ideas with respect to taking numerous measurements of the child’s physical proportions, although she reduced his lengthy list of specific measurements. She introduced this idea in her first published book, *L’Antropologia Pedagogica* (1910). In subsequent publications Montessori did not mention the association of the child’s physical proportions with socio-economic status as an observational starting point. As her ideas evolved she relinquished this emphasis in favour of becoming more concerned with the overarching ideal of effecting radical social change through educational reform.

The legacy of these educators that is apparent in Montessori’s approach to education is revealed in six pivotal principles:

- Sensory training, as used by Jean Itard in training Victor, the ‘wild boy of Avéyron’, and described in Montessori training as the basis of intellectual development.
- Sensitive periods, which Itard held responsible for Victor’s inability to learn to speak, despite his concentrated efforts, the boy having been separated from human culture during the critical period for the accomplishment of speech (Itard, 1801/1972: 99).
- The prepared environment, which describes the stimulating environment

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<sup>12</sup> “Pedagogical anthropology” was understood in the early twentieth century as an empirical science in the style of conventional natural sciences, which [was] studied by way of taking exact measurements and [recording] regularities of human physiology and development” (Hammerer and Ludwig, 2011). These physiological and psychological measurements, were compiled as a biological chart of each pupil, and then related to the child’s social and intellectual development. Gutek (2004) points out that the notion of taking anthropological measurements became confused with the ideal of scientific pedagogy, with the result that teachers were instructed in the minutiae of physiological measurement techniques, with the belief that it would lead to the reconstruction of education and the formation of a new social order.

prepared by Itard to generate Victor's spontaneous interest, focus, and associated learning.

- Human potential for self-development and creation of personality depending on the human socio-cultural environment, as opposed to animal instinct which binds the animal to inbuilt responses (Montessori 1949/1982: 52-72; 1955, pp. 62-83).
- Social relationships and spiritual sensitivity as essential factors in the education of individuals (Montessori, 1909/1964).
- Education as a means to reform of society through self- and peer-training in harmonious social relations and self-discipline.

These six principles were considered by Montessori to be as vital in adolescent education as in early childhood education (McKenzie, 2007; Sutton, 2007; Loeffler, 2003; Celeste, DeAubrey, Freilino, & McDurham, 2003). In the adolescent period according to Montessori's farm-schooling, sensory applications are found in the experience of working the land, growing and harvesting food, handling the farm animals, preparing, cooking and serving food, and experiencing the life of service to the community. Here too, we see the prepared environment of the farm and the small community providing stimulating experiences that galvanise the attention and direct the energies of students. Through service to each other, through production and exchange of goods, young people are able to develop the personality through social relationships, during this sensitive period for growth and adaptation to the responsibilities of adult life (Montessori, 1937/2001; 1938/2001). These principles can equally be located in the tenets of place-based education as will be shown below.

In 1899, Montessori joined the Theosophical Society, a rationalist religious movement in which social action and education reform were strongly promoted by an established core of female management. It was through this connection that sculptor and art educator Francesco Randone (1864-1935) influenced the ideas of Montessori. His educational theories such as free art education for all children; allowing children to develop their own creativity independently by providing an environment that encouraged them to experiment freely and at their own pace; his assertion that the children were the caretakers and restorers of their art school; together with the social values he promoted with respect to the equality of all children, and the preservation of

civic objects, buildings, and monuments, were widely incorporated into the first edition of *The Montessori Method* (Foschi, 2008; de Feo, 2001, 2005; Wilson, 1985; cf. Montessori, 1909/2000: 328–330). Montessori remained associated with the Theosophical Society for most of her life, despite her Catholic origins, with many references to those beliefs scattered throughout her writings. Böhm (2011:5) argued that “Montessori repeatedly talks of God as the ‘celestial geometer’, meaning that, according to theosophist terminology – she sees God as the cosmic architect...” Indeed, Montessori mentioned having read the founding Theosophist Helena Blavatsky’s (1831-1891) educational writings, and being “...surprised that so long ago there were educational writings so similar to her own of today” (Arundale, 1946:29).

### **Montessori’s ‘Scientific’ Credibility**

Despite Montessori’s rigorous scientific training as a doctor, and the acknowledgement of her status as a medical practitioner specialising in psychiatry, her pronouncements on education did not manifest as particularly academic in style or content. Indeed, the florid and evangelistic style she adopted in speaking and writing about her educational philosophy tended to undermine her authority as a scientist (Kramer, 1976). Jerome Bruner described her as a “strange blend of the mystic and the pragmatist” (Cunningham, 2000: 209), while others refer to “the perception of Montessori as a ‘priestess’ leading a cult” (Kramer 1976: 207).

Röhrs suggests that Montessori’s observations were not reflective of her own ideal of scientific writing,

Montessori envisioned a procedure that today would be described as hermeneutic-empirical. Nevertheless she herself did not succeed in putting any of these ideas into practice at all thoroughly in her own work. Her experiments neither possessed a solid theoretical framework nor were they carried out and evaluated in a way that would allow them to be objectively conformed. Her descriptions were not free of subjective impressions and her conclusions were often biased in her own favour or even dogmatically phrased (1994:7).

Feez (2007) proposes that Montessori was attempting to describe her ideas using the language of the physical sciences, because the language necessary for description of the social sciences had not yet evolved.

Montessori's educational writings were not critiqued as 'unscientific', however, until English-speaking academics commented on her work, which suggests that perhaps the translation of her writing was the source of misinterpretation (Whitescarver & Cossentino, 2008). Her translators were generally teachers and followers. According to Kramer (1976), Montessori's works published before 1920 were written by her in Italian and translated under her supervision. However, Montessori was not familiar with English, and the translations were all completed by her students and followers with little experience in the expression of scientific ideas (Feez, 2007: 51), most of whom also were not well-versed in Italian. For example, Montessori's first book, *The Montessori Method*, was translated by an American student, Anne George, after one year of studying Italian (Kramer, 1976: 162-166). This is the English version that remains the standard text to this day, despite the fact that Montessori produced five more versions under the same title between 1913 and 1950 (Trabalzini, 2003). Later works were compiled from translations of her speeches and training course lectures.

Kramer (1976) confirmed that Montessori's critics disparaged her scientific pedagogy as mediocre, arguing that she did not provide adequate details of her experiments such that they could be replicated, that there were no control groups, and that she did not provide sufficient evidence or proof of her findings. Kramer commented further, that:

Although she insisted on the scientific basis for her statements, they were largely the result of remarkably intuitive observations integrated with creative genius into a body of thinking about education which came down from Itard and Séguin (1976:376).

Despite Montessori's reported lack of scientific credibility it can hardly be ignored that many of her ideas have since entered the mainstream of contemporary early developmental understanding. For example, the notions that early childhood experiences have a profound effect on later development; that it is possible to rectify cultural deprivation through enrichment of early experiences; that intelligence, while to some degree genetically determined, can be potentiated by stimulating interaction with the environment; that children's spontaneous interest in learning is founded on

their intrinsic pursuit of novel experiences; that effective learning is an active endeavour; that learning development is dependent upon the nature of the learner; that child-centred education is essential to motivation; and that self-motivation is key to understanding. These are accepted tenets in current early childhood education theory (Bruner, 1966; 1973; 1996).

### **Montessori's Educational Theory**

It can be argued that Montessori education has been disseminated over the past century without a central theoretical structure that would enable the practical contribution of Montessori's educational tenets to be objectively evaluated. As Feez (2007:49) explained:

What is lacking, however, is a framework for investigating, testing and generalising the principles on which the method is built.

Montessori was adamant that from observation and practice, educational theory would be forthcoming, stating that:

[w]e start essentially from a method, and it is probable that psychology will be able to draw its conclusions from pedagogy so understood, and not *vice versa*' (Montessori, 1964 [1909/1912], p. 167).

Montessori's grandson, Mario Montessori Jnr., supported the evaluation that Maria Montessori's educational ideas did not comprise an educational theory:

She was not a theoretician. She did not construct a differentiated theoretical framework that paved the way for later applications of her work (1976:4).

Montessori justified her approach as one originating from scientific principles:

I have never affirmed anything that I have reasoned in my mind because if I did it would just be a theory of no importance, just be a matter of opinion not a serious statement. Serious statements must come from observations of development – *the truth* (Montessori Course, London 1946).

Feez (2007: 44) describes Montessori's educational principles as "a theory of practice rather than a theory constructed through written language." O'Donnell (2013:64), additionally suggests that Montessori conducted naturalistic research in the classroom,

developing theory from her observations, and that *The Montessori Method* might be classed as ethnography, since it was essentially the record of Montessori's observations, experiments and developing theory of early childhood education. Ornstein (1977:117) has commented that naturalistic inquiry is well established as a scientifically valid approach, employed by such respected educational philosophers as 'Comenius, Rousseau, Pestalozzi, Owen, and Spencer.'<sup>13</sup>

In effect, Montessori's written specifications in *The Montessori Method*, portray a collection of procedural directions interspersed with dietary suggestions, anthropological notes, anecdotal descriptions, and classroom logistics, all of which impede the extraction of a distinct theory of education. In part, this is due to the rhetorical style that characterised both her lectures and her writing (Kramer 1976). Montessori's subsequent publications read similarly.

In this study, the application of the criteria incorporated in the Place Based Education Portfolio Rubric (PBEPR) to Montessori adolescent principles (which by derivation could be understood as a theory), is intended to furnish a rationale in educational terms towards the ideal of an evaluative framework. By this means, an understanding of the actualisation of Montessori's principles in the USA schools included in the study can be reached. In addition it also constitutes a means to appraise the congruity of Montessori adolescent education to twenty-first century educational requirements.

### **Montessori's Adolescent Education Principles**

The earliest references to adolescence as a significant period of developmental transition are generally attributed to G. Stanley Hall (1904). Although his views were not based on research, they prevailed for the next fifty years. By comparison, Montessori's observations of adolescents were remarkably detailed for the early twentieth century, though she is rarely acknowledged for her expertise in this respect (Petersen, 1988).

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<sup>13</sup> This idea is more emphatically the case since the landmark publication of the notion of 'naturalistic inquiry' by Lincoln and Guba in 1985, seen as the foundation of the qualitative movement in social science (i.e. the beginning of more formalised theorising and acceptance of qualitative work, albeit still inclusive of system and rigour to the methods used.)

Montessori elucidated the concept of the expansion of independence in the child's development, from the primary/elementary period in which the child is learning *about* the environment, and the adolescent learning to *manipulate* the environment. She also described adolescent education as practical experience in the evolution of civilisation, in which human society becomes more inclined to actively transform the environment:

Just as nature is brought by the labour of man to a higher degree of beauty and usefulness, so man must raise himself to a state that is higher than his natural state, and the land-child must see that society is in a state of ascent from nature in which he, as a civilized and religious man must play his part (Montessori, 1949).

Although this sounds intensely romantic, Montessori's agenda was essentially that of a social revolutionary. For example, she remarked:

The essential reform is this: to put the adolescent on the road to achieving economic independence. We might call it a "school of experience in the elements of social life" (1948/1994: 64).

As she saw it, much of the intellectual development of the child would be established during the period from birth to the final elementary years. Thereafter, because the child was entering a new phase of physical transition to adulthood, the physical, social, psychological, and spiritual/emotional elements of the young adult required special attention.

The significant emphases in Montessori's education of 12-15 year olds are focussed on the development of the personality, economic exchange, and independence. In the words of Montessori:

The human personality as the basis for education should make man grow with all his powers ... We have to put moral education at the foundation of a change in education... We must give everything that is necessary to develop the personality to the highest possible degree... If the personality is the center of education, the child is much more instructed than the child who is forced. He feels his individuality and his independence (1937:193-195).

This phase of development and further independence could best be achieved, Montessori opined, by accommodating the adolescents on a farm in the countryside. There they could maintain the land and gardens, keep livestock for meat and other primary produce, and learn through experience in this specially prepared environment.

The notion of ‘the school on the farm’, was associated with German education reform movements in the idealistic aftermath of the first World War. It is clear, however, that Montessori intended something much more profound than a derivative of those ideas for her *Erdkinder*.

### **History and Theoretical Development of Montessori’s *Erdkinder***

Between 1920, when Montessori first began to consider the continuation of the Montessori method for the adolescent stage of development, and 1936, when she presented the conclusive *erdkinder* material at the Fifth International Montessori Congress in Oxford, Maria Montessori travelled throughout Europe and the UK, lecturing and speaking, as well as visiting a variety of progressive adolescent educational sites (Kramer, 1976).

At the same time in Germany, educational reforms were initiated by the uprising of youth movements protesting the rigid school disciplinary regimes of the period. The resulting progressive schools that grew out of that movement, the *Landerziehungsheime* (Country Estate Schools), the Odenwald School, and the Berlin Garden Schools appear to have greatly influenced Montessori’s ideas about the education of adolescents (Barker, 2001).

These rural boarding schools emphasised to different degrees, the idea of the creation of a strong community in the form of a mini-society based in a rural environment, in which all the daily activities of farm and community work were carried out by students in the interests of serving their educational needs. A prominent role for self-expression in the arts, a healthy lifestyle, and some aspect of spirituality were also inclusions in such programs. Academic learning was specifically geared to the interests of the students and the practical work of school community life, in a particular location.

As such, these ideas were not new, being evident in the concept of Plato's *Republic*, Fellenberg's establishment of the estate of Hofwyl in 1799, an agricultural school based on the work and theories of Pestalozzi, and also Goethe's 1821 work, *Wilhelm Meisters Wanderjahren* (Barker, 2001).

Many of these German practices of farm-schooling were generated from Herman Lietz' experiences at Abbotsholme, a country-estate school in England started by Dr. Cecil Reddie in 1889. Lietz' subsequent opening of the *Landerziehungsheim* (country estate school) initiated more variants on the initial model (Grazzini & Krumins-Grazzini, 1996).

The Odenwald School, opened in 1910 by Paul Geheeb, was based on the idea of Herman Lietz' *Landerziehungsheime*, but with further modifications, in which mixed-age groupings were introduced (an important Montessori tenet), and work became the focus for galvanising the students' interest, as well as the fulfillment of community tasks and finances. These ideas were, in turn, adopted from the *Arbeitschule* (Work School) developed by Dr. Kerschensteiner, in which he (again, along similar lines to Montessori's concepts) advocated that individual character was constructed through work that the student freely chose, and incorporated into a curriculum of academic subjects, Principally mathematics and science.

In Berlin in 1919, land that had been used during the war for military purposes was designated for use as *Gartenschule* (Garden Schools), in which agricultural specialists guided teachers, students, and parents in the techniques of land cultivation. Participant families kept their harvested produce for their own domestic use, or for sale (an idea subsequently extended by Montessori in her notions of the *erdkinder* micro-economy). Small farm animals were also kept, such as chickens and goats. These agricultural courses further developed into multi-week excursions into the country, in which other outdoor skills were taught (Barker, 2001), as can also be seen in several contemporary Montessori middle-school interpretations.

The Outward Bound schools begun by Kurt Hahn, with the establishment of Schule Schloss Salem (Salem Castle School) in 1920, also followed a similar model, with a setting in the countryside, and emphasis on the development of the whole person through outdoor work, self-discipline, self-discovery through service in the

community, through challenge, forging relationship with place, and separation from the family. Like Montessori, Hahn sought to focus on peace education as a means to harness the idealism of adolescence in the creation of a new social order (James, 2000).

Notable also, in this regard is the fact that Robert Baden-Powell's book on scouting, first published in 1908, drew on the work of both Maria Montessori and G. Stanley Hall as influences. Some decades later, Montessori referred to the scouting movement as invaluable in the outdoor education and developing life-skills of the young adolescent (Montessori, 1938).

Montessori's ideas for *erdkinder* clearly grew out of a general movement for reform in education, in the quest for social change. However, although Montessori adapted the ideas and examples of the European reform movements, she based her educational philosophy on her observations of natural human tendencies (O'Donnell, 2013).

Montessori's ideas about secondary education place her *erdkinder* plans firmly within the landscape of educational reforms of that time, in Europe and the United Kingdom. Those ideas were characterised by the creation of a mini-society of young adolescents boarding together, away from the family, in the countryside, with farming as the basis for physical and community work, academic studies and artistic pursuits.

### **Economic Exchange: The Essence of Social Existence**

The significant point is that Montessori augmented these common ideals by taking a unique approach to farming as the basis for economic production and exchange. She reiterates a number of times that, "The essential reform is this: to put the adolescent on the road to achieving economic independence" (1948/1994:64).

In her 1936 Oxford lecture, Montessori makes her position abundantly clear: "Production and...exchange, are the essence of social existence" (2001:180). She envisaged money, and exchange of goods and labour as the basis for understanding and practising morality and social responsibility, and therefore a key to social reform. Money, she explained, is "a materialized abstraction", a representation of the value that is placed on the time and work of others, on goods, and on individuals themselves (1936: 184). Therefore, in Montessori's *erdkinder* vision, adolescents develop

independence, a growing sense of self and greater understanding of social life, through work and exchange of goods and capital. Such an emphasis is reflective of Montessori's endorsement of Marxist philosophy (Chisnall, 2011).

### **The Term '*Erdkinder*'**

In order to highlight the revolutionary nature of her farm-schools, Montessori coined the word '*erdkinder*', since it is not an actual German word, but a combination of 'erd' (soil, earth) and 'kinder' (children). It has been suggested many times over in the literature, that she introduced the term as a link to the German educational reform movement mentioned above (Barker, 2001). However, Gerbhardt-Seele (1995) maintains that Italians frequently employed German expressions (such as 'kindergarten') in educational contexts. According to Grazzini and Krumins-Grazzini (1998), (Mario Montessori's close friend and colleague), Maria Montessori invented descriptive terms for each stage of development: '*die Moebelkinder*' (furniture children) for the infants to twelve-year olds, '*die Erdkinder*' (earth children) for the twelve to eighteen years age group, '*die Wuestenkinder*' (desert children) for the eighteen to twenty year olds, and '*die Universumkinder*' (universe children) for the twenty-year to twenty-four years cohort (1998:10). There may have been some rationale in using German to imply a scientific nomenclature behind the terms (since German was the designated language of science), as a means to give further credence to the notion of a scientific education.

### **Adolescent Learning on the Farm**

Montessori's notion of the farm-school was to provide a protective cocoon for the 'social newborn' away from the influences of family life (Montessori, 1936/2001:175). This would potentiate the young adolescent's development as an integral contributing member of a 'little community' in the transformation to adult independence.

For Montessori, "the supreme reality of social life" was to be found in economic exchange (1936/2001: 186). This theory underpins her assertion that real productive work for wages would initiate the young adolescent into the social realities of independent adult life. The introduction of economic exchange in the early years of adolescent development presented further opportunities for heightened awareness of

social justice and personal morality. Montessori called this “social education”, regarding it as the basis of the developing independence of the young adult and the educational groundwork for international peace (1948/1994: 64).

In Montessori’s time, such economic exchange could readily be realised in a rural community. Montessori’s ideal was that young adolescents could be educated in a farm environment, in which the small community and the rural lifestyle would be conducive to a healthy and productive life. Additionally the students’ practical applications on the farm would lead to intellectual curiosity, a means of engaging their interest, as well as serving as a means of producing goods for financial benefit.

She further suggested that the students organise and maintain their own accommodation on the farm, in addition to running a small private hostel at which parents might visit. A shop, in which to sell food and craft produced on the farm also formed a part of this vision.

Her idea was to broaden the concept of education, so that young adolescents discovered a sense of their own value as versatile and respected members of society, who grasped their responsibilities and contributions as individuals within the larger group (1948/1994: 65).

Montessori specified in the remaining pages, the obligations of staff towards their adolescent charges and the general curricular requirements of such an education to produce capable and responsible members of society.

The “insecurity of the times”, and the necessity of individuals to be adaptable, especially with regard to advances in technology and science, are recurring topics. Montessori was developing these ideas through two world wars, which may have given rise to many of her notions about the necessity for versatility and adaptability, as well as her emphasis on peace studies. As she explained:

For in our times science has created a new world in which the whole of humanity is joined together by a universal scientific culture...Therefore a new morality, individual and social, must be our chief consideration in this new world...and the responsibility the individuals incur when they assume powers so much greater than those with which they are naturally endowed (1948/1994:78).

Many of these ideas were first publicised in a lecture delivered by Montessori in 1920, at the University of Amsterdam. Indeed, these ideas had hardly changed at all by the time they were published as an appendix in her 1948 edition of *From Childhood to Adolescence*. Within the pages devoted to *erdkinder* plans, Montessori referenced the American practice of ‘self-help’, in which impoverished students, under the auspices of their educational institution, were able to work in return for their tuition. For Europeans, such an idea was most unusual. Montessori exemplified those students who resorted to ‘self-help’ as generally the most successful scholars. In her view, they benefitted additionally because they understood at a personal level, the moral value of time and effort, and were developing further independence from family, while becoming more socially responsible.

Montessori travelled widely in many cities when she visited the USA on two occasions. She noted in the *Erdkinder* appendix, that some of the universities in the USA and in Britain that were once isolated institutions of (secondary) study with boarding facilities had grown into university towns, as an indication of their popularity. Thus it is interesting to note that the idea of sending adolescents to board at farm-schools in the country is generally culturally unacceptable in the USA, in contrast to Europe, and Britain. Indeed although American parents and educators welcomed Montessori’s innovative approach to the education of children, it was not a wholly successful transition until an American visionary by the name of Nancy Rambusch took up the challenge in the early 1960s.

## **Montessori in the USA**

(For a Timeline of Montessori in the USA, see Appendix A)

### **Initial Enthusiasm**

Montessori’s initial visits to the USA were remarkable for the enthusiastic welcome she received, and the national acclaim for her lectures concerning the rights and education of the child. With the onset of World War I however, Montessori’s standing in the USA was revoked, due primarily to the denunciation of her learning principles

by academic progressives. It was not until the 1960s that Montessori's educational ideas were revived, with school numbers rapidly increasing through to the present day. This pattern of acceptance, rejection, and renewed affirmation of Montessori education is found in numerous other countries, such as the UK, Australia, New Zealand, and several countries in Western Europe.

By the time Montessori entered the education debate in the USA at the turn of the century, demands for education reform had become increasingly urgent as a result of the social changes caused by industrialisation, increasing urbanisation, and immigration (Shortridge, 2007).

At this time, John Dewey and his protégé William Heard Kilpatrick headed the progressive contingent at Teachers College, Columbia University, which was considered the centre of educational thought in America (Gutek, 1986). Their philosophies shared some commonalities with Montessori's, and they initially agreed with her. Their ideas promoted theories of social learning, education as the central vehicle for social reform, the child-centred classroom with child-initiated purposeful activities and experiential group projects as the means to character development and social change (Shortridge, 2007).

Improvements in print production and distribution helped to proliferate the reputation of Montessori among teachers, parents and educationalists. There were 187 English language publications reporting on Montessori education in the years 1912-1914, and almost all of these were published in the USA (Whitescarver & Cossentino, 2008: 2576). Further, in 1912, the Harvard University publication of *The Montessori Method* became the second largest-selling nonfiction book in the USA (Chattin-McNichols, 1981) with the first edition of five thousand copies selling out in four days (Kramer, 1976). In the introduction to *The Montessori Method*, by the Professor of Education at Harvard, Henry W. Holmes, American schools were urged to apply the Montessori approach, although with the caveat that "the system ultimately adopted in our schools will combine elements of the Montessori program with elements of the kindergarten program, both 'liberal' and 'conservative'" (cited in Whitescarver and Cossentino, 2008: 2578).

The first American Montessori school had already opened in 1911, in Tarrytown, New York, followed soon after by another in Boston (Kramer, 1976: 155). By 1912, the Teachers College progressives at Columbia University were disquieted by the popularity and attention that surrounded Montessori's education reform ideas. Fearing that her model of education might overshadow theirs, they sent a team, including Kilpatrick, to Rome, to investigate and report on the reality of the Montessori Method (Chattin-McNicols 1981).

In Rome, in 1913, Americans outnumbered all other nationalities in the first international training course for teachers offered by Maria Montessori (Whitescarver & Cossentino, 2008: 2577). Montessori's name was celebrated in USA educational circles by the time of her initial visit to New York in December of the same year. John Dewey, president of the National Kindergarten Association introduced her to a capacity audience at Carnegie Hall, New York (Kramer, 1976). She stayed for three weeks, travelling, lecturing, giving interviews, and meeting with prominent supporters in the major cities across the country. All of the leading newspapers reported on the visit in glowing terms (Kramer 1976).

Additionally, the celebrity status of American supporters of Montessori, such as Alexander Graham Bell and Mabel Hubbard Bell, S.S. McClure of *McClure's Magazine*, Margaret Woodrow Wilson (daughter of the U.S. President) and the U.S. Commissioner of Education, Philander P. Claxton, added to Montessori's stature as an innovator in educational circles. It was these latter personalities who created the Montessori Education Association in 1913 (Shortridge, 2007).

### **Cultural and Academic Conflict**

In 1914 Dewey and Kilpatrick publicly opposed Montessori's philosophies, objecting to specific aspects of Montessori's Method including the prescribed methods of using the sensorial materials, which seemed to them, to contradict the notion of the child's freedom, and impede the natural imaginative processes. Other objections included Montessori's concentration on early development of the senses, which they argued was psychologically outdated. In addition Montessori's 'premature' emphasis on intellectual development, as well as a perceived lack of social stimulus in the

education of children, were also decried as educationally unsound (Enright, 2011; Shortridge, 2007).

Although he regarded much as creditable in the Montessori Method, particularly in the concept of the freedom of the child, Kilpatrick wrote a book-length critique, published in 1914, titled, *The Montessori System Examined*. His scathing dismissal of Montessori's educational approach as based on long outdated psychological theory, concluded that she contributed little to educational theory:

The question of a permanent contribution turns on whether there have been presented original points of view capable of guiding fruitfully educational procedure...Her greatest service lies probably in the emphasis on the scientific conception of education, and in the practical utilization of liberty (Kilpatrick, 1914: 66 -67).

In fact, he did not assess the Method *as a whole*, but in terms of discrete elements. He derided Montessori's concepts and practices in his keynote address at the 1913 meeting of the International Kindergarten Union, as duplications of Rousseau, Pestalozzi and Froebel (Kramer, 1976), and concluded with the statement, "Montessori has then, the spirit, but not the content of modern science" (Shortridge, 2007: 45).

Kilpatrick made his considerable reputation on the basis of his denouncement of Montessori, publishing his book and numerous articles, and making speeches across the USA until the Montessori movement was demolished, and even the financial backing of her most ardent and famous supporters was withdrawn (Kramer, 1976).

Between that first visit to the USA, in 1913, and the second, in 1915, the destruction of Montessori's reputation as an educational innovator was complete. As Whitescarver and Cossentino (2008: 2577) described this period, "By the time of American entry into World War I in 1916, the American Montessori...movement was a nonentity in American education."

There were many and varied factors in the enthusiastic introduction and rapid rejection of Montessori's educational system in the USA, in the early decades of the twentieth century. Factors that led to wholehearted enthusiasm for the Montessori

method, included several of the educational ideals of the Progressive Education Movement (Gutek, 1986). These included greater focus on the child's learning interests, character development, free movement, and the rights of the child. Elements relating to Montessori's rejection included clashes over specific education innovations with educational progressives, and conflicting cultural attitudes (Kramer, 1976).

Montessori's compelling personality and her gender also contributed to her initial popularity, and to her rejection (Burstyn, 1979). These attributes, as scientist and feminist, were enough to discredit Montessori's scientific credentials; the former was popularly considered impossible, while the latter cast her as an emotional and irrational trouble-maker. The scientific characteristics of rationality and objectivity were at that time regarded as the exclusive preserve of men (Babini, 2000).

Educationalists such as Dewey and Piaget, by contrast, were acknowledged as logical thinkers and pedagogues (Whitescarver and Cossentino, 2008: 2580). The point is that Montessori's method was legitimated as scientific or otherwise according to the dominant socio-cultural determinants of the time as to what could be regarded as "scientific education."

Montessori's definition of her method as the application of science to educational theory and practice, at a time when many other educationalists were also urging a scientific approach to education in order to meet the needs of industrial society, was a contributing factor in both the enthusiastic acceptance and subsequent rejection of her ideas. As Whitescarver and Cossentino (2008: 2580) assert, "Montessori has never been considered a scientist by anyone other than her followers." This was partly because, having separated herself from the scientific/academic community, she had no base for publication of her work, nor an academy for support. Her insistence on a direct, evangelistic mode for dissemination of her educational method was also a factor. In her particular *modus operandi* in which she established herself as a type of self-referential authority, Maria Montessori simultaneously made herself vulnerable to the powerful organisation of epistemic authority invested in the academy (Gieryn, 1983). Prominent educationalists of the time publicising theories about a science of education were men holding qualifications that continued to be barred to the vast majority of women, in science, medicine, philosophy, and education (Burstyn, 1979; Babini 2000; Povell, 2007). Her predominantly male detractors ignored her unusual

achievements in these fields. For example, she was referred to as ‘Madame Montessori’ by her American arch-critic, William Heard Kilpatrick, when the rest of the world knew her as a qualified doctor (Cunningham, in Hilton & Hirsch, 2000).

Montessori’s motivation for social reform, beginning with her first school in the slums of San Lorenzo, was not upheld by the private elitist Montessori schools that were established in America for the children of the professional and privileged classes. Although educational reform determined the rationale for such schools, the ideal of *social* reform was not part of that agenda (Whitescarver & Cossentino, 2008). In fact, the rationale was to encourage the maintenance of the status quo, rather than to offer educational opportunities for all children to achieve their highest potential.

The tendency to convert educational practice to conform to the dominant cultural concepts of knowledge, human development, and socialisation, in the USA, ensured that Montessori and the American academy came to conflict. Montessori’s insistence on the application of the Montessori method in its original unaltered entirety, together with the American desire to assimilate the method into existing educational frameworks, and thus to capture the market, became a battleground of contested territory and epistemic authority (Gieryn, 1983).

In addition, there were American backers and philanthropists with expectations of prestige, maintenance of popular approval, economic and political agendas—the territorial currency of stakeholders, who sought their own rewards from the altercation. Essentially, it was Montessori’s insistence on monopolising the integrity of her method that created tension between herself and her USA supporters, since they felt that the method would only find widespread diffusion through *adaptation* to American educational frameworks already in place (Kramer, 1976; Whitescarver & Cossentino, 2008).

Finally, there were geographic, cultural, and linguistic barriers. In the context of a global climate that was on the edge of World War I, these exacerbated the conflict between Montessori and her opposition in the USA. In hindsight, it would have been an incredible feat had Montessori’s educational reforms been accepted and endured in the USA during that era.

## **Renaissance of Montessori in the USA**

In 1958, the reintroduction of Montessori education in the USA initiated a different version of conflict; one that has continued with varying degrees of intensity ever since, and profoundly influenced the history of the Montessori movement in the United States. Much of this friction involved disagreements over intellectual property rights by two rival Montessori associations attempting to establish territorial rights in education while simultaneously attempting to colonise educational territory in the traditional educational domain (Whitescarver & Cossentino, 2008; Povell, 2010). Questions arose about the right to appropriate educational methodology, and the ethics of such, and also whether the attempt to monopolise an educational method precluded the right of a different group to enhance or extend such a system to accord with a different cultural milieu (Povell, 2010).

Nancy Rambusch, a young, energetic, and charismatic woman, assumed the task of reinstating Montessori education in the USA. In 1953, she attended the Tenth International Montessori Congress in Paris, where she met with Maria Montessori's son, Mario Montessori, the new head of the Association Montessori Internationale (AMI). Maria and Mario Montessori had established the AMI in the Netherlands in 1929, as the central organisation safeguarding and monitoring the integrity of the Montessori method. Since the Montessori method was never patented or copyrighted, the AMI presided over Montessori materials, teacher training, establishment of schools and national Montessori associations; anything that mentioned the name 'Montessori'. This appeared to be a practical form of endeavouring to apply a trademark on the Montessori educational principles, which, in reality had no legal substance.

One of the unintentional outcomes of this attempt to secure power in knowledge, according to Cunningham, (2000), was the alienation of potential public and academic interest in the 'Montessori method', because of the impression of commercial investment that accompanied such activity. Certainly it stood in opposition to Montessori's dream of "a Montessori education for every child" because it ensured that training and materials remained exclusive. It has been suggested by Burstyn (1979) and Kramer (1976) that the motivation was to trademark the name for its associated financial rewards, because Montessori had no other source of income since

abnegating her academic position. Additionally, the plan to reference intellectual rights, ensuring that Montessori's system remained uncompromised by additions and alterations, was clearly intended (Kramer, 1976). Whatever the rationale, it was clearly controversial, particularly in an area in which political and ethical questions might be asked about the right to own and distribute knowledge about an educational method promoted as "the means to social reform."

After Montessori training in London, which she described as "uninspired and devoid of academic rigor" (Rambusch, 1977:15), Rambusch opened the Whitby school in 1958, with other families in Greenwich, Connecticut. That same year, the American Montessori Society (AMS) was established, with Rambusch at its head. It was not until some years later (1972/1979: see below) that the AMI (USA) branch was established. Until then, Rambusch remained as Mario Montessori's chosen representative of the AMI in America.

As head of the AMS in its initial years, Rambusch promoted Montessori education as "a social movement", with as its goal, "the creation of a viable American Montessori experience for as many children as possible" (Rambusch, 1977:8). (The Whitby school, started by Rambusch in 1958 was, however, a private school under the jurisdiction of the Catholic diocese of Connecticut, continuing in the tradition of Montessori implementations in the USA). Rambusch appealed particularly to educated Catholic middle class mothers in the aftermath of the Second World War. A devout Catholic, she also determined the necessity for modernisation of the Montessori movement, referencing the updating of the liturgy and practices of the Catholic Church by the Second Vatican Council together with the call for an educated elite in the "perfecting" of America by the new liberal Catholic President, John F. Kennedy (Whitescarver & Cossentino, 2008).

Rambusch, as an educated and radical thinker, was convinced that unless Montessori training was rigorously scientific, according to the tenets of the time, the approval she sought from the academic establishment would not be forthcoming. She insisted that "American Montessori" was distinguishable from "Montessori in America" (Rambusch, 1977:8). According to Whitescarver and Cossentino's research, Rambusch spearheaded a deliberate attempt to propel the Montessori movement into

an era of educational and scientific modernity, in order to associate Montessori training with intellectual and academic excellence.

Whitescarver and Cossentino, (2008: 2587) claim that there had been persistent innuendo of “mysticism and the cult of Montessori”, since Montessori’s first visit to America. Rambusch sought to undermine such accusations, by ensuring that Montessori training conformed to American standards of academic, social, and cultural expectations, rather than the “masterclass initiation” of transmission that remains the preferred training method of the AMI.

It was in the area of teacher training that the cultural conflict between Mario Montessori and Rambusch came to a crisis (Povell, 2010; Whitescarver & Cossentino, 2008). Rambusch declared that teacher training would serve as a primary means of firmly establishing Montessori in the realm of progressive education in the USA, but that this would necessitate conforming to American professional teaching standards. In contrast to Mario’s notion of transplanting a “pure” (European) version of Montessori education in the States, Rambusch asserted the necessity for “transmutation” of the method (Appelbaum, 1999).

Rambusch declared as early as 1963:

There is a good reason to believe that the American Montessori movement will be destroyed as intellectually and pedagogically substantive [sic] if it is representative of the fossilized outlook of those Europeans whose fidelity to Dr. Montessori’s memory is as unquestioned as is their innocence of the complexity of American culture (1963: 1).

By 1963 the antagonism between purist and pragmatic approaches resulted in Mario’s severance of all support and recognition of the AMS (Kramer, 1976; Povell, 2010). In fact, Whitescarver and Cossentino, (2008) point out that it was the culmination of a long battle between the European-based AMI and the American Montessori Society over cultural, ideological and political issues. Indeed, the attempt of the AMI to appropriate power in monopoly ownership, and in addition, to police the territory of progressive educational methodology, is echoed in contemporary struggles over the right to allocate the name and description of “Montessori” to educational institutions.

The AMI continued to maintain its presence and influence in the USA, under new representatives, while the AMS also continued its training courses and attempts to disseminate and popularise the Montessori method. Rambusch's approach to Montessori teacher training was to attempt to incorporate the 'Montessori Method' into university teacher preparation courses, while the AMI continued the more traditionally European "master class" approach. In fact, the most fiercely contested territory amounted to debate over the kind of education that would find approval as authoritative and authentic in the American cultural socio-political arena.

The continuing animosity between the AMS and the AMI within the USA was intensified as they both struggled to legitimate territorial and epistemic authority within the bounds of the Montessori empire and the broader educational domains. For example, according to the AMS-based account of Whitescarver and Cossentino (2008: 2589), the AMI-USA was established in 1979. The AMI-USA website however, lists the date of establishment of the USA branch of the AMI as 1972, in a classic case of contested authority. The ongoing fracture has continued to compromise and even diminish the credibility of Montessori education, ensuring its ongoing marginalisation and segregation from mainstream education (Vaughn, 1999; Whitescarver & Cossentino, 2008)

Despite superficial attempts at concordance between the AMI and the AMS (the presidents of each association were present at the Montessori centenary of both their own and the opposing association's celebrations), the conflict between the two is still vigorously contested. Indeed, Whitescarver and Cossentino (2008:2590) attest that all Montessori adherents support the convergence of "respect and unity within the Montessori movement worldwide", whilst simultaneously averring that "even with its current popularity, Montessori education worldwide continues to be viewed as a marginal movement with minimal significance for those interested in contemporary school reform" (2008:2572). Further to this, they point out that, "Most Americans today remain uninformed about Montessori education, and...the Montessori movement retains distinctive cultural practices which ensure its marginality" (2008:2589).

## **Late Twentieth Century Developments**

Montessori public programs began to proliferate around the mid-1990s, soon after the sanctioning of charter schools<sup>14</sup> as a viable approach to education reform.

Whitescarver and Cossentino (2008: 2590) state that the majority of the 240 public Montessori programs they canvassed were associated with neither the AMI nor the AMS. This may be so because they could not garner accreditation from either association, according to the official sets of standards of each. The AMI requires AMI-approved training and materials as the fundamental authority for AMI accreditation, which would be problematic in public Montessori programs, even those abiding by a charter, since they are obliged to conform to State standards of education. The AMS accreditation stipulates conformity to “a twenty-six page document of guidelines covering all aspects of school life – from personnel to facilities” (Whitescarver & Cossentino, 2008: 2588). This would also create difficulties for a public/charter Montessori program for similar reasons, with the necessity to answer to State standards, first and foremost.

While lip-service is given by both AMS and AMI to prioritising unity and mutual respect, the fact is that the American Montessori movement has further fractured, to the extent that Montessori schools and teacher-training may currently be affiliated with any of at least six different Montessori associations in the USA (Whitescarver & Cossentino, 2008: 2592). As such, there is no one unified body that regulates Montessori curriculum or practice in any school that designates itself as ‘Montessori’.

Therefore, when Mario Montessori Jnr. suggested pedagogy of place as a means to meeting the increasingly popular demands for Montessori middle school education, many changes had already been implemented and accepted by practitioners who were committed to a Montessori education that complied with the relevant cultural and

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<sup>14</sup> A charter school is an independently run public school granted greater flexibility in its operations, in return for detailed accountability for performance. The "charter" establishing each school is a performance contract detailing the school's mission, program, students served, performance goals, and methods of assessment.

geographical context of the place in question. According to Ludick, (2001), the term ‘pedagogy of place’ was derived from the environmentalists, David Orr and David Hutchison. Orr’s work, *Ecological Literacy* (1992), bore close similarities to much that was characteristic of Montessori adolescent education:

Places are laboratories of diversity and complexity, mixing social functions and natural processes. A place has a human history and a geologic past: it is part of an ecosystem...Its inhabitants are part of a social, economic and political order: ...they are linked by innumerable bonds to other places. A place cannot be understood by from the vantage point of a single discipline or specialization. It can be understood only on its terms as a complex mosaic of phenomena and problems...The study of place... enables us to widen the focus to examine the interrelationships between disciplines and to lengthen our perception of time (1992:129).

This passage bears commonalities with Montessori’s ideas of the *place* of the classroom as a scientific laboratory for the study of diversity and complexity in human learning and behaviour:

The school constitutes an immense field for research; it is a ‘pedagogical clinic’ which, in view of its importance, can be compared to no other gathering of subjects for its study...The possibility of observing the developments of the psychical life of the child as natural phenomena and experimental reactions, transforms the school itself in action into a kind of scientific laboratory for the psycho-genetic study of man (1913: 47).

### ***Erdkinder* to ‘Urbkinder’**

Montessori’s focus on the increasing scope of the child’s world can also be seen in place-based terms, beginning within the home, and then at school, in the neighbourhood, community, the local region, and further. In this way the acquisition of increasing familiarity with successive places entails a gradual transformation encompassing developing personal independence, towards a broader and deeper connection to the world and its people. When children learn to appreciate the places in which they are situated, through profound knowledge and experience of those places, then the impetus to preservation, to change, and to reflection on their relation to other places is inspired (Sobel, 1996). This appears to be an element in the decision

to adopt pedagogy of place principles into the practice of Montessori adolescent implementations.

The significance of *place* has become one of the keystones to framing the concepts of Montessori adolescent education in relation to twenty-first century life (La Rue, 2010). It is this understanding that is responsible for the elaboration of the principles of Montessori adolescent education and the idea that these could be realised in any environment whether rural, suburban or indeed, urban. Given that pedagogy of place, or place-based education, currently has some credence in Montessori circles as an alternative to farm-schooling (Coe, 2003, 2007; Sutton, 2007; McKenzie, 2007), it is instructive to consider Montessori's intentions with respect to the significance of the educational environment.

### **Environmental Considerations in Montessori Education**

Montessori indicated clearly that she considered environment as paramount in the self-development of the child:

The immense influence that education can exert through children has the environment for its instrument, for the child absorbs his environment, takes everything from it, and incarnates it in himself (1949/1988: 61).

Montessori's concept of education is that children develop themselves by interacting with their environment, by following human tendencies (basic needs) and by adapting themselves to their environment, and reciprocally, their environment to their own needs. The task of the adult 'guide' then, is to prepare an appropriate environment to meet the needs of the particular developmental age-group, in order that children's self-construction is activated (Povell, 2009).

In 'traditional' non-Montessori modes of education, curriculum and subject matter are generally considered the Principal considerations in education. Montessori adolescent education, on the other hand, requires a developmentally appropriate environment that offers opportunities for engagement in the bid to initiate self-learning. Montessori considered that

the farm-school would present an environment to which adolescents would respond, with the ability to exercise personal independence, responsibility and co-operation as a community, alongside the help of adults, in order to “take an active part in society’s productive labours or in the regulation of its organisation” (Montessori, 1936/2001: 180).

### **Community as Integral to the Adolescent Learning Environment**

The notion of community is integral to the development of the personality that Montessori considered characteristic of the adolescent years. For Montessori, social relationships are the means to personality development. What Montessori meant by social life is production and exchange, that is, work, because as she says, these elements form the essence of existence, one’s useful contribution to society.

Social life is not sitting in a room together, or living in a city. The essence is that something is produced which is useful to the whole of society, and is changed for something else” (1936/2001: 180).

This is echoed by Mewburn (2015), director of research training at the Australian National University in her recent academic blog explaining that constructing a community based on academic endeavour is more than simply a matter of shared proximity:

Community is not just about being in the same place or having the same events to go to – it’s about that ‘feeling of fellowship’ that comes with sharing common interests and goals. The quickest way to achieve a sense of belong[ing], aside from religion ...is shared work.

This idea is also closely related to Lave and Wenger’s (1991) “community of practice” concept, which they defined as a group sharing a common interest, with the goal of building knowledge to develop themselves personally and professionally through sharing information and practice. Indeed, Montessori’s notion of *erdkinder* could readily be translated as a community of practice.

Mario Montessori Jr. (1992/2008:6) summarised the concept of ‘community’ thus:

. . . human development is the result of an unconscious creative activity of the individual, and that process is possible only in association with others. It is only in the community that man's potentialities can be realized.

Montessori elaborated on the idea of production and exchange as the basis of social life, with the explanation that work is the key to life, in the exchange of labour and goods for economic independence.

Real earnest work and the exchange of its products constitute the mechanism or working of social life, because the aggregate of human society is based on the division of labour. Labour is requisite to carry on the production essential to the existence of mankind (Montessori, 193/2001: 182).

Thus far, Montessori has specified the characteristic developmental necessities for the education of the "social embryo", by which she means the adolescent on the brink of the transformational passage to adult human society. Her subsequent theme concerns the appropriate environment for adolescent developmental growth: the farm.

### **Erdkinder: Twentieth Century Interpretations**

It has become apparent as we have traced the history of Montessori's educational principles, that her ideas evolved and changed through experimentation and application. As a currently influential leader in Montessori adolescent education, Coe (2013: 50) pointed out, "We are here to continue Dr. Montessori's work, not just repeat it." The significance of the historical continuum lies in the recognition of the fact that Montessori education adapted to time and culture through the years, because education is an integral part of culture. The adaptation of the farm-school model therefore, was inevitable despite some conservative perceptions that Montessori's educational model would endure unchanged.

### **The Significance of Land versus the Urban Compromise**

Life in the open air, in the sunshine, and a diet high in nutritional content coming from the produce of neighbouring fields improve the physical health, while the calm surroundings, the silence, the wonders of nature satisfy the need of the adolescent mind for reflection and meditation...The observation of nature has not only a side that is philosophical and scientific,

it has also a side of social experiences that leads on to the observations of *civilization* and the *life of men* (1948/1994: 67-68).

Montessori's lyrical description above is indicative of a romantic idealism with respect to rural life that is not always experienced in the reality of subsistence farming. Indeed, very few of those who have defended Montessori's concept of the ideal prepared environment for the adolescent have endured the trials and the harsh realities of life on the land.

Grazzini (at that time an AMI teacher-trainer, a member of the AMI board of directors, and an examiner for AMI) is representative of the arguments of those opposed to any revision of the idea of Montessori farm-schooling as the ideal adolescent learning environment. Through an examination of the arguments he promoted for the retention of the farm-based *erdkinder*, in contrast with views of the role of place-based pedagogy in Montessori adolescent education, a sense of the whole picture in more recent times is made possible. For example, Grazzini and Krumins-Grazzini insisted:

The one element that is absolutely fundamental and irreplaceable, that we absolutely cannot renounce as far as the adolescents are concerned, is therefore the *erde*: the earth as the soil that we can take in our hands; the earth as the land which we can till and cultivate in order to make it bear fruit; the earth as the countryside where we can live in conditions that are healthy for both body and spirit (1996:13)

Grazzini and Krumins-Grazzini (1996:13) elaborated further that *erde* did not imply regular visits or occasional trips, short stays or 'odysseys'<sup>15</sup>. Rather, he stated very firmly that Montessori intended the farm as the prepared environment "where the adolescents live their lives" and that all the various work environments specified by Montessori are located within this very specific environment. He emphatically pointed out that it is these work environments that produce "the *erdkinder* community

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<sup>15</sup> An Odyssey is generally a trip away, in the company of classmates and guides, in which physical and psychological challenges help students to discover more about themselves, and help them learn to bond more closely as a community.

which Montessori calls ‘a school of experience in the elements of social life’” (Grazzini & Krumins-Grazzini, 1996:13).

Grazzini and Krumins-Grazzini’s next point is puzzling in the light of his former contention. It is, however, an essential element in unravelling the logic of the argument:

The value and the significance of the *erdkinder* does not reside in the countryside as such (otherwise any school in the country would do) but in working the land, where this is understood as an introduction to both nature and civilization. Or, better still, in the value of work in general, “with its wide social connotations of productiveness and earning power” (1996:13).

This passage implies that gardening work in *any* location would be sufficient to meet the needs of adolescent development in terms of work, production, and exchange values. Montessori made a similar point: “For it is not the country itself that is so valuable, but work in the country, and work generally...(1948/1994: 68). These statements suggest that Mario Montessori Jnr. was not mistaken in his alternate proposal of pedagogy of place, allowing for Montessori adolescent education to be conducted in locations other than the farm. There is an implication in both Grazzini and Krumins-Grazzini’s, and Montessori’s words, that the crucial point is *labour*, and not necessarily work on the land at all, but work that produces some thing useful for society.

Nevertheless, Grazzini and Krumins-Grazzini opposed the very idea of the “urban compromise” plan, however, noting that the contradiction of *erdkinder* minus the *erde* component was simply nonsensical. Further to this, they questioned how such a compromise can be distinguished from the *urban compromise* of the Montessori Lyceum in Holland:

...it has nothing to do with Maria Montessori’s vision, intentions or hopes...and it would have been better simply to identify it...without any reference to Montessori and without any sort of Montessori justification (1996:13).

As previously stated, Montessori did not ever establish a farm school, and when asked to advise on the establishment and direction of “Montessori Lycea” in Holland, in 1930-31, Maria Montessori counselled:

Don’t call it Montessori. If it works along Montessori lines, good. But there is no Montessori method for the secondary stage yet. That continuation of the method can only come from the children, and not from me (Joosten, 1976).

Yet, in one of her final publications, *The Formation of Man*, Montessori stated:

In Holland there are five Montessori Lycea, the results of which have been so satisfactory that the Dutch Government has not only granted them subsidies, but has given them the same recognition and independence as the other recognized Lycea (1955: 4).

None of the Lycea Montessori mentioned in the previous passage were farm-schools. Despite this, Montessori mentions them with an air of approval, and more significantly, the descriptor, ‘Montessori’.

It is instructive that the “prepared environment” for the pre-primary, primary and elementary children came to be known as the Casa dei Bambini (The Children’s House/Home). This environment originated from a *coincidental* occurrence, in which Montessori’s first experimental education for ‘normal’ children was located in tenement housing in San Lorenzo, at the request of the director general of the building. His idea was that the children of the residents could be educated in a ground floor apartment of the tenements, while their parents were at work in the nearby factories (O’Donnell, 2013). The experiment was immensely successful, with the establishment thereafter, of the ideal prepared environment for the education of pre-adolescent children.

Since Montessori did not ever establish a farm-school, she was never able to test the hypothesis for this prepared environment as the ideal for adolescent development. Therefore, it could be suggested that ‘the urban compromise’ was not only practical, but, at least as satisfactory as the five Dutch Montessori Lycea were found to be, above.

Grazzini and Krumins-Grazzini’s description (1996: 13-14) of the *erdkinder* community is significant:

What is particularly new and revolutionary about Montessori's reform for the education of adolescents is the idea of a more or less self-regulating community which is located in the country, that undertakes various kinds of enterprises; enterprises that provide the adolescents with varied experiences of adult or "productive" work, and which offers an opportunity to develop practical abilities in organization, management and administration.

Apart from the phrase, "in the country", it is not difficult to imagine such a scenario as a possibility in any location; even perhaps, a Dutch Lyceum.

### **Teaching in the Montessori Adolescent Environment**

Montessori's plan for the farm-school was that it would be maintained by the adolescents themselves, with the guidance of adult staff for security and responsible administration. "Young visiting teachers, men and women", who were properly qualified as secondary school teachers would provide lessons. The expectation was that "they must agree to adopt special methods and cooperate in the experiment" (1948/1994: 79-80). Montessori rationalised her idea that young teachers would be open-minded teachers.

Grazzini and Krumins-Grazzini addressed the issue of training of personnel for the *erdkinder*, with absolute certainty: "In the light of what Montessori herself writes, the problem of training Montessori teachers for working in the *erdkinder* does not exist" (1996:16). He clarified further:

What is required of them, instead, is a high level of specialised qualifications and knowledge, combined with a sympathy for Montessori principles and an unconditional acceptance of their application in the program and work (1996:16).

Grazzini and Krumins-Grazzini further specified that "...the most that would be required [of teachers] is a brief orientation course for those who have no knowledge whatsoever of Montessori..." and that administrative and co-ordinating roles would be reserved for "[trained] Montessorians" (1996:16).

Montessori teacher training was one of the main issues that prompted the institution of the AMS as a separate organisation from the AMI, as Rambusch led the fledgling American Montessori movement into the modern era in the early 1960s. With

‘transmutation’ of the traditional Montessori educational approach as the means to adaptation to American standards of professionalism, Rambusch insisted that teacher training should be institutionalised through teachers’ colleges (Rambusch, 1963). She asserted that the success of Montessori education in the USA was dependent upon, in the first instance, directing the training of teachers away from the European style of “mystical initiation” and towards “professional formation” of appropriately qualified teachers (Rambusch, 1977).

### **Curricular Concerns**

Grazzini’s (1996) opinions are still held in high regard by conservative Montessori practitioners (AMI *Communications*, 2004). Therefore, his pronouncements on one of his ‘specialties’, namely, the Montessori adolescent curriculum (Kahn, 2004), are influential as representative of the AMI-legitimated (and thus, ‘authentic’ Montessori education) approach. It is perplexing then, to find that his opinions are not always in agreement with Montessori’s ideals, but at times embrace the objectives of contemporary bureaucratic influences, which is precisely what Montessori reviled in her radical reforms to education.

Grazzini and Krumins-Grazzini’s (1996) homage to state educational requirements and national standards is inexplicable in the domain of the private school that is presumably a characteristic of Montessori farm schools. Private schools in the USA are not required to conform to state standards<sup>16</sup>, although many Montessori teachers refer to the state curricular models as a guideline. Since there are few Montessori farm-schools in comparison to urban- and suburban-based adolescent implementations, it is surprising that Grazzini and Krumins-Grazzini made any such pronouncements with respect to *erdkinder*. Opinions within Montessori practitioner groups about the importance of state requirements, high-stakes testing and

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<sup>16</sup> U.S. Department of Education: State Regulation of Private Schools Document, 2009. Retrieved from <https://www2.ed.gov/admins/comm/choice/regprivschl/regprivschl.pdf>

standardised approaches, is acutely polarised, particularly because Montessori education can be found in public, private, charter, and magnet school<sup>17</sup> configurations.

The curricular section of Montessori's *erdkinder* plans begins with the note that "Study need not be restricted by the curricula of existing secondary schools and still less do we need to make use of their methods..." (1948/1994:71). The remaining syllabus is described in four pages, outlining creative (self-expressive) arts, moral education, mathematics and languages, and then earth studies, and the study of human progress in the sciences, and the history of mankind.

Grazzini and Krumins-Grazzini's (1996:17) idea is that:

Research into the national or state requirements concerning the academic curriculum should focus, above all else, on the targets that are set for each subject area: the knowledge and the skills to be reached by the end of the first three-year-cycle of adolescence.

It is curious that despite Montessori's intention to revolutionise secondary schooling, Grazzini and Krumins-Grazzini's recommendation is that state and national standards are of interest, particularly in the light of his insistence on adherence to the farm-school setting.

A further puzzle lies in Grazzini and Krumins-Grazzini's additional information, cited from the Clio Montessori edition of *From Childhood to Adolescence* (1948/1994),

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<sup>17</sup> Magnet schools are free public elementary and secondary schools of choice that are operated by school districts or a consortium of districts. The Montessori educational approach is a popular focus for magnet schooling. Magnet schools are typically more "hands on – minds on" and use an approach to learning that is inquiry or performance/project based. They use state, district, or Common Core standards in all subject areas, however, they are taught within the overall theme of the school. Diversity is an important element of a magnet school. Since student interest in a theme is the only eligibility criteria to attend a magnet school, students from a wide array of backgrounds attend magnet schools (<http://www.magnet.edu/about/what-are-magnet-schools>).

Montessori writes, “A schema written in large letters, posted in an obvious position, clearly indicating the degree of study demanded by the laws governing secondary education, constitutes an excellent stimulus and gives the directives” without imposing obligations (1996:17).

This excerpt is not found in either the identical Clio edition nor the Schocken (1948/1973) editions. Furthermore, it seems extraordinary given the criticisms Montessori made about secondary schools of the era, concerning the waste of adolescent energy directed towards the necessity to “study as a duty or necessity” without care for the individual personality, or the physical care of the adolescent. Montessori continues:

So study becomes a heavy and crushing load that burdens the young life instead of being felt as the privilege of initiation to the knowledge that is the pride of our civilization. The young people are formed into a mould of narrowness, artificiality and egotism. What a wretched life of endless penance, of futile renunciation of their dearest aspirations (1948/1994: 62).

The domain of assessment is a contentious issue in Montessori education circles, particularly in the USA, related as it is to accountability, which is inextricably associated with education policy and practice, with funding decisions, administration, competition and comparisons dependent upon statistical rankings of individual student and school grades (Gruenewald, 2005). Montessori herself was scathing in her censure of the measurement of adolescent work as if it were to be “measured like inanimate matter, not ‘judged’ as a product of life” (1948/1994: 62). She referenced the deep injustice and wretchedness of an education system that transformed the energy and idealism of young individuals into identical replicas of “narrowness, artificiality and egotism” through the dehumanizing system of assigning marks (1948/1994:62).

### **Student Admittance to *Erdkinder***

Montessori’s recommendations with respect to the admittance of students included any adolescent who has attended elementary school, “not only the pupils of special schools”. Here, presumably, Montessori intended that students who had no experience in Montessori education were permitted to enrol in the secondary Montessori school. Montessori (Schocken ed.1948/1973:119-120) points out that:

The school is intended for normal children, but those who are slow or backward, suffering from some psychological maladjustment...[examples included]...may be admitted with the certainty that they will benefit and show real improvement. Their number should, however, constitute a feasible fraction of the whole community.

Grazzini and Krumins-Grazzini's (1996) interpretation of the excerpt above, is rather different:

It would, however, be better if, in the beginning, only those adolescents without problems or handicaps of any kind were accepted for the *erdkinder*. Adopting this policy, just for the initial phase, is important both in relation to the larger community in the locality of the *erdkinder* and in relation to the parents who are interested in this initiative (1996:15).

Grazzini and Krumins-Grazzini's interpretation can hardly be said to be sympathetic to the vision of Montessori, champion of children requiring special education. It is interesting that as representative of, and executive board member of the AMI, he has chosen to interpret Montessori's ideas in a manner that seems contradictory to one of Montessori's prime objectives: the care of children with special educational needs and the provision of an education for *every* child. These examples are yet further indications of the (mis)interpretation of Montessori's work.

### **The Three-Year Cycle**

Montessori discussed the application of three-year age-groupings (cycles) in the plan for the *erdkinder* school, as applied to Montessori primary/elementary education. This encouraged peer-support, peer-tutoring and unrestricted learning, as students were not restrained by the learning levels of their own age-group but were able to work at their own individualised level in every discipline. It also promoted an attitude of community cohesion, an essential principle in Montessori's education as the basis of social reform. As Montessori explained:

This exchange and effective co-operation among the different age groups is enormously important for the mechanism of learning...intellectual development is very difficult among people of the same age, and the

consequence is a type of intellectual competition. To ascertain differences between the children, the adults resort to identifying those who are below and those who are above an artificial average. This does not promote cooperation and mutual support and it is an error (Montessori, 1938: 200-201).

Here, Montessori was discussing three-year mixed age groupings in adolescent education. It is difficult to say what percentage of the Montessori adolescent programs incorporate the three-year cycle at the middle school level in the USA. La Rue's (2010) thesis does not specify the ratio of schools that utilised the three-year cycle in her sample of five Montessori high schools, and currently the only available published data pertaining to this issue is more than 14 years old.

At the time of Grazzini and Krumins-Grazzini's (1998) analysis of Montessori *erdkinder* ideals, there were no existing farm-schools of the type under discussion, so it is of particular interest that they made such firm pronouncements in regard to key aspects of Montessori *erdkinder* plan, in the absence of actual experience.

In summarising Montessori's detailed plans for the *erdkinder*/farm-school, it becomes evident that this was a hypothetical notion that was never actualised during Montessori's lifetime. Although several approximations of Montessori's original *erdkinder* plan have since been realised, changes that conform to more recently legislated limitations, including child-protection issues, food industry standards, and state or national educational accountability give rise to common compromises in the implementation of Montessori's idealistic vision of *erdkinder* education. These compromises are necessary to meet current social and educational legal standards primarily, as opposed to ideals.

### **Adapting and Updating the Montessori Canon**

Given that educational changes in response to social, technological, political, and economic developments through any protracted time period are inevitable, the expectation that Montessori's untested principles of adolescent education would hold firm was unrealistic at best. Montessori was herself, repeatedly adapting, updating and evolving her ideas throughout her life. In addition, Montessori's own approach to

other educators' experimentation with her ideas also changed in response to her circumstances and attitudes.

Initially, Montessori's attitude was to observe, record, and share the results of the experimental studies that were carried out in education according to her principles. In the finale to her first book, *The Montessori Method*, she expressed this ideal as a clear invitation:

It is my hope that, starting from the individual study of the child to be educated with our method, other educators will set forth the results of their experiments. These are the pedagogical books which await us in the future (1909/1964:373).

One of the many reasons however, for the failure of initial attempts to sustain Montessori educational ideals in the USA in the early twentieth century, could be attributed to Montessori's (subsequent) insistence that the control of teacher training, school authorisation, and distribution of didactic materials remained solely within her administration (Graham, 1967).

More recently, some Montessori teachers and trainers have begun to raise queries with respect to the idea of rigid adherence to the Montessori code of unquestioning acquiescence. In 1981, for example, Lakshivi Kripalani, a Montessori teacher trainer remarked in the AMI-based NAMTA (North American Montessori Teachers Association) journal that:

At present the majority of the Montessori teachers that are in the field are coming out of the training centers so rigidly attached to the didactic material and their presentation that the child is lost in the shuffle (p.30).

Interestingly, in his keynote lecture at the European Montessori Congress in 2011, Böhm averred that Montessori's perpetual regret was that her followers never understood that it was not the *method* that was significant, but the spark, the motivation within each individual child. It was the teacher's role to discover that spark, and to guide the child, by observing carefully what the child required. He quoted Montessori's opening speech at the International Montessori Congress in Copenhagen (1937), in which she pointed out,

I have never developed any educational method. Rather it is true, that those who wish to explain my method with authority, have necessarily to go back to the sphere of infantile psychology, because child psychology, has been, or better said, the interior spiritual life of the child, has dictated to me step by step what some like to call an educational or didactic method. If someone really insists on saying that I dispose of an educational method, then I would say that it is only the basis of the *normal child's* psychic development (p.12).

Chisnall (2011:54-55) referenced a Montessori commentator, Joy Turner, (2001) who suggested that “if we ‘concretize’ the Montessori approach it becomes ‘just another pedagogical entity...but if we regard it as a set of ideas, then our legacy becomes a set of guidelines for a dynamic, transformational process of educational expansion.’” In other words, Turner favoured a view of Montessori education that applied the principles rather than simply followed regulations. This is precisely the direction that Mario Montessori Jnr took, in suggesting that the principles of pedagogy of place, or place-based learning, would facilitate the *erdkinder* stage of learning.

Malm (2001:14) drew a similar inference in her discussion of Swedish teachers’ tendencies to distinguish between “right” and “wrong” approaches in Montessori educational practice. She suggested that, “This may result in a reluctance to experiment and subsequently change the existing order of things.” However, as Stigler and Hiebert (2009), and Stager (2013) point out, such experimentation and adaptation is the lifeblood of effective teaching practice (Richardson, 2015). Opposing camps of AMI and AMS policy adherents similarly debate the orthodoxy of various practices in Montessori education, although, as Whitescarver and Cossentino have explained, the separate sets of standards produced by the AMI and the AMS do more to highlight their similarities rather than their differences (2008: 2588).

In fact, refinements in the approach have been instituted since Margaret Homfray and Phoebe Child, students of Montessori, initiated, with Montessori’s approval, a variation in the method of acquisition of literacy for English-speaking children. Montessori’s method, encouraging and guiding Italian children towards literacy, is designed for a language that is phonetic and highly regular, unlike English. Although the English variation, commonly known as the “Pink, Blue and Green system” is not

AMI-approved, it has been found to be as readily successful in English literacy as the original system introduced by Montessori for the development of Italian children's literacy endeavours (O'Donnell, 2013).

Mario Montessori Jnr's decision in 1973 to incorporate a change, with the insertion of pedagogy of place theory to equate with Maria Montessori's *erdkinder*-farm plan for adolescents, was an unprecedented step in AMI history. The resultant continuing, sometimes bitter, debate between adherents and opponents of the suggested change, is a predictable legacy of Montessori's reluctance during her lifetime, to engage any critique of her ideas implied by the necessity for change. Yet, as Kramer indicates:

It is hard to understand how anyone of her intellectual background and sophistication could have failed to see that in all the history of human thought, no idea and no system has not been modified over time as more has been learned and as it has been applied by people with changing needs (1976:223).

As Philip Gang (1989:14), one of the first educators to implement Montessori adolescent education in America, argued:

The Montessori underlying principles are universal truths which can continually inform our thinking, but the methodology and the doctrine need constant updating. I see a current dilemma surrounding Montessori education because nothing has significantly changed since her death. The universal truths are still there but much has been discovered in the human and natural sciences that shed additional light on her work. As knowledge evolves, so must theories and techniques.

Change and evolution were necessary in order to implement some concept of the *erdkinder* plan in the American education system, just as adaptations had been required in the early 1960s with respect to Montessori teacher training with the formation of the American Montessori Society. In the 1970s, with the increasing demand for Montessori schools at the junior secondary level, the changes suggested by Mario Montessori Jnr were being translated into practice. Those changes incorporated the principles of place-based education into the Montessori *erdkinder* model.

## **Pedagogy of Place, or Place-based Education**

### **Definition**

The essential elements of place-based education in which curriculum is based on local cultural studies in the context of the community, with local community needs and interests as the springboard for learning, can be found in the following definition. The similarity to the natural ways in which children learned at home in rural areas in the past, is marked.

“Place-based” education is learning that is rooted in what is local – the unique history, environment, culture, economy, literature, and art of a particular place. The community provides the context for learning, student work focuses on community needs and interests, and community members serve as resources and partners in teaching and learning. Place-based educators have discovered that this local focus has the power to engage students academically, pairing real-world relevance with intellectual rigor, while promoting genuine citizenship and preparing people to respect and live well in any community they choose (Rural School and Community Trust, 2003 n.p.).

This definition was chosen for its clarity and comprehensiveness, but also for the fact that it is the representative definition of place-based education authored by the same Rural School and Community Trust responsible for generating the Place-Based Education Portfolio Rubric (PBEPR). The PBEPR is the tool employed in this study to assist in the understanding of place-based learning in Montessori adolescent educational settings, and key to the analysis of data.

Given the origins of the Rural School and Community Trust as an organisation to assist in the revitalisation of rural towns and schools, it is logical that the definition above describes place-based learning in terms of local contextual learning, with citizenship and living well as explicit learning agendas. These are the terms that rural inhabitants have always espoused as essential to community living (Gruenewald, 2005). These terms are also readily encountered in Montessori’s expressions of adolescent *erdkinder* learning, based as she saw it, in a rural land setting. Moreover, the motivation for learning, in Montessori’s estimation, is one’s potential contribution

to society, rather than an individualistic notion of self-improvement (Montessori, 1948/1994).

There are myriad names and forms of place-based education, including pedagogy of place, place-conscious education (Gruenewald, 2003), situational learning, environmental education, outdoor experiential learning, bioregional education, community-oriented curriculum and community studies, to name just a few (Powers, 2004). All of them incorporate the idea of a more hands-on, interactive, and democratic style of learning, combined with the development of talents and skills necessary to contribute to the well-being of community and the bioregion that supports it. The idea of combining such an approach with Montessori educational principles so dependent upon the sense-experience and internal interest of the student, is more than a fortuitous blend of the two educational approaches, but in fact, an essential, particularly in the exploration of a vision in which Montessori's *erdkinder* proposal is shifted from farm to urban prepared environment.

Many of the notions of place-based learning evolved from outdoor education models, in which character development and leadership qualities are the focus of adventure-learning and experiential education curricula. As Wattchow and Brown (2011) argue however, these approaches are the result of the particular social, cultural, geographical, and historical contexts that gave rise to them – just as the *erdkinder* plan reflects its early twentieth-century Italian origins. Wattchow and Brown (2011) suggest further, that current social and ecological imperatives demand a different approach – one that is related to recent understandings of how people learn and the multiple varieties of intelligence (Gardner, 2006). In addition, calls for education that has some congruence with the wide range of human lived experience require an approach that involves an increased degree of “mutuality and reciprocity in learning” (Seaman, 2008:12).

One of the more recent variations of place-based learning, incorporating character education and an ethic of service to others, is ‘service learning’ (Powers, 2004; Smith, 2013; Sobel, 2005) in which students are challenged to expand the scope of their experience and understanding, and to critically consider the political and material conditions that produce social injustice, by working among, studying, and contributing to, the local community.

Another alternative suggested by Gruenewald (2003), is *critical* place-based education which extends further still, to explorations of sociology, philosophy, ecology, and cultural studies, to questions of geographical power, reflections on contested arenas of identity and ownership, and territorial boundaries in corporate relationships, in the quest for a broader understanding of the mutual relationship between place and humanity (Gruenewald, 2003).

Many of these alternatives are readily integrated with Montessori adolescent education principles, since Montessori's ideas of *erdkinder*, indeed, her educational principles in general, emerged from practices such as these place-based alternatives incorporate. The differences lie in Montessori's emphasis on micro-economy as a means to social development, and the recognition of peace education as a defining element in preparation for life in adult social community. These incorporations offer new additions to place-based education, whereas the PBEPR offers some solutions to concerns about interaction with the local community, leadership skills, teacher training, and negotiating State measures of accountability.

### **Pedagogy of Place and Montessori**

Montessori speaks of the secondary school as:

...the very center of all education; the center where one must look for the key to give to humanity... Social experiences are needed, a social life with instruction at its basis. Studying is very different from living... and this should be the goal of secondary school, the preparation to find one's place in the society in which we live (Montessori, 1937:189/195).

A place-based approach to learning proposes answers to frequent questions about the relevance of *erdkinder* farm-style education to a world in which some adolescents of the twenty-first century have access to considerable economic power (both as consumers and earners), in an age of information technology, instant communications and unprecedented globalisation. These technological and informational advances are offset by the spectre of 'nature-deficit disorder' as a significant determinant of behavioural problems including attention disorders and depression, in children and youth. Physical effects are also observed in rapidly rising rates of obesity and myopia (Louv, 2005).

Pedagogy of place, or place-based learning is intrinsic to Montessori education at every age level. Since Montessori's tenets of auto-education are centred on freedom and spontaneity, together with the focus of interest and developing independence, the indoor/outdoor divide is much less delineated in the Montessori learning environment than in traditional educational settings. The principles of the *erdkinder* plan revolve around place as the focus of all learning, both experiential and academic. Thus pedagogy of place is not necessarily a foreign concept to Montessori practitioners and thinkers.

Mario Montessori Jr's 1972 proposal to incorporate the principles of pedagogy of place into Montessori's plans of *erdkinder* for adolescents, was an inspired suggestion. It meant that the possibility of the adolescent component in the Montessori continuum would become a viable endeavour, rather than an impractical dream, as it had been to that point. It also meant that the essentials of the *erdkinder* approach could be employed in any educational setting to enrich the learning of adolescents.

Since Montessori's descriptive curriculum for the adolescent is generalised and relatively sparse, it seems that Montessori adolescent schools have difficulty in preparing programs of study that incorporate Montessori features, while simultaneously meeting parental expectations (particularly with regard to assurance of college entry), and state standards of accountability (Brunold-Conesa, 2010). In this respect, Seldin, a Montessori education leader suggested that "no one model of secondary Montessori has become the norm and many schools struggle to design a program from scratch" (2010: 8). In part, this is because Montessori practitioners and administrators remain split over issues of farm-based curricula for *erdkinder* and other models of adolescent education such as the International Baccalaureate.

Discussions concerning place as curriculum in the literature generally reference Aldo Leopold's seminal work of 1949. In this work he exemplified the power of interdisciplinary learning, through concrete experience within the landscape. By harnessing his students' interests with critical pedagogy and employing Socratic questioning, he sought to engage the curiosity of their minds with respect to the web of human and non-human interactions in local communities. Although Leopold used the terms 'ecological education' and 'conservation education', his approaches to learning are recognisable as characteristic of place-based education.

Montessori's much earlier notions of curriculum, also found particular focus in the immediate environment (primary), the locality (elementary), and to some extent, a combination of locality and community (junior high school). 'Scouting' was also included as an adjunct in her ideas of a broad-based education in both primary and secondary models, due in part to its experiential capacity, the notion of understanding one's place in the whole cosmos, and the interdependent nature of a small community.

Gruenewald (2003a: 621) posited that any analysis of place must conclude that "every place is profoundly pedagogical." Ludick (2001:159) clarified this notion further in a statement that echoes Montessori's ideas:

Places give the adolescent a frame of reference in time and place. They enable them to make sense of their experiences. They also help the adolescents to recognize themselves as part of the continuum of events that have shaped society.

Kemp's (2006) discussion about place-based education argued that the point of education is to promote the skills that are essential to twenty-first century life – that is, to make decisions, solve problems and think critically. Arguably, these are skills that are relevant to successful human life in any era. Certainly these same skills are promoted as valuable in the Place-Based Education Portfolio Rubric (2003). The P21 Partnerships for 21<sup>st</sup> Century Learning<sup>18</sup> take this notion of twenty-first century skills and educational outcomes much further, outlining a framework of 21<sup>st</sup> century outcomes that includes

- Content knowledge and 21<sup>st</sup> century themes;
- Learning and innovation skills;
- Information, media and technology skills; and
- Life and career skills.

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<sup>18</sup> <http://www.p21.org/about-us/p21-framework>

The Principal tenets of Montessori adolescent education are suggested as shared with features characteristic of place-based educational approaches (as outlined by Smith (2002):

- 1) The immediate locality is central to the curriculum
- 2) The experience of the student is key to understanding, and creating knowledge
- 3) Concerns and questions of students play a critical role in transforming the curriculum
- 4) Teachers act as facilitators for the students rather than as the lecturers.

These initial four points are immediately recognisable as central to Montessori's educational principles from infancy through to adulthood. The fifth characteristic in Smith's (2002) list situates the school and the students as integral in the community, with the community as a source of experience and learning. This can be found in two of the participating Montessori adolescent schools in this study, and in some others, but not all. Although Montessori's model includes references to lifelong learning, and extensive community interaction *within* school, she omitted any reference to a reciprocal relationship between community and school, at the middle school level. These five features of place-based education are also key outcomes found in the PBEPR.

Kemp (2006) addressed the recurrent criticism of place-based education as parochial, by alluding to the understanding that local issues are readily applicable to regional and global concerns and politics. This connection between personal and global is essential to a profound understanding of the concept of the oneness of the universe, as Montessori's theosophical influences would attest.

### **Community Involvement**

Advocates of place-based education argue that confining education to performance, or career oriented models is not only short-sighted, but does a disservice to learners and to the welfare of the larger society. Scholars such as Robert Putnam (1993; 2000) suggest that a democratic society requires citizens who are educated to play a role in political processes, beginning with involvement in local associations that ensure the vitality of community life. He argues that enculturation into responsible community life is the role of schooling. Educators who support ideas about community

participation are generally advocates of place-based education, with the notion that the role of education is to encourage responsible participation in local and global citizenship (Tolbert and Theobald, 2006).

Both Maria Montessori and John Dewey recommended a community-based curriculum in which social experience, fostered by active community membership combined with learning experiences, created the basis for engaged and constructive education. Indeed, the term constructivism implies that background knowledge, previous experiences, and cultural mediation are critical factors in cognitive development, as Lev Vygotsky emphasised in his theory of social development. He argued that community plays a central role in making meaning, and that "learning is a necessary and universal aspect of the process of developing culturally organised, specifically human psychological function" (1978, p. 90). Similarly, Kohlberg's notion of the 'just community' is fundamental to the ideal of education as a stimulant to social change.

In Montessori's vision of adolescent schooling, students determine the responsibilities, limits, and freedoms that govern the functioning of school community life. Plans, conflict, and advice are discussed in respectful student-led meetings on a weekly or fortnightly basis. This practical experience in community life is referenced in the students' research into historical communities and in their creative visions of utopias. It can also form the basis for interaction with, and studies of, the local community.

The work of Anderman et al (1999) found that school environments that offered meaningful tasks, student-directed learning, and collaborative approaches without competition, resulted in enhanced intrinsic motivation. Following on from this, Rathunde and Csikszentmihalyi (2003) conducted a study in which they compared Montessori and traditional adolescent students' motivation and quality of experience in the school environment. The differences between the two groups were significant, with Montessori students reporting 40% higher intrinsic motivation in their schoolwork. The authors explained this difference by referencing the close and co-operative peer community, and more time spent in collaborative and self-directed experiential work with supportive teachers in the Montessori learning environment. The research report resulting from this study does not mention place-based education,

although in essence, the characteristics that the authors considered responsible for this significantly higher rate of intrinsic motivation, are those found in definitions of place-based learning (Sobel, 2005).

Maria Montessori's primary emphasis in middle-school adolescent education is not so clearly local community-based, as centred on the small community within the school, with minor excursions into the larger community. She envisioned the farm-school as a subsistence-based community, selling excess produce at local markets, for example, because she perceived the young adolescent as a social-embryo, in the process of constructing personality, through work, cooperation, and artistic self-expression. Therefore, at the middle-school level, the young adolescent would be protected from the complexities and conflicts of the larger society while the internal work of personality construction through peer-community life was developed.

In the literature, a recurrent critique of place-based learning is its tendency to be associated with a narrow parochial focus, rather than a global outlook in a world of international connections and information technology (Greenwood, 2013). Such critique tends to emanate from educational circles that misunderstand the broader applications of the place-based curriculum that commences with understanding of local systems extending to the complexities of state, national, and global frames of reference. They also underestimate the curiosity and intelligence of adolescents who are ready to make extrapolations from the world around them to more complex frameworks. Similar criticisms are also directed at the Montessori *erdkinder* approach, with its boundaries set at the local township, and much greater emphasis placed on the adolescent community within the school. With the instigation of the pedagogy of place proposal as an alternative to farm-schooling, however, the boundaries become wider, although there is still a strong emphasis on the cohesion and learning opportunities within the student community as a frame of reference for adult life in the larger community.

The ideal approach, particularly with respect to Montessori's intention of social reform as the inevitable outcome of her educational approach, is to begin with the school community and the school grounds, and moving outwards, both socially and practically, with interdependence at the local community level, to develop understanding and finally action, with a global perspective.

Greenwood (2013:461) discusses the “local/global paradox” comparing it to the tensions between place-based learning focused on ecological concerns, and critical place-based approaches that concentrate on social issues. This same tension exists in Montessori adolescent educational approaches that pit land-based *erdkinder* programs emphasising ecological/justice issues, against “urbkinder”, or city-based Montessori adolescent learning facilities in which social justice provides the focus. The point is that if Montessori’s guidelines for adolescent education are incorporated with sensitivity and some ingenuity, then it should be possible to achieve both with the involvement of community. This hypothesis constitutes one of the focus-points of this study. As Greenwood (2013:462) queries,

One wonders whether the deep experience of *land as teacher* held by outdoor and ecological educators will ever meet the critical reflections of *place as power and ideology* held by critical theorists and geographers.

### **Critical Pedagogy of Place**

Montessori’s critical socialist attitudes, her feminism, and her outrage with respect to the treatment of children signpost clearly that she was a critical thinker. Like Freire (1970/1972) after her, she too critiqued the model of education that implied that children’s minds were like empty vessels waiting to be filled with the knowledge of their adult teachers. Like Freire, she contrasted the latter model of education with a problematising model, which was later termed “critical pedagogy”, by Giroux (1998).

If the definition of critical pedagogy is education in which assumptions, oppressive practices and accepted outcomes in conventional education are challenged, in which social justice is considered, and the dominant culture is interrogated, then Montessori education is, by such a definition, critical pedagogy in action. As Gruenewald (2003:4) explains:

With roots in Marxist and neo-Marxist critical theory, critical pedagogy represents a transformational educational response to institutional and ideological domination, especially under capitalism.

This ideal is actualised in the peace education curriculum and in the micro-economy activities that form an integral part of the adolescent developmental curriculum (Chisnall, 2011; Duckworth, 2006). This is where Montessori's concept of peace education accords with critical thinking and transformative pedagogies. As Jenkins (2007) argues, peace education consists of encouraging learners to reflect and query their worldviews, to consider realistic alternatives to violence, to collaborate in order to address issues of common concern, and to engage in public action in order to confront and resist violence in all its forms.

Additionally Vaughn's (2002) analysis of empowerment in several Montessori classrooms concludes that Montessori's sensibilities in the realm of social justice were revealed in her educational processes, with regard to students' abilities to make free choices about their work, in the empowerment of the individual and the learning community through respect, through individual self-discipline, and in the organisation of the learning environment, to produce a transformative process of education.

Gruenewald's (2003) suggestion of a "critical pedagogy of place" would serve to incorporate Montessori's social justice theory with Mario Montessori Jnr's proposal for the adoption of pedagogy of place principles. Essentially, Bullard's (1993:23) description of a critical place-based pedagogy reveals how the two approaches combine to create the transformative education espoused by Montessori:

...the fact that social inequality and imbalances of power are at the heart of environmental degradation, resource depletion, pollution and even overpopulation. The environmental crisis can simply not be solved effectively without social justice.

In many respects, the PBEPR incorporates the challenge for educators and students to consider the total environment in all its cultural diversity, and to identify and change thought processes that injure and exploit other people and places.

### **The Place Based Education Portfolio Rubric (PBEPR)**

The PBEPR was chosen as a focus through which the main purpose of the research could be addressed. This purpose was to explore and understand the specific criteria and possibilities that the principles of Montessori adolescent education and place-

based learning tenets contribute to the development of a model of adolescent education designed for current social and environmental contexts.

The PBEPR provided theory and a concept of accountability in the examination of place-based education principles. The fact that the Educational Testing Service, together with the Harvard Graduate School of Education, collaborated with the Rural School and Community Trust to develop this tool afforded it credibility that went beyond standard descriptions of Pedagogy of Place concepts (Gruenewald, 2005).

It must be said that the PBEPR was developed as a tool dedicated to assist rural schools and communities in the effort to revitalisation, as small towns and rural areas wound down in the wake of industry shutdowns and loss of income-earning capacity (Gruenewald, 2005). Schools too were affected by population shifts, and the pervasive legislation that resulted in school shutdowns in rural areas for reason of enrolments that numbered fewer than 100 students per grade (Theobald and Curtiss, 2000).

The PBEPR is a purposefully designed tool for documenting, measuring, and evaluating the outcomes of learning strategies that occur within and outside the school boundaries, and for reflecting on that evidence to improve place-based learning efforts. The design of the PBEPR is intended to encourage community members and students to document the evidence of their mutual place-based learning, to tell the story of their efforts as change-agents, to assess and reflect on their efforts and their progress towards agreed goals. There is a strong emphasis on the idea that adults and students are mutually interdependent as teachers and learners, which is again, a Montessorian concept in learning and education generally (O'Donnell, 2013).

The PBEPR is organised into three basic sections, or lens, for viewing the work and activities of place-based learning:

- Student Learning and Contributions;
- Community Learning and Empowerment; and
- Deepening and Spreading Place-Based Learning.

These three aspects are further subdivided into twelve themes elaborating on the capacity for achieving deeper connections and sustainable relationships between school and community that reflect intellectual growth, empowerment, and problem-

solving strategic development, which for Montessori, is the rationale for knowledge (Frierson, 2014).

**Table 2.1 Place-Based Education Portfolio Rubric (PBEPR)**

| Aspect 1                           | Aspect 2                                 | Aspect 3                                     |
|------------------------------------|--|--|
| Student Learning and Contributions | Community Learning and Empowerment       | Deepening and Spreading Place-Based Learning |
| Student intellectual growth        | Connections between school and community | Instructional spread                         |
| Academic rigour of the Project     | Process                                  | Community engagement                         |
| Authenticity of the Project        | Roles, relationships and power           | Supporting structures                        |
| Assessment                         | Community learning                       | New resources and connections                |

Documentation and evaluation is supported by rubrics describing the focus of themed values, and delineating developmental stages of meaningful and sustainable place-based learning (See Appendix B). In addition, informative notes assist in the gathering of evidence, and questions provide guidance in documenting and evaluating the evidence (<http://portfolio.ruraledu.org/index.htm>)<sup>19</sup>.

The PBEPR not only supports the independence and critical thinking development of all participants, but also encourages social awareness, a democratically involved citizenship, and dissolution of the barriers around schooling that segregate community from the learning process. Furthermore, the PBEPR challenges received notions of accountability that legislate external bureaucratic evaluations of education through standardised testing that measures the acquisition and reproduction of facts – rather than constructive thinking, understanding, lateral thinking, critical thinking, independence, creativity, empathy, and community awareness. The PBEPR is a qualitative means to accountability of teaching and learning, in which the measure is school-community interaction, and both community and students assess their mutual progress through demonstrable evidence, with the use of a rubric that guides participants to strive for deepening the relationship between school and community

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<sup>19</sup> Retrieved 27/11/2013. This link now appears to be inactive.

### **Significance for contemporary theorists**

Montessori's innovations were influential in the development of other significant educationalists' theories, such as Jean Piaget (Campbell, 1988:5). Piaget was President of the Swiss Montessori Association in the 1930s (Montessori Jnr, 1976:65). His stages of human and cognitive development, published in English in the 1960s, were remarkably similar to those of Montessori (O'Donnell, 2013), despite the fact that Elkind (2003) dismisses the evidence of Montessori's influence on Piaget's theory of child development. Additionally, although Montessori was unaware of Lev Vygotsky's work, which was not published in the West until 23 years after her death (O'Donnell, 2013), Feez (2007: 134) suggested that, "He [Vygotsky] identifies her [Montessori's] pedagogy on more than one occasion, as the ground from which he launches his proposals."

Erik Erikson was also a student of Montessori, having attended her training course in Denmark. He later met her in Vienna, and then in the USA, when she visited in 1913. His theory of personality development showed some correspondence with Montessori's writings on the subject (Frierson, 2014), as did Lawrence Kohlberg's work, reflecting her principles of moral development most particularly in his writing on the 'just community'. (Chisnall, 2011; O'Donnell, 2013). O'Donnell (2013) makes the point that all of these psychologists were respected theorists in educational circles, although none of them were conducting research in classrooms.

### **Contemporary Educational Theorists' Views of Montessori Education**

Despite the fact that Montessori education has been an expanding element in the progressive education movement in many countries throughout the world, it is not considered a force particularly worthy of academic discussion in education today. It is difficult to understand why this is the case when so many of the features of Montessori's principles and materials have been integrated into mainstream education and her ideas adapted or developed by her more famous contemporaries.

Like some other current educationalists, Ahlquist (2011) mentions Montessori's lack of interest in theory as prejudicial to consideration of her principles of education

among academics. Ahlquist is, however, deeply interested in Montessori's philosophical connection to phenomenology. She discusses Montessori's observations of the experience of the child as it is lived (phenomenology), and thus, observing that the child is motivated to independence, the Montessori learning environments were designed to encourage the child's independence. Thus, Montessori's principles involved a complete reversal of the educational approach that suggested that the adult would shape the child according to adult designs. Her idea was that educators should look to the nature of the child for the indicators of the child's needs (Böhm, 2011:7) and that understanding the nature of the child was possible through close and enduring observation. This was clearly also the case in Montessori's writing on the principles of adolescent education.

Trabalzini (2011) explains that Montessori fostered a liberating and transformational approach to learning based on her observations of human psychological and developmental markers beginning with infancy through to adulthood. In fact, one particularly noteworthy aspect of Montessori's style of education lies in the notion of closely observing the student as a means to unobtrusive guidance in the child's auto-education. In this respect, the Swedish researcher Quarfood (2007:171) avers that Montessori gathered her empirical data from an anthropological point of view, but then interpreted and acted upon that information with the intent to interrupt discriminations of class and gender. In short, Montessori's close observation and guidance of the self-developing student becomes the means to social change, just as Hultqvist (1998) depicts Montessori's educational approach as "an excellent case of the relationship between power and knowledge, between science and political reform" (1998:152). It is this notion of the power of observation in the guidance of students' education that suggests the scientific aspect of Montessori's education, with the classroom as a laboratory, with students and teacher all experimenting in the exploration of knowledge and understanding.

With respect to the modification of Montessori principles in practice, Karsten (2013:7) alluded to a Dutch study (Roede & Derriks, 2008) that revealed a variety of adaptations in Dutch Montessori schooling, including the findings that a small minority practised the principles of Montessori education as written; a larger minority combined Montessori practices with current scientific insights about education; and that "a tiny majority" adapted Montessori to some other progressive concept such as

‘New Learning’. Karsten’s concern was centred on how Montessori schools can distinguish themselves, given that most Dutch primary schools espouse similar non-cognitive values (social development, creativity, critical thinking and social responsibility) and methods (including collaborative learning, integrated subjects, meaningful contexts and the intertwining of movement with learning), as Montessori schools. These concerns vex primary and secondary Montessori schools as they search for the means to differentiate themselves in a competitive educational market. (Karsten, 2013; Hultqvist, 1998). Kramer (1976) suggested that the attempts to protect and conserve Montessori’s educational principles as a closed system, also served to isolate them as in a backwater. Meanwhile the academic world proceeded onwards, reinventing her ideas through institutions such as Headstart, Early Start, Goodstart, and other commercial and research centres devoted to child development and educational psychology.

As Galloway (1976: 412) pointed out:

It is hard to understand how an instructional approach based on a philosophy that subsumes so many of the key ideas of the world’s outstanding theorists of development, learning and education could have gone relatively unnoticed, particularly in the United States and Canada for a period of nearly fifty years.

## **The Literature Review: A Summary**

This literature review has explored the epistemological history of Montessori’s pedagogy, from its beginnings in early childhood education through the developing continuum to adolescent education. The history of Montessori education in the USA revealed the impetus to change at the fundamental level of teacher training, and in the addition of the pedagogy of place proposal for adolescent schooling, to the extent that the realisation of *erdkinder* became feasible in locations other than the farm envisaged by Montessori.

Pedagogy of place principles were compared to Montessori’s adolescent educational ideas revealing that the ideologies shared numerous points of similarity. The Place Based Education Portfolio was introduced as a theoretical framework that would

supply the theoretical constructs that were found to be absent from place-based educational approaches and from Montessori adolescent education.

# **Chapter 3**

## **Research Design and Methodology**



## **Introduction**

The study of Montessori adolescent education implementations has been the subject of minimal research, due in part to the fact that a majority of Montessori middle-schools have only been in existence for the past ten to twenty years. With more than three hundred Montessori schools developing adolescent programs in the US, and several in Australia, and Europe also, the purpose of this study was to explore the evolving theory and practice of Montessori adolescent education and its relevance to twenty-first century contexts.

This chapter begins by reiterating the research questions and the aims of the project, as these were determined by the choice of a qualitative research design. Discussion of the nature of qualitative research and the paradigms that are relevant to the study follow. The research methodology is also described and explained, including the rationale for the research approach, methods of collection, management and analysis of data, ethical considerations, and limitations of the study, since all of these support the possibility of verifying the credibility and repeatability of the study (Flick, 2007; Hammersley, 2008; Maxwell, 1992; Stake, 2006).

In seeking to understand the relationships between theory and practice in the educational models under study, the research questions were specifically formulated to explore a selection of North American Montessori middle school implementations. Montessori middle schools were first established in the USA and therefore, over time have dealt with problems that start-ups (such as the half-dozen of such schools in Australia) had not yet surmounted.

## **Research Questions**

1. How are Maria Montessori's principles of adolescent education actualised within the 21<sup>st</sup> century North American context?
2. How do the tenets of the place-based Education Portfolio Rubric align with Montessori adolescent education principles and practices?
3. What can we learn from the participating schools that might contribute to the continuing relevance and applicability of Montessori education and to place-based education theory for adolescent education in the 21<sup>st</sup> century?

4. How might the participating schools reflect Montessori's intention of education as a catalyst for social change?

## **Project Aims**

Since place-based education principles have been suggested as a way forward in the practical implementation of Montessori's *erdkinder* plan, as outlined in previous chapters, the following project aims were incorporated:

- to determine the shared principles of Montessori adolescent education and place-based learning;
- to exemplify viable solutions to emergent complexities in Montessori and place-based education models; and
- to understand the specific criteria and possibilities each contributes to the development of a more enlightened model of adolescent education designed for current social and environmental contexts.

Observing Patton's recommendation of the adoption of "a stance of ...methodological appropriateness [and] pragmatism..." (2002: 68), it was decided that in order to explore the actualities of Montessori adolescent education in the 21<sup>st</sup> century and its affiliation to place-based education, a qualitative multiple case study rooted in an ethnographic approach would constitute the most appropriate design.

## **Rationale for Qualitative Research Design**

Qualitative research is essentially founded on a constructivist philosophical approach – that is, it is an approach that is concerned with understanding and interpreting the ways in which sociocultural attitudes, habits, and perceptions contribute to individual and group constructions of context-specific world-views (Mertens, 1998). The ontological and epistemological underpinnings of a constructivist approach, in which the researcher studies the *how* and perhaps the *why* of participants' construction of reality in specific situations (Charmaz, 2006:130), implied that a qualitative approach would provide the best fit for the study of Montessori principles and practices in four US middle schools.

In qualitative research, *processes*, rather than outcomes, are the fulcrum in the study of events, actions and outcomes (Maxwell, 2005). Thus, in the attempt to understand the motivations, practices, and meanings of Montessori practitioners in the process of creating *erdkinder* in a variety of locations, a qualitative multicase study approach was found to be apposite.

Denzin and Lincoln (2000) describe qualitative research as characterised by the proximity of the researcher's involvement with the participants (through close observation and direct interaction). It is, as Bogdan and Biklen (1992) argue, the reflexive nature of that research relationship that enables an holistic rather than a reductionist understanding of a particular contextual area. In the case of this research study of Montessori middle schools, "thick description" (Geertz, 1973) was developed from detailed interviews, and observations concerning teachers', students', administrators' and parents' attitudes, understandings, and practices of Montessori education at the middle school level. In turn, the involvement of participants stimulated further insights and questions that augmented the observations.

In this study, the 'how' of Montessori middle school theory and practice would not readily have been served by a detached numerically-based approach as typified by a quantitative study. The data collected in this study were dependent upon the participants' constructions of the realities of schooling within each particular setting, and their interpretations, meanings and understandings within their unique situation (Cohen, Manion & Morrison, 2000; Crotty, 1998). Nor is the research problem, as outlined above, bound to a hypothesis to be proven or verified. Instead the outcomes of the research are negotiated through the interactive context of setting, people, situations and events (Guba & Lincoln 2000). In itself, this suggested an ethnographic approach.

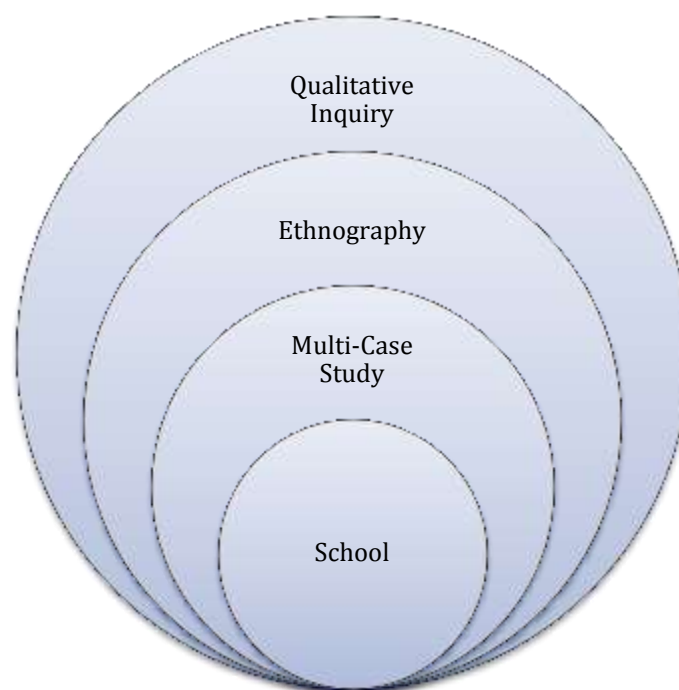
In summary, this research study lent itself to qualitative case study because

1. Its overall purpose was exploratory, and
2. it examined processes of change and implementation,
3. detailed in-depth information was required about participation in the adolescent learning programs,

4. the focus was to understand the interaction between theory and practice in Montessori adolescent implementations of education;
5. a qualitative approach was necessary in order to understand participants' constructions and actualisations of Montessori principles;
6. a further stated goal was to understand participants' beliefs as to the nature and qualities of Montessori adolescent education and how the addition of place-based education principles supports the desired outcomes.

These components of qualitative research were found, as mentioned above, to suggest a multi-case study with an ethnographic focus.

A graphic representation of the composite design can be seen below:



**Figure 3.1 Components of the Composite Design**

### **Ethnographic Approach**

Ethnography involves the in-depth study of social groups in natural settings (Brewer, 2000), in order to understand, describe and interpret social life, patterns of belief, and behaviours, from the perspective of the participants (O'Leary, 2004). Profound

knowledge and study of a social culture requires prolonged contact in the field (Wallen & Fraenkel, 2001; O'Reilly, 2005). Ethnographic studies rely on the premise that individual frames of reference reflect shared cultural attitudes and experiences. The implication is that ethnographies describe multiple realities, and require cultural empathy on the part of the researcher (Willis and Trondman, 2000).

The specific contextual reality of each site is found in the perceptions of the participants in addition to the researcher's observations (researcher as the instrument of data collection), and through these data, descriptive cultural knowledge of a specific group in a particular context, can be generated (O'Reilly, 2005). O'Reilly further emphasises the iterative-inductive nature of ethnographic research. In the conduct of this kind of ethnographic study, the researcher enters the culture with as few preconceived theories as possible, but with a broad general knowledge of the context under scrutiny (Wiersma and Jurs, 2005), whilst remaining open to new ideas and concepts.

The ethnographic approach adopted in this study was intended to support the exploration of meanings and intentions encapsulated in the socio-cultural and educational practices of Montessori principles in the four selected schools. My training as a Montessori teacher ensured sufficient background knowledge of the language and cultural practices that might be encountered, tempered by the fact that the practice of Montessori adolescent principles is essentially an evolving model shaped by place. Therefore, understanding would depend upon interpreting the perceptions and meanings revealed in the participants' socio-cultural and educational practices, rather than on the researcher's preconceived theories. Such an approach implies the construction of views of reality, rather than an ideal of the objective 'truth' of things.

Purnima Mankekar, a cultural anthropologist, mentions "the potential of ethnography as an *evocative* genre of cultural analysis..." (1999: 49, original emphasis). In a sense this idea of 'evocation' is pertinent in any discussion of human perceptions, feelings, and the constructed meanings and symbolism of community life. Since the aim of ethnography is to shed light on cultural phenomena, then Geertz' recommendation of producing "thick description" and Les Back's proposal:

...to achieve rigorous forms of reporting alongside a reflexive consciousness of the codes, textual moves and rhetoric integral to the process of writing ethnography (1996:5)

are means to validity and credibility.

For this inquiry, the ethnographic elements were concentrated on identifying shared patterns of behaviour (Montessori education principles and placed-based learning) in a recognisable cultural group. Case studies were incorporated into this design in order to learn and understand more about the evolving principles of Montessori adolescent education in diverse settings.

### **Case Study Methodology**

Case study shares many features with ethnography as is clear from Sturman's (1999) definition of case study:

...the distinguishing feature of case study is the belief that human systems develop a characteristic wholeness or integrity and are not simply a loose collection of traits...case study researchers hold that to understand a case, to explain why things happen as they do...requires an in-depth investigation of the interdependencies of parts and of the patterns that emerge (1999:103).

Qualitative case study is an ideal design for understanding and interpreting educational phenomena, according to Merriam (1998):

A case study design is employed to gain an in depth understanding of the situation and meaning for those involved. The interest is in process rather than outcomes, in context rather than a specific variable, in discovery rather than confirmation. Insights gleaned from case studies can directly influence policy, practice and future research (1998: 19).

A qualitative multiple case study approach was chosen because pre-knowledge and prior assumptions suggested that each school would model differences and similarities of approach depending on the site and the participants' interpretations of Montessori's principles of adolescent education. In a case study approach, the researcher deals with one, or several bounded systems, in order to uncover the subtleties and intricacies of a complex social situation (Stake, 2006).

A variety of methods, including close observations, detailed journaling and note-making, interviews, survey, document examination and casual conversation were employed to generate the thick description necessary to understand Montessori middle school culture in particular contexts.

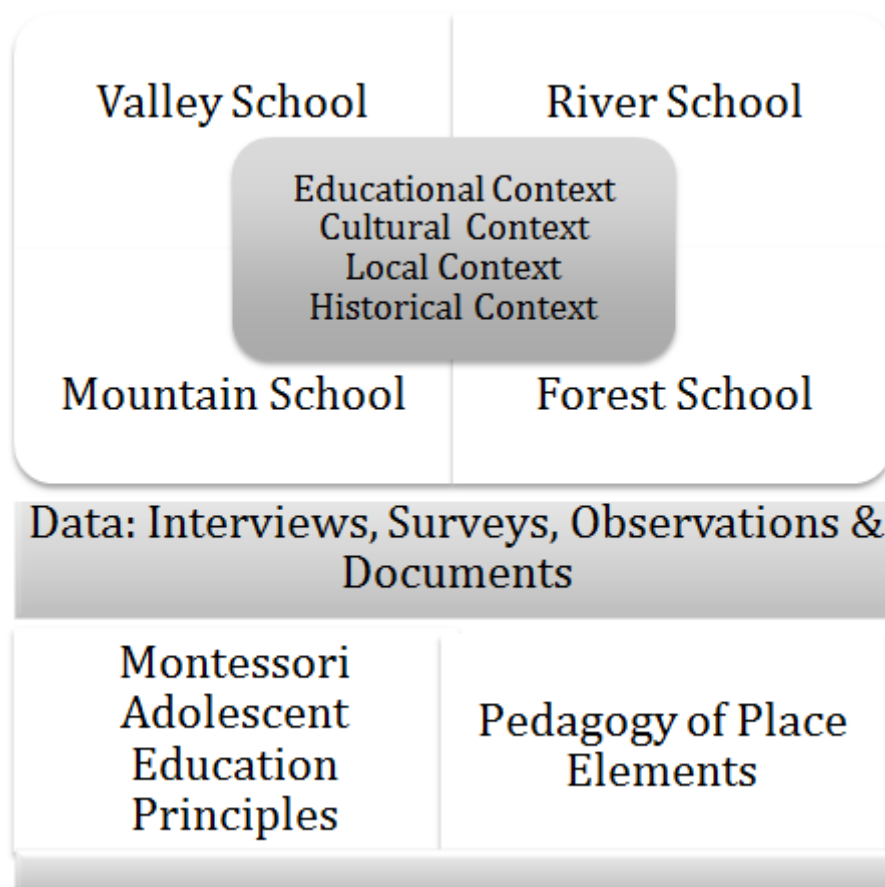
Yin (2003:13 - 14), describes case study as "...an empirical inquiry" that is situated in a contemporary and real-life context in which the boundaries between the phenomena under study and the context are unclear. He goes on to define case study as "a comprehensive research strategy that:

- Relies on multiple sources of evidence, with data needing to converge in a triangulating fashion, and as a result
- Benefits from the prior development of theoretical propositions to guide data collection and analysis."

This approach must acknowledge the assumptions underpinning the construction of knowledge, and furthermore, that these constructions (knowledge and beliefs) are time and context dependent. Flyvbjerg (2006: 21) asserts that such preconceived assumptions, theories, concepts and hypotheses can be proven incorrect by the degree of detail and proximity generated by case studies, and that in fact, "experience indicates that the case study contains a greater bias towards falsification of preconceived notions than toward verification".

Montessori's under-theorised set of principles of adolescent education necessitated that for the theory-practice comparison, the logical approach would entail the selection of Montessori's conditions for adolescent education, and to apply these issues as a conceptual framework to organise the study. In addition, the general principles of place-based education were incorporated, to identify the degree to which pedagogy of place was influential in the Montessori adolescent curriculum.

During the analysis phase, the Place-Based Education Portfolio Rubric (PBEPR) was employed, to augment the sorting process with a validated theoretical model, since place-based learning, like Montessori educational principles, could only be described as a collection of ideas rather than a distinct theory (Sugg, 2013).



**Figure 3.2 Multi-Case Study Design**

Figure 3.2 shows how the principles of Montessori Adolescent education and the pedagogy of place elements were selected as foci for the collection of data incorporating the contexts of the four schools as a means to revealing the whole picture of each school culture.

### **Initiating the Data Collection**

With UoW Human Ethics approval (No: HE09/296) (Appendix C) in place, the data collection process was initiated. This involved emailing permission requests to 16 Montessori middle school Principals, discussing the methods and duration of the visits, and including an outline of the research project (Appendix D) together with the interview questions prepared for each cohort of teachers, students, administrators, and the survey questions for parents.

## **Sampling Method**

This study was based on purposeful sampling according to Maxwell's definition, which lists four possible goals for purposeful sampling: representativeness, range of variation, critical cases, and comparative cases (Maxwell (2005). The first two of these were influential in the choice of schools.

The principle criterion in selection of schools was, "Which selection will best contribute to the understanding of the significance of pedagogy of place in the theory and practice of Montessori middle schools in the U.S.A?" (Stake, 1995).

In choosing four schools with differing characteristics of organization, size, socio-economic area, and geographical location, it was considered that much could be learned about pedagogy of place principles as observed in actual practice in Montessori schools, by identifying common themes in different schools across a variety of sites differing in size and location (Stake, 2006).

In this way the intention was to maximize variation (Miles & Huberman 1994: 28) in a small sample, so that shared patterns arising from a heterogeneous sample might reveal real alternatives in achieving Montessori's intended outcomes. As Patton (2002: 235) says, "Any common patterns that emerge from great variation are of particular interest and value in capturing the core experiences and central, shared dimensions of a setting or phenomenon."

The Principals of each of the possible participant schools were emailed with a detailed description of the intended research (Appendix D). Once the replies were received, four schools were chosen according to location (rural, urban, or semi-rural), size, and type of school (private, public or charter).

A further consideration in the selection of sites was accessibility. My status as a Montessori trained teacher was an advantage, but the Montessori community is small, bounded, and self-protective. Although my introductory letters to the school Principals initially selected were intended to be transparent, containing a detailed outline of the research study, research questions, interview questions and observation requirements, some respondents seemed to infer that a researcher would be an

“inspector” or an “expert” who might see and judge the deficiencies in their adherence to Montessori ideals.

Such “fears” were addressed with explanatory letters outlining my approach as exploratory, and exemplifying Montessori’s own words specifying that the development of adolescent education would emerge through attempts to put her principles into practice (Appendix E). There were sufficient positive replies from schools to proceed with the study.

### **Participant Schools**

The key, therefore, to choosing the participant schools was that each of them was different in respect of history, size, organisation, socio-economic status and geographical location. In the words of Stake (1995:4), “Given our purposes, which cases are likely to lead us to understandings, assertions, perhaps even to modifying of generalizations?” The schools included in the study are briefly described below:

**Valley School<sup>20</sup>:** A large urban public school in mid-western USA, re-situated in a low socio-economic area whilst renovations were undertaken in the upper middle class area that is the permanent home of the school. There is a middle school (years 7 to 9) of 295 students, and high school (400 students) onsite, using buildings shared with another school.

**Mountain School:** A medium-sized suburban charter school with a farm onsite, in Southwestern USA. The middle school numbered 95 students out of the whole school population (comprising years K to 12) of 365 students.

**River School:** A small public charter school representing the years from 7 to 12, that opened six years prior to my first visit. There were 340 students in total, with 100 in the middle school and 240 in the high school. This school was situated in an industrial area, in the Upper Midwest of the USA.

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<sup>20</sup> Pseudonyms were employed for all schools and individual respondents to ensure anonymity.

**Forest School:** A small private Montessori semi-rural school, with all ages represented to year 8 (middle school student population of 19), in an upper socio-economic area of Midwestern USA.

Such a diversity of schools, it was felt, would highlight one of the significant advantages of comparative case studies, which is, that the data can reveal causal relationships within particular contexts, indicating that context can generate distinctive characteristics (Flyvbjerg, 2005). Furthermore, each case in a multi-case study may act as a replication of the study in a different setting, supporting the wider applicability of the results (Bazeley, 2013).

## **Research Methods**

### **Ethnographic Tools for Investigation**

Throughout this study ethnographic methods were employed for the purposes of creating a multi-dimensional picture of each case (school) for the wider view, and the deeper perspective that ethnography can generate towards understanding the culture of an urban Montessori middle school, or the social dynamics of a farm-based *erdkinder*. Hammersley and Atkinson (2007) describe ethnography as enquiry into the daily lives and minutiae of a group of people, by gathering data over an extended period and in a variety of ways in order to illuminate the focus of the enquiry. More specifically, Troman et al (2006) delineated a list of key features of ethnographic methods in educational research contexts, thus:

- the focus on the study of cultural formations and maintenance;
- the use of multiple methods and thus the generation of rich and diverse forms of data;
- the direct involvement and long-term involvement of the researcher(s);
- the recognition that the researcher is the main research instrument;
- the high status given to the accounts of the participants' perspectives and understandings;
- the engagement in a spiral of data collection, hypothesis building and theory testing leading to further data collection; and

- the focus on a particular case in depth, but providing the basis for theoretical generalization (Troman et al. 2006: 1).

The discussion of research methods entailed in this study bears a majority of the characteristics of the ethnographic toolkit outlined above, apart from the fact that four cases were the subject of investigation in this research undertaking, rather than one particular case. A multiple case study was considered more conducive to achieving the projected aims of the study, as described above (see p.86). Therefore, references to ethnographic tools employed in this study iterate the notion that there are elements inherent in the methodology employed that, “describe and interpret the shared and learned patterns of values, *behaviours*, beliefs, and language of a *culture-sharing group*” (Harris, 1968, in Creswell, 2007: 68).

## **Observations**

The fieldwork officially commenced when I began making observations and formulating trial interview questions as I became acquainted with a variety of interpretations of Montessori adolescent implementations.

As the instrument of data collection, (Mertens, 2010: 249), I realised during the formulation of the study that if the main research question were to focus on the pedagogy of place aspect, then none of the schools would feel threatened by a sense of their practice being negatively weighed against Montessori principles. Any anxiety about negative comparisons with other schools would also be obviated, since pedagogy of place practice is primarily a function of the geographical location of each particular school and its individualised response to the opportunities presented by the situation<sup>21</sup>. This was a crucial point in gaining the trust of the participant schools, due to the degree of improvisation adopted by each school in response to Montessori’s theory of adolescent education and place-based learning.

With UoW ethics approval (Appendix C), observations in the schools were made over a ten-week period in each school in 18 months. These visits were conducted in two-

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<sup>21</sup> The essential elements of place-based education can be found in the notion that curriculum is based on local cultural studies in the context of the community, with local community needs and interests as the springboard for learning. (See Chapter 2, p.45).

week blocks, in which I observed classes, community gatherings, teacher discussions, students' use of independent/study time and recreation. I accompanied students and teachers on excursions and observed seminars and library study, performances, and demonstrations of learning as well as student-led parent-and-teacher conferences (three-way conferences). Observations were conducted in school hours between 8am and 4pm in most cases, with interviews sandwiched in between classes, and during lunch hours and after teaching hours, or during teachers' preparation time, as they advised.

## **Surveys**

Parents were surveyed, using a survey form of ten open-ended questions (Appendix F). Parental opinions were solicited for several reasons:

- Parent education/understanding is a crucial indicator of the school's commitment to Montessori adolescent education principles, since boarding is a keystone in Montessori's plan. An alternative to the boarding component is to ensure that the principles of independence, responsibility, self-discipline and community (family) co-operation are continued at home;
- Anecdotal evidence suggested that culturally, boarding was unacceptable as an option in the USA. Surveying parents' opinions and reasons would assist in understanding whether such disapproval was a national or regional cultural reaction, or perhaps idiosyncratic;
- Since parents determine whether their children will attend Montessori schools, I was interested in their opinions of place-based education, experiential learning, and social change; and
- One approach to triangulation of data is to solicit "second and third perspectives, or even more (e.g. the views of parents and kids as well as teachers)" (Stake, 2006: 37).

Access to parents proved more difficult than I had anticipated. However, one school had the idea of distributing the survey to parents when they attended at school for three-way conferences. The response to this initiative was outstanding compared to the trickle of replies I received by email, so I attempted to apply this same procedure at the other schools. The results were not as proportionately numerous from any other

school, but some schools also encouraged email replies. The parent surveys became an index of the enthusiasm of a school, or an individual teacher towards the research, since I did not access any parent directly, but had to rely on the school to intervene on my behalf with the parents.

## **Documentation**

I also examined and documented information from school newsletters, school noticeboards, class handouts, and school websites, in order to verify and triangulate data collected by alternate means, such as interviews and observations. As Denzin (1989) suggested, the qualitative researcher might employ more than one method to examine the same focal point (e.g., document review and interview).

I did not request access to student records, nor to school or board records, as I felt that such requests would have been too intrusive in many Montessori adolescent schools.

## **Interviews**

Stake (1995:64) points out that interviews are an essential tool in understanding the multiple realities presented by studying cases. My interviews were not only an essential source of information in each school but also a means to triangulation of the data obtained from observations, document-analysis and surveys. Maxwell (2005:94) asserts that, "Interviews can provide additional information that was missed in observation, and can be used to check the observations."

The style of interview and the process of interviewing were carefully considered during the pre-approval process. Fontana and Frey (1995) observe that many researchers consider standard in-depth interviewing as manipulative and objectifying, and thus unethical. They question the need for the kind of objectification that reduces the humanity of those under study, and in the process, obviates the purpose of qualitative research. As Jones (1985, cited in Seale 1998:205) states, "An interview is a complicated, shifting social process occurring between two individual human beings, which can never be exactly replicated..."

Patton (2002) points out that the disadvantages of unstructured interviews are many, including the necessity for extended time in the field so that similar ground is covered with each participant, which may require several attempts. He also suggests that

(negative) interviewer effects are more likely with this type of interviewing, including bias, leading questions and interpretive suggestions. Furthermore, according to Patton (2002), while such interview data can be difficult to analyse and to relate to other data emerging from observations and interviews, it is on the other hand, more flexible, responsive to individual and social elements, and more spontaneous in self-reflection.

Semi-structured interviews were therefore selected as the most appropriate means to elicit subjective, experiential and meaningful insights into the participant's world, producing rich thick descriptive data (Kvale and Brinkmann, 2009). These interviews were guided by ten questions (see Appendix G) previously piloted at a Montessori middle school that did not participate in the study.

Interviews were conducted in the school environment, during the days I was in attendance. Seventy interviews were conducted, including interviews with administrators and focus interviews with groups of students. Interviews were held in a variety of locations, designed in every case to maximise the communicative experience for both interviewer and participant. Interviews were recorded using a small MP3 digital recording device. The researcher also took notes during the interviews, detailing non-verbal communication and aspects of the interview that would not constitute part of the audible record (Example in Appendix H).

### **Focus Group Student Interviews**

Student interviews were arranged as focus-group interviews because adolescents in particular would be more likely to speak openly if they were safely ensconced within their peer group. Furthermore, this arrangement facilitated the timely collection of data, because collecting data from groups of students with their teacher present, minimised ethics issues. The teacher announced my role and work, and explained that students were free to volunteer to help me by discussing their opinions. As Gibbs (1997: 1) explains:

The main purpose of focus group research is to draw upon respondents' attitudes, feelings, beliefs, experiences and reactions, in a way which would not be feasible using other methods, for example observation, one-to-one interviewing, or questionnaire surveys. These attitudes, feelings and beliefs may be partially independent of a group or its social setting, but are more

likely to be revealed via the social gathering and the interaction which being in a focus group entails.

The questions for focus group discussion were chosen from a set of twelve questions I devised and (see Appendix I) piloted with students at a Montessori school previously visited but which did not become a participant in this study. In most focus group sessions three to four of these questions were discussed, depending on the size of the group. Questions were chosen for variety of data, according to information I had previously collected in a different student focus group, or spontaneously, according to the direction of responses where I intuited that the discussion would be more stimulating.

Student focus groups proved a rich source of data, as students competed for the right to air their opinions. Some of these occurred in small groups, during the lunch hour, with a teacher present, but busily engaged in classroom preparation tasks. Other groups were organised as large roll-call classes by the teacher, with students seated in a circle on the floor, answering the questions in a group-discussion style with the teacher present. In a different set of cases, students who completed their work quickly were directed to a corner of the classroom where we engaged in a focus-group interview, and as students completed their set work they joined the interview group to add their voice to the opinions. The variety of permutations in arrangements of focus group interviews is shown in the chart below:

**Table 3.1 Focus Group Structures**

| Arrangement                | When          | Where     | No. of Students | Approx. Duration |
|----------------------------|---------------|-----------|-----------------|------------------|
| Small group (friends)      | Lunchtime     | Classroom | 4 – 5           | 15 - 20 mins.    |
| Large roll-call group      | After lunch   | Homeroom  | 15 – 20         | 30 - 45 mins.    |
| As students completed work | In class time | Classroom | 5 – 15          | 15 - 20 mins.    |
| Whole class                | During lunch  | Homeroom  | 20              | 30 - 40 mins.    |

In the Montessori middle schools I visited, relationships between students and their teachers/guides was generally relaxed. Students were habituated to speaking frankly, since they were generally self-governing, and cohesive as a community. In all of these schools, it seemed that the students spoke freely despite the presence of their teachers.

It must be acknowledged that there may be some disadvantage associated with focus group interviews, in an outcome that Fontana and Frey (2003) termed “groupthink”. With respect to the groups of young adolescents who attended focus group, or group interviews at the participating Montessori schools, there may have been some incidence of groupthink. The advantages, however, of candid conversation among young teens in a permissive atmosphere that fostered a range of opinions regarding their school life, far outweighed any perception of disadvantage, in terms of eliciting a wide range of opinions, and providing insight into factors that created similarity and difference in perspectives.

### **Teacher and Administrator Interviews**

Interviews were arranged two weeks in advance with Principal administrators in each school. In every case, apart from student group interviews, the interview questions were emailed or handed out in hard copy one to two weeks prior to the interview appointment.

I arranged to interview every teacher of the middle school in each school I studied. Only one teacher refused an interview.

Despite the fact that ten interview questions were set out in a semi-structured interview format (see Appendix G), I observed that teachers who were untrained in Montessori education were not prepared to answer questions involving Montessori theory. It was clarified in the email containing the interview questions to participating teachers, and again at the start of every interview, that the questions were guidelines only, and that we would talk about issues that they could discuss with the ease of real experience. In fact this eventuated in most cases, where the interview began with an introductory question but evolved into a semi-structured discussion in which most of the interview questions were addressed, in varying forms. The purpose was to ensure that the interviews were as unthreatening and also productive as time would allow. In

fact, this approach proved fruitful in terms of gathering information that was most informative about each school.

Therefore, since the research questions focused on the theory-practice dynamic of Montessori adolescent education, I decided to analyse in detail five interviews carried out with the most experienced Montessori teachers from each school. Administrators' interviews were all included in the data analysis, as were all student group interviews, and all the parent surveys (see Appendix K).

### **Triangulation of Data**

The concept of triangulation is based on the notion that perspective and context generate meanings. Triangulation of data, therefore, is basically an attempt to ensure that the data researchers collect is as accurate and meaningful as possible (Stake, 2006). In qualitative research, data represent the multiple realities of participants, rather than the subjective impressions of the researcher. Therefore, in order to recognise, support, and integrate such data as part of the process of understanding and analysis, various strategies are employed to cross-check and verify the accuracy and the interpretation of the data for the purpose of validity (Denzin 1989). Triangulation assists in clarifying meanings and interpretations (Stake, 2006), although White (2011) argues that different approaches cannot be used to seek *confirmation* of data but can be used to illuminate different facets of the same phenomenon or to reveal alternative frames of reference.

Patton (2002: 559) lists five strategies for triangulating data within qualitative methods:

- Comparing data derived from observations with interview-generated data;
- Comparing participants' public statements with their private views;
- Checking participants' opinions over time;
- Checking views from a variety of participant perspectives (e.g. staff, parents, outsiders, students); and
- Checking evidence from interviews against program documents or other written evidence.

Data for this study were collected from several perspectives: my own observations, field notes, interviews with administrators and teachers, group interviews with students, parent surveys, and examination of documents. Informal talks with teachers

and students also provided data for the study. I felt that such variety would inform the research with greater consistency (Mertens, 2005) than any less energetic means may have provided. It also conveyed to the whole school community that my research study was to be interpreted as ‘serious’, and that trustworthiness<sup>22</sup> was a core issue.

Maxwell (1992) discusses ‘interpretive validity’, concerning what “objects, events and behaviours mean to the people engaged in and with them” (p.288) and how they reflect the reality of the context. He suggests that the researcher must return to the site/s to seek confirmation data and thereby rule out threats to validity. My repeated visits to each of the four schools over 18 months meant that data collected on previous visits could be compared for confirmation, or further investigation.

Huberman and Miles (2002) argue that by co-constructing reality with the participants, the constructivist nature of qualitative (case-study) research is confirmed. Member checking is an effective means for ensuring that the multiple realities of participants are acknowledged, as practised in this study.

Table 3.2 illustrates the variety of data sources, the relative significance as an information source, the places and persons involved in the data collection process, and the relative duration of various sources of data. Such a variety of data, the semi-structured nature of the interviews, and the open-ended survey questions allowed for checking of accuracy of observations and interview perspectives. As Maxwell (2005:112) points out, “In the final analysis, validity threats are ruled out by *evidence*, not methods.”

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<sup>22</sup> The issue of trustworthiness is addressed more comprehensively later in the chapter.

**Table 3.2 Data Sources**

| <b>Data</b>            | <b>Purpose</b> | <b>Place</b>   | <b>Person/s involved</b>   | <b>Approximate Duration</b>     |
|------------------------|----------------|--|--|---------------------------------|
| Observations           | Primary        | Classrooms<br>Meeting rooms<br>Homerooms<br>Cafeterias<br>Playgrounds<br>Hallways<br>Community<br>Sportsgrounds<br>Farm<br>Bus/Car<br>Excursions | Students<br>Teachers<br>Parents<br>Technical<br>Assistants<br>Administrators | From 5 minutes to several hours |
| Interviews             | Primary        | Classrooms<br>Cafeteria<br>Car<br>Homeroom<br>Office   | Teachers<br>Administrators   | One to two hours                |
| Focus Group Interviews | Secondary      | Classrooms<br>Homerooms  | Students   | 15 minutes to 45 minutes        |
| Parent Surveys         | Secondary      |  | Parents  |                                 |
| Document Review        | Secondary      | School Office  |  |                                 |

**Role of the Researcher**

Flick (2006) references the subjectivity of the researcher (and of the participants) as acknowledged and admissible forms of data. Constructivist methodology is based on the concept of researcher as the instrument of data collection, which is defined by Guba and Lincoln as “the instrument of choice for the constructivists, and it should be stressed, the *only possible* choice during the early stages of an inquiry” (Guba and Lincoln, 1989:175). In this embodied role (employing the senses in the observation and collection of data), the researcher is both participant and observer:

Through participant observation – through being a part of a social setting – you learn firsthand how the actions of research participants correspond to their words; see patterns of behaviour; experience the unexpected, as well as

the expected; and develop a quality of trust, relationship, and obligation with others in the setting (Glesne, 2006: 49).

In my role as researcher in each school, I was a participant observer, attempting to remain as unobtrusive as possible. Repeated visits to the schools, for two weeks at a time, over the course of 18 months, ensured that participants in each setting became habituated to the presence of the researcher within the bounds of the school.

As standard procedure, parents are invited to observe in Montessori classrooms at any time, which suggested that the students and teachers were accustomed to having an observer in the classroom. After the initial few days in the schools, I did not ever feel that the students were particularly affected by my presence. They were used to visitors. As Patton (1990: 217) points out, participant observations are those in which the ‘participants know that observations are being made and who the observer is’

I was particularly aware of the “reflexivity” factor (Hammersley and Atkinson, 1995), in my role as researcher/expert in the schools I visited, and particularly during interviews with teachers and administrators. My awareness of this influence was uppermost in my attempts to square what was said in interviews against what I observed in classrooms, meetings, and informal conversations with teachers and students, in order to attempt to understand the perspectives of participants, and how this might affect the validity of the inferences I was drawing about theory and practice. For example, in one school I was not introduced to the school community until after a week of observation. Some students subsequently told me that they thought I was “a school inspector.”

Fetterman (1998: 22) argues that “good ethnography requires both emic and etic perspectives”. Ethnographic fieldwork is an interactive process in which, no matter what perspective the researcher takes, the participants will always assign different roles to the researcher in different situations. The roles taken by the researcher, together with the relationships that are formed with the participants, form part of the research context (Graue and Walsh, 1988). As the researcher, it was clear from the outset that I would straddle the boundary between etic (insider) and emic (outsider) perspectives. That is, I was definitely an ‘insider’ from the point of view that I am a trained teacher in the Montessori method. Both the Montessori aspect, and the fact that I am an experienced teacher at middle school level, implied that I was part of the

milieu of trained teachers who were also Montessorians. This allowed me a certain entrée that may not have otherwise been available.

The etic viewpoint was related to the fact that as an Australian researching and visiting middle schools in the U.S., and further that I was not a member of the individual culture of any participant school; I was an outsider, a foreigner in the midst of a tightly-knit educational-cultural group. For participants, especially teachers and administrators, a similar blurring of my roles could be inferred. I was recognisably a participant member of a recognisable Montessori-teacher culture, speaking the language<sup>23</sup> (albeit with a strange accent), recognising and referring to Montessori educational theory, aware of the particular cultural nuances. Simultaneously, I was a fledgling researcher, an Australian who had travelled a long way to study their school, a member of the club, and yet not. By implication, I was an observer, an interviewer, perhaps an evaluator (in some minds), but not a teacher at that time.

## **Data Analysis**

“Ideas for making sense of the data that emerge while still in the field constitute the beginning of analysis...” (Patton, 2002: 436).

The first level of data analysis proceeded in the field (Stainback and Stainback, 1988), through reflection on relationships, patterns, impressions, and commonalities, as data were gathered, assembled and organised. These kinds of analytical activities were recorded in the research journal, breathing life into the study as an iterative process. It is such reflective activities that recorded, maintain the chain of evidence, and provide accountability (Mertens, 2005).

The second level of analysis occurred during the organisation and correspondence of data against initial impressions, while transcribing notes and memos from field notes (Appendix L) to a digital observations journal (Appendix M) during data-collection

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<sup>23</sup> “Montessori’s use of antiquated, borrowed terms, and the inadequate translation of these, often persists in contemporary Montessori material. Montessori insiders recognise the phenomena these terms refer to but for those outside the tradition the language of the Montessori subculture can seem arcane and cultish” (Feez, 2007: 40).

breaks and at the end of each day. Interviews were reviewed several times as close as possible to the time the interviews were completed (usually at the end of the day), so that as the data were collected, the focus on particulars was intensified. These procedures were followed in order to create the chain of evidence, to contribute to the iterative process, and to ensure validity. As Patton reminds us: “The fluid and emergent nature of naturalistic inquiry makes the distinction between data gathering and analysis far less absolute” (2002: 436)

The immediacy of reviewing observations and annotating interviews underscored the accuracy of observational notes made during interviews, and assisted in the assignment of categories and relationships later in the analytical process. Notes and memos formed the bulk of the research journals, in which I questioned and considered interpretations, insights, perspectives of individuals, classes, and Montessori educational principles and practice (example in Appendices L and M).

### **Transcription**

All interviews were transcribed in full by the researcher. Transcription was achieved by uploading the recording to a computer as an MP3 file, then listening to each interview in small sections that could then be re-vocalised by the researcher. A second computer with Dragon Naturally Speaking voice-activated software was employed for the actual transcription of the spoken words. The entire recording was then checked against the transcription for accuracy of transfer, and to ensure fidelity of the interviewee’s intentions in every case (examples in Appendix J and N).

During the process of transcription, in which I noted the recorded numbers corresponding to the announcement of each question (for later ease of checking), I began to make connections and links that stimulated further insights and ideas.

Transcriptions were completed as soon as possible after the interviews, and after checking for spelling and accuracy were offered to the interviewee as an email attachment for member-checking. Only a small minority of interviewees accepted the offer to check the transcription of the interview. None of the participants returned objections to the transcriptions.

## **Developing Categories for Data Analysis**

In the absence of theoretical frameworks for Montessori education principles and also for place-based education principles, the Place Based Education Portfolio Rubric (PBEPR) (see Appendix B) was adopted. This descriptive rubric provided the means to furnish theory and a concept of accountability in the examination of pedagogy of place principles as evidenced in the participating schools. The fact that the Educational Testing Service, together with the Harvard Graduate School of Education, collaborated with the Rural School and Community Trust to develop this tool afforded it credibility that went beyond standard descriptions of Pedagogy of Place concepts.

Together with the PBEPR described above, the principles of Montessori adolescent education as described by Maria Montessori were also employed as a baseline to examine the practice of Montessori adolescent education in the four selected school cases.

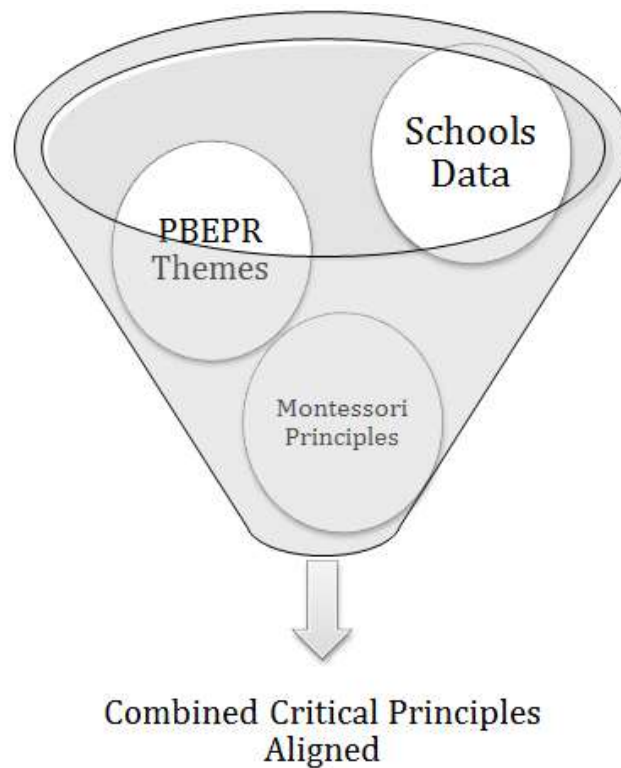
Given that Stake's (2006) multiple case study methodology provided the analytical template across the whole study, the themes elicited from the PBEPR were applied as per Stake's methodological analysis:

## **Framework for Analysis**

The framework for analysis was composed of the data collected from each of the four school case studies, which were then referenced to the Montessori adolescent education principles and the PBEPR (place-based learning tenets), to produce a collection of critical principles (Figure 3.3). These critical principles formed the framework of the Montessori place-based hybrid model for analysis of the data.

### **Part 1: Aspects and Themes Based on PBEPR**

The aspects and themes with descriptive criteria, (See Appendix B) were drawn directly from the PBEPR. These served initially as codes for the analysis of the place-based components.



**Figure 3.3 Process of Developing Analytical Elements**

## **Part 2: PBEPR themes compared with Montessori principles**

The PBEPR themes were compared with Montessori's principles of adolescent education, with a view to revealing:

- the **shared** characteristics between Montessori's theory and PBE theory;
- those characteristics specific to Montessori adolescent education, but which were **not** evident in the portfolio of place-based education themes;
- those PBE Aspects and Themes that were **not** evident in some/any of the schools under investigation;
- themes that were specific to Montessori's theory, but were **not** evident in the data collected in the school cases; and
- Other issues that arose from the data, such as:
  - Parental expectations;
  - Technology; and
  - Legal Issues.

### Part 3: Simplification of PBEPR Themes

For the purposes of comparability with the Montessori principles and comprehensibility, these 12 Themes were reduced to the three overarching Aspects, as seen in Table 3.3 below.

**Table 3.3 Place-Based Education Portfolio Rubric (PBEPR)**

| Aspect 1                           | Aspect 2                                 | Aspect 3                                     |
|------------------------------------|--|--|
| Student Learning and Contributions | Community Learning and Empowerment       | Deepening and Spreading Place-Based Learning |
| Student intellectual growth        | Connections between school and community | Instructional spread                         |
| Academic rigour of the Project     | Process                                  | Community engagement                         |
| Authenticity of the Project        | Roles, relationships and power           | Supporting structures                        |
| Assessment                         | Community learning                       | New resources and connections                |

Each of the listed sub-themes is described by more detailed elements in the original PBEPR (Appendix B), which are further qualitatively compared and ranked through four levels from ‘beginning’ to ‘advanced’. All of this was referenced throughout the analysis, with detailed tables constructed for the purposes of analysing each of the four schools.

### Part 4: Adding the Montessori Principles as Themes

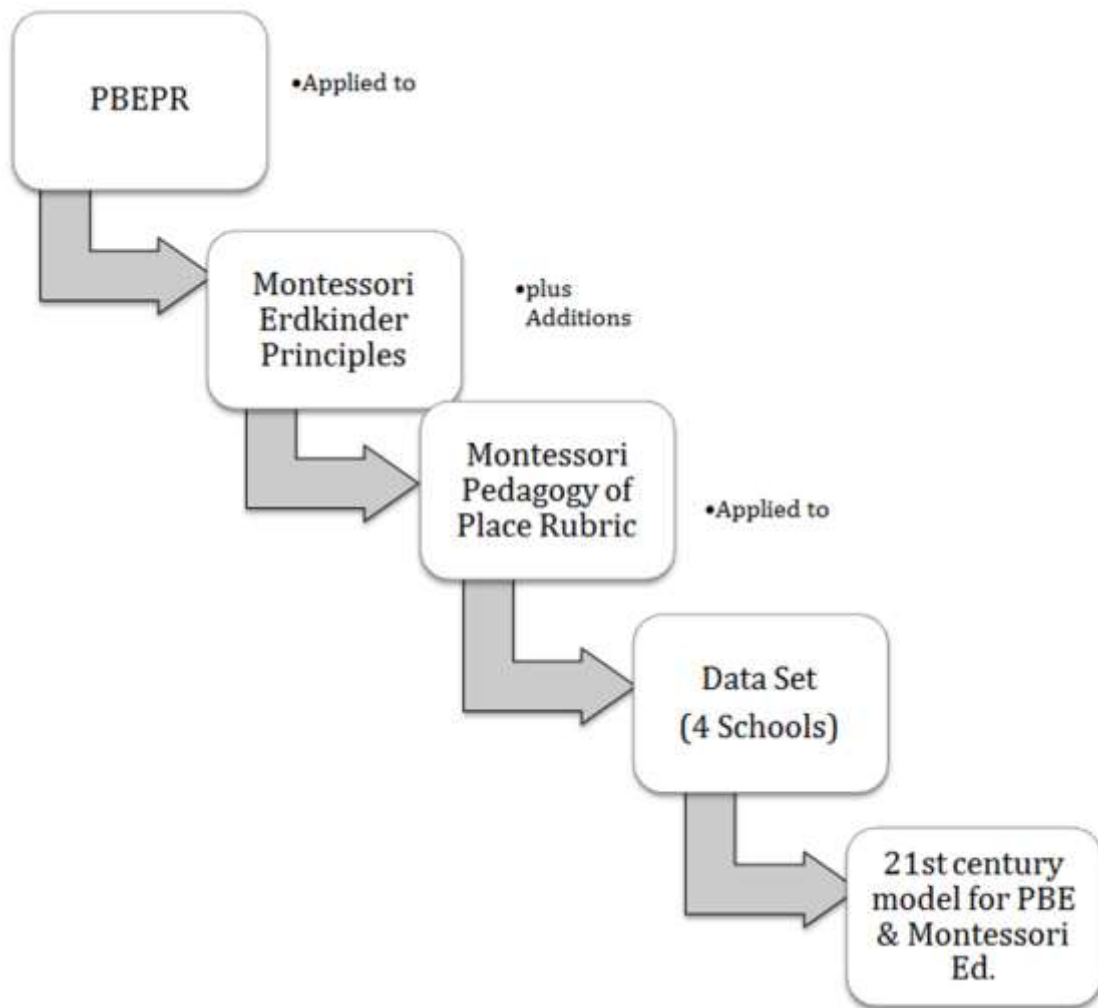
The Montessori adolescent education principles were viewed as themes alongside the PBEPR Aspects and Themes (see Appendix P). The PBEPR having been reduced to 12 themes categorised under three main aspects, the Montessori principles were organised under the same three aspects to create a comparable set of Montessori themes. This was possible in light of the fact that the Montessori principles shared a majority of the elements found in the PBEPR. Table 3.4 below, resulted from arranging Montessori adolescent education principles under the three aspects of the PBEPR:

**Table 3.4 Montessori Principles X Place-Based Education Portfolio Rubric**

| Aspect 1                               | Aspect 2   | Aspect 3                                     |
|--|--|--|
| Student Learning and Contributions     | Community Learning and Empowerment   | Deepening and Spreading Place-Based Learning |
| Collaborative student-centred learning | <ul style="list-style-type: none"><li>• Community emphasis</li><li>• Nature-based/Service work</li></ul> | Community partnerships                       |
| Integrated learning                    | Experiential education   | Teacher training                             |
| Critical thinking                      | Creative arts emphasis   | Peace studies                                |
| Authentic/Group or Self-assessment     | <ul style="list-style-type: none"><li>• Relationships emphasis</li><li>• Identity development</li></ul>  | Micro-economy                                |

The Montessori themes were found to align to those of the PBEPR, adapting easily to the Aspects headings, while adding variation and breadth to the PBEPR themes. For example, Montessori themes under the heading of Aspect 3 lay the emphasis on deepening and spreading place-based learning by sharing with community through interactive means, such as micro-economy, peace studies and public sharing of creative arts.

Through examination of place-based and Montessori themes under the same Aspects, it was possible to compare and reveal the shared criteria and the potentialities each contributes to the development of a more enlightened model of adolescent education designed for current social and environmental contexts. The process could be expressed diagrammatically thus:

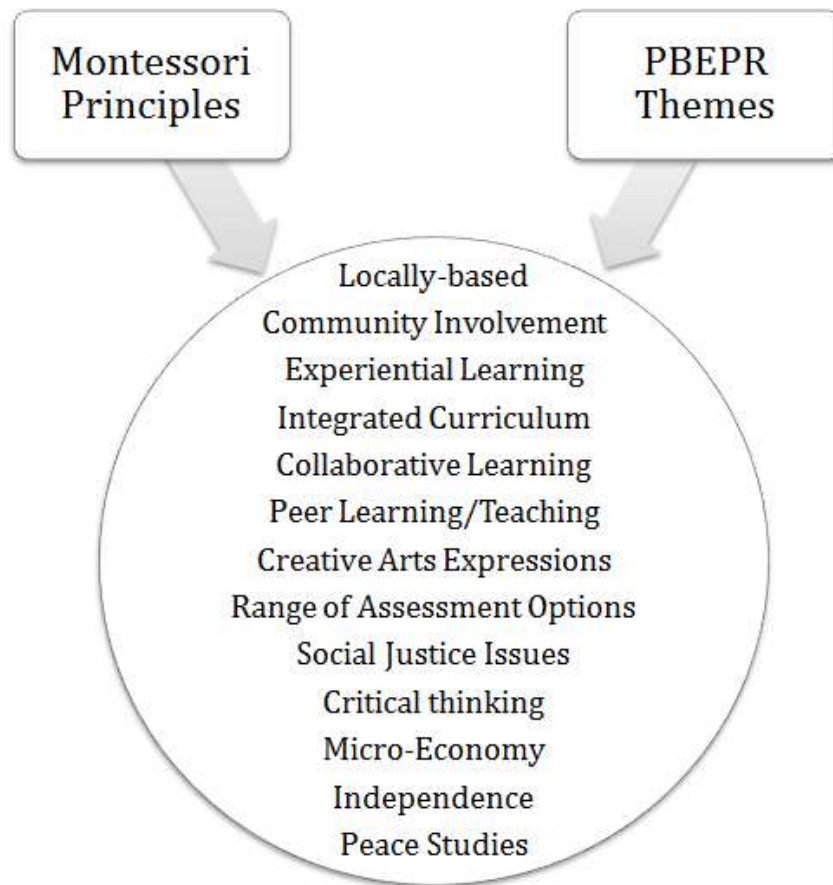


**Figure 3.4 Data Analysis Flow Chart for Each Case**

## **Part 5: Cross-Case Analysis**

For the cross-case analysis, however, further refinement was necessary. The essence of each school analysis referencing the 12 themes of the Montessori x PBEPR model, together with the elements that were *not* evident (as listed above) were incorporated to feed into the cross-case analysis. This modification did not affect the content, but simply amounted to a rearrangement in order to place the primary emphasis on the Montessori aspects of the schools' programs, as per the original intention of the study.

Diagrammatically, when the Montessori Principles and PBEPR Themes were arrayed under the three Aspects of the PBEPR, the critical issues that aligned were revealed thus:



**Figure 3.5 Critical Themes resulting from Montessori Principles and PBEPR themes combined**

Following the descriptive criteria and rubric components of the PBEPR, designations of Beginning, Progressing, Maturing and Advanced, were assigned to each critical theme as expressed in each school (See example in Appendix Q). These results were then cross-matrixed for comparison in order to examine the patterns of themes and practices in each school context.

Stake (2006: 83) argues however, that, “Multicase study is not a design for comparing cases. The cases studied are a selected group of instances chosen for better understanding of the quintain [phenomenon or problem]...” Nonetheless, Stake’s (2006) research from which the latter opinion is drawn, is based on cross-case analysis of the Step By Step educational program, conducted as a multicase study across 30 countries in Central and Eastern Europe. Stake proposes that following cross-case analysis, assertions about the problem/phenomenon (quintain) will eventuate:

[The researchers] will take evidence from the case studies to show how uniformity or disparity characterizes the Quintain. Often the Quintain will appear increasingly less a coordinated system and more a loose confederation, or less a simple pattern and more a mosaic. With deep study, the differences among the cases often seem to grow (2006: 40).

Stake does say, however, that a number of the significant findings will be case-contextual, and that assertions must be supported by evidence.

Bazeley's (2013) summary of current understandings about multi-case comparisons emphasises the view that the context and details of each case are decisive in terms of understanding how those aspects influence or confirm common processes and outcomes. In addition, Firestone (1993) suggested that critical and deviant cases in a multicase study could be used to explore and challenge existing theories in an effort to discover threats to generalisability.

If we revisit the aims of this research study, it is evident that the intention of cross-case comparison was to generate insights and understandings about the synergistic effects of combining Montessori principles of adolescent education with place-based learning, with the aid of the PBEPR.

## **Ethical Considerations**

As a researcher in a different culture, the awareness that basic sociological constructs such as gender, class, age, and education are associated with power and privilege (Schostak, 2006) was uppermost in my dealings with participants. To the best of my ability, the research was conducted with sensitivity to issues of inclusion, power, and freedom of expression. Participants were recognised as informed, aware, and consenting, with respect to the research project. A tendency of informants to regard the researcher as an expert in Montessori education was noted, with all participants reminded frequently that their expertise and knowledge would inform the study. This provided the rationale, for example, of omitting questions concerning Montessori theoretical issues with teachers who were unfamiliar with the principles of Montessori education.

## **Informed Consent**

All participants in the study were fully informed of the nature and purpose of the research project. Emails containing attachments detailing the aims of the project, the scope, the institution and supervisor contact information, and requests for participation were sent to school Principals, initially (see Appendix R). If the Principal approved the project, then a request was sent to the Principal to inform the school of their participation, with emphasis that individual participation was entirely voluntary. The initial visit to the school was reserved for observations, and interviews with administrative staff (Principal, Deputy Principal) since I reasoned that they were well aware of the research project. During that initial visit, I emailed and spoke with staff members about the research, in order to gain access to their classrooms, staffrooms and staff meetings. At that time I also sent another email to each teacher, requesting an interview, with the interview questions as an attachment. In this way, they could preview the interview and thus make an informed decision with respect to their involvement. Formal consent documentation was completed by all staff members and students (see Appendix S). Avenues for complaint about any aspect of the research conduct were made clear and accessible (Appendix T).

## **Confidentiality**

Every possible measure was taken to ensure and protect participant confidentiality. Several of the schools provided an empty office for the conduct of interviews. Interviews were also conducted in teachers' homerooms, and occasionally in their cars in the school car park. In every case, a quiet place was essential due to the recording of interviews. Anonymity was assured at the beginning of each interview, and an alias was assigned to label the record at the time of interview.

All interviews were conducted, transcribed, and analysed by the researcher. No other person ever heard the interviews, nor viewed the transcriptions. Transcriptions were emailed to individual interviewees for member-checking. Names were coded at the interview for the purposes of member-checking, and anonymity.

Audio recordings and their subsequent transcriptions were securely transferred to password-protected external hard drives, and stored in locked filing cabinets.

## **Issues of Trustworthiness**

In order to address the issues of validity and reliability that are considered keystones to quantitative research studies, Guba and Lincoln (1998) suggested the use of concepts appropriate to qualitative research that might reliably address the trustworthiness of such studies. These concepts were termed *credibility*, *dependability*, *confirmability*, and *transferability*, with the idea that qualitative researchers could attempt to control for bias (or at least acknowledge it) in the design, implementation and analysis of the research.

### **Credibility and Dependability**

Qualitative research designs are thought intrinsically to contain limitations relating to credibility, most specifically in the areas of researcher bias and reactivity – that is, the reaction of participants and environments to the presence of the researcher (Creswell, 2009; Marshall & Rossman, 2011; Maxwell, 2005). This aspect has been discussed above under ethical considerations.

By use of purposeful sampling in order to maximise variation, and employing a variety of data collection methods to support the triangulation of data and ongoing analysis, methodological credibility issues were anticipated and acknowledged.

Methodological validity was addressed by considering the research design components and the relationship between the purpose, conceptual framework, the research questions and the methods involved (Maxwell, 2005; Mason, 1996). The research journal charted the methodological and interpretive validity of the study, through a constant consideration of the questions being asked, the logic of the method and the validity of analysis and interpretation.

Dependability in qualitative research studies addresses concerns of whether the findings are consistent with the data collected, and therefore dependable. Again, by keeping a detailed research journal documenting the audit trail, and reflection on the processes of thought and decision-making, inconsistencies may still occur, but are recognised through the documented reflective process (Merriam, 2002).

## **Confirmability and Transferability**

In order to confirm that the outcomes of qualitative research are the result of clearly described methodological procedures, reflection, data analysis and interpretation, (rather than the biases and subjectivity of the researcher), the readers of such a study should be able to assume the replicability of the study. In addition, the audit trail represented by the research journal, field notes and transcripts, are indicative of the reliability of the study. In this case, the journals, field notes, and transcripts were all kept as a record and a means of reflection of the processes of thought and decision-making.

Transferability in qualitative research corresponds to generalisation in quantitative research traditions. Patton (1990: 489) refers to “speculations on the likely applicability of findings to other situations under similar, but not identical conditions”. Addressing this notion by way of thick, rich description of participants and detailed contexts, relevance to broader context is broached and confirmed (Schram, 2003). Bazeley (2013) distinguishes between generalisation (theoretical or analytic) with theory development applicable to other contexts as an aim, and transferability, specifying case-to-case considerations (dependent on “rich description”) as per Lincoln and Guba’s (1985) limitations to the concept.

The possibility of generalisability from qualitative studies remains a matter of debate, however. Miles and Huberman (1994) suggested that where inferential treatment across cases is high, the result may be a loss of detail and context-specific causality to the extent that few if any of the generalisations apply to any single case.

Stake’s (2006: 89) perspective is that generalisations:

...are problematic because they lead to expectations that they will optimally facilitate professional practice, which they will not...Still...formal generalisations make an important contribution to debate and deliberation of public policy. When recognised for what they are – that is, hypotheses and working positions – they provide valuable counterpositions to experience and convention.

## Limitations of the Study

There were limitations specific to this particular study related to issues of credibility and transferability in qualitative research, some of them inherent to the particular design of this study. Consideration of means of accounting for these limitations, and minimising the impact of such on the research is addressed in the following:

- That it is USA based, and therefore of limited transferability to other countries and locations. The uniqueness of North American cultural issues in the reception, interpretation and application of Montessori's education theory, discussed more fully in the literature review chapter, is applicable to this point.
- One of the key limitations of this study is the issue of subjectivity and potential bias due to the researcher's status as a trained Montessorian. Due to the history and culture of Montessori education, the expectation is predominant that Montessorians will not only respect the culture from within, but also reflect Montessori education positively to those outside the circle. In recognition of this issue, triangulation of data was considered of crucial importance so that confirmation of data was dependable. Analysis of data according to a cross-matrix of two collections of categories, was employed, in order to double-check any tendency to bias. In addition, constant reflection through writing the research journal helped to clarify thoughts, and to check tendencies in analysis and interpretation of data.
- Further limitations include the fact that there is a cultural divide between researcher and the participants. Thus the etic perspective of the researcher's Australian status with associated cultural assumptions, may result in misunderstandings in observations and interpretations of American behaviours, which could impact validity in the collection and analysis of data. I addressed this limitation by member-checking as a reflexive activity.
- Limitations of access and opportunities to observe in the participant schools.
- Practical limitations of budget, time, and travel opportunities also applied.

## **Summary**

This chapter began with a discussion of the methodological challenges of studying Montessori middle school implementations in conjunction with place-based educational principles, in the USA. Qualitative multiple case study methodology combined with an ethnographic approach provided the framework to address the questions and aims of the study. Data was collected through observations, interviews, open-ended surveys, focus groups, and documents. Data were reviewed against themes drawn from Montessori and Place-based education principles, and analysis was carried out in order to exemplify viable solutions to emergent complexities in Montessori and place-based learning models designed for current educational contexts.

The schools that constituted the cases in this study each had a story to tell, or perhaps many stories, depending on the teller. The participants' stories were woven together to form the fabric of a whole school story in each case, representing the community, its context, its learning activities, its adaptations to the circumstances and the place they called their own. My own part, as narrator, was to make sense of all that I observed, heard, and encountered, and in turn to attempt to relate those stories faithfully and respectfully. The next chapter relates those stories.

# **Chapter 4**

## **The Case Studies**



## **Introduction**

This chapter reveals the findings from the four schools in a case-by-case framework. In order to represent the ways in which each school manifested the shared principles of Montessori and place-based learning (referenced as Aspects and Dimensions throughout), the three Aspects of the Montessori Place-based hybrid model formed the category headings, while the subheadings, although maintaining the configuration reflecting the Dimensions of the hybrid model, varied slightly according to the educational structure that emerged from each school's attempts to create an education that accorded with their place, possibilities and disadvantages.

### **Case Study 1: Valley School**

#### **The Background**

At Valley School, an urban public Montessori secondary school, the daily timetable officially begins at 8:45am, although most teachers arrive at 7am and remain at school until 6 or 7pm. They say that such long hours are necessary to meet the individual needs of students, to liaise with parents, collaborate with other teachers, as well as to plan and execute the experiential components of the place-based program at Valley School. As Bruno, one of the teachers, explained:

You couldn't do what we do, or offer the extras that we do, without long hours. But no-one ever wants to leave. If you're called to be a teacher, this is the ideal environment (Interview, 7/10/10).

This was the largest school included in the study, with a total school population of 643, of which the middle school comprised 258 students guided by 17 teachers. The middle school students were divided into five 'communities' each composed of around 52 students. Each community, inclusive of both Years 7 and 8 students, was guided by two teachers. These two teachers represented two contrasting subject faculties such as Language Arts and Math, or History and Science.

Valley School was also the only public school that was not also a charter school.<sup>24</sup> This meant that it was required to conform rigorously to the State standards as the benchmarks for its curriculum, and perform well on standardised tests, while attempting to remain true to the Montessori philosophy of adolescent education. For Valley School participants, it was a matter of pride, according to Melanie, the program director, to excel in the balancing act that was necessary to become an outstanding public Montessori school.

To add spice to that challenge, Valley School was in the situation (unique in this study) of relocation from its 'home' premises during a period of renovation and rebuilding that extended far beyond the expected duration. As such, it adapted its Montessori pedagogical practices to meet the new conditions with initiative, despite the limitations presented by sharing the building with another non-Montessori public high school.

The move from Valley School's original 12-acre rural-like space in an affluent neighbourhood on the other side of the city, to the current constricted site in one of the city's lowest socio-economic areas, required significant adjustments that demanded wise leadership and dedicated collaboration from the whole school community. In reality, it appeared that within the space of two years, Valley School had effectively made the transition from Montessori's original *erdkinder* vision to the place-based urban alternative suggested by Mario Montessori Jnr.

With the shift in location, other changes were inevitable. For some families, the commuting distance was too great for their children to remain enrolled in Valley School. As a result, the student population ethnicity ratios changed. At the new site, African Americans and other ethnicities outnumbered Caucasians by almost 20 percent, because the school now attracted students from the new local surrounds. The Principal, Rita, revealed that the average socioeconomic status of the student

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<sup>24</sup> A charter school is an independently run public school granted greater flexibility in its operations, in return for greater accountability for performance. The "charter" establishing each school is a performance contract detailing the school's mission, program, students served, performance goals, and methods of assessment. Charters differ according to State.

population fell, with the result that the necessary supplementary funding from parents and benefactors to support a public Montessori school, also fell.

The school culture also changed as a result of the move, with some curtailment of student freedoms. In this high crime area, school entrances and exits were monitored by CCTV, and teachers only, held keycards. Walking home was prohibited. The reduction in freedom of movement however, unwittingly reinforced community-building within the school as students and parents organised car-pooling and buddy-strategies as safety measures.

Valley School members found that other compromises were also necessary in order to balance the demands of a public school with Montessori practice. One of those compromises entailed conforming to the traditional division between junior high school with Years 7 and 8, and high school which includes Years 9 to 12. Montessori theory however, specifies three-year class combinations correlated to the three-year stages of human development.

In order to meet the Montessori theoretical requirement for three-hour work periods, Valley School scheduled two 'block-days' per week, in which students spent 150 minutes in each of two long class-study blocks. It was during these block-days that students were able to accomplish the experiential and community work that provided the source of creative and academic endeavours.

### **Expectations: A Public Montessori School**

In this large public Montessori school, school administration and parental expectations to exceed state standards were extremely high, in part because Valley School was seen as setting a benchmark for public Montessori adolescent education. Additionally parents and teachers generally perceived that private schools and charter schools had more liberal agreements with state education boards with respect to achieving standardised test scores. Public schools, on the other hand, are completely government funded, which implies that accountability is paramount. This school was rated highly by several educational organisations, including the state education board, so parental expectation of performance-based scores was high.

Parents and students had the choice of attendance at the State public school that shared some of the buildings and grounds with Valley Montessori. For some, it was their first opportunity to make choices about their children's education. For many students, it was their first Montessori learning experience and their first chance at independent learning. For these reasons, teachers spent many extended hours helping parents and students to understand Montessori principles of education.

**School Day Structure:** The school day began at 8:45 a.m. and ended at 3:45 p.m. Middle school students attended an elective subject for the first period of 50 minutes. Following that, they spent the remainder of the day in their respective 'communities', alternating between math/science and language arts/humanities, with one extra lesson per day devoted to one subject among art, physical education, Latin, music or leadership. All these subjects were compulsory.

Students attended seven classes per day, mostly held within their own 'community'. Each subject class met three times per week, with a block schedule two days a week. On block days, half of a student's schedule was covered each day, extending class periods from 50 minutes to 105 minutes. This block schedule was instituted to conform to Montessori's ideal of longer lesson duration, which was designed to allow the child to concentrate on chosen work for up to three hours. It also allowed for lengthy periods of place-based experiential learning on those days.

## **Aspect 1: Student Learning and Contributions**

### **A New Place, New Learning**

Valley School students spent approximately one-third of their total timetabled 'class' time in place-based activities, because community service and experiential learning formed the conduit to the academic curriculum. That is, a majority of the content of curricular subjects including language arts, math, geography, art, music, and history, was built around community service or integrated with experiential studies.

This approach to the practice of Montessori adolescent education was an adaptation of Montessori's farm school principles, as the program organiser, Melanie, explained:

If you have a farm-based rural program, then the energy exchange occurs through the land and its produce, which extends into service. If the program is urban-based, then the exchange is through people; they become the medium, the currency, and the energy exchange happens through them, in service directly. What makes a city program work in the way that Montessori intended? In her day you could base it all on the farm, but now you can't. So you must do something that's related to them in the real world, in the city, and so that service aspect becomes absolutely key (Interview, 12/10/09).

As the farm program devised by Montessori was organised so that academic work originated *from* the farm activities, so at Valley School, much of the academic curriculum relied on the community service program and experiential studies as stimuli for studies, writing, community-building, and performance.

Debra, a humanities teacher explained how her interpretation of adolescent education as real-world, and experiential, accorded with Valley School's curriculum:

The fundamental purposes of education of the adolescent are to prepare them for adulthood by scaffolding their experiences, with all of the pieces of life an adult needs to take care of. For example, interactions with humans in a business environment, or work environment, or worldly environment, or social environment, managing choices that will keep them healthy and safe and happy. Those are the things that I think are the most important, and the academic piece has to be there because otherwise they won't have any choices (Interview, 13/10/09).

Every aspect of academic class work and experiential study at Valley School intertwined problem-solving, direct investigation, research techniques, inquiry, and occasionally data analysis, into the students' activities. In most cases students worked together in groups assisting and supporting one another so that projects could be completed to meet the conditions of learning.

### **Student-centred, Collaborative Learning**

Student learning experiences were supported by encouraging and modelling collaboration and lateral thinking in most activities. Bruno, a math-science teacher, described his deliberate strategies to foster group interactions that maximised the skills of each individual in the group, as indirect instruction in the advantages of collaboration:

I work into the curriculum the option for students to work independently or in their cooperative project group and, to try to foster those interactions, I will often have little challenges for their project group, and then it's not an option but a motivation, 'specially for those that prefer to work independently. I also try to incorporate activities that require different sets of skills – some that require communication skills, some that need manipulative skills – so it draws on the strengths of different students, and then I talk really openly about how social groups evolve into a high-performing team by drawing on each other's strengths, and compensating for, or overlooking the individual weaknesses (Interview, 4/2/10).

Many of the teachers described similar approaches to motivating and encouraging students to think and act collaboratively as a pathway to independence.

When the students described the learning experiences they found most enjoyable, most of them described their work as hands-on and collaborative:

We're very hands-on, so if we want to explore something, we go out into the real world and use real-life examples to interpret say math problems. We don't have to memorise everything, because we actually do things for understanding (Student, Focus Group Interview, 11/9/2010).

## **Independence**

It was noticeable during observations and interviews with teachers at Valley School, that in fact, students did not initiate or design many of the practical aspects of the curricular program studies at Valley School. When the teacher suggested or sketched out a planned activity, students would generally negotiate for alternative ways and means, but their ownership of the program was not so encompassing that they planned and organised classroom initiatives themselves. The teacher outlined the general direction, and students followed, with some variations.

One aspect of the overall program in which the students exercised substantial independence and initiative however, was in the individual community service aspect. As a condition of graduation in Year 12, students were expected to have accumulated over 270 hours of documented independent (extra-curricular) community service. Service, documentation, and certification remained the responsibility of each individual student.

## **The Music Program: Integrated Learning with Initiative**

One area of learning in which students showed outstanding enterprise in performance and organisational capabilities was in the music program. With a variety of music styles, and a steel band, several jazz groups and stomp bands, music was one of the most influential learning activities at Valley School. It offered students many opportunities to demonstrate ownership and commitment to the program by designing, leading, and sustaining a musical program for performance. The music teachers both encouraged such resourcefulness as an indication of the students' passion to perform, development of independence, and collaborative experience. In addition the music program fostered students' enthusiasm to engage in a community service providing entertainment while raising money for donation to charity as an aspect of the school's community service program.

The music program was also responsible for raising students' self-esteem. An increasing number of students who had previously performed poorly in academic areas, and had been marginalised in consequence, discovered that music was valued as a source of collaborative learning, organisational strategies, and community service at Valley School. With public recognition and appreciation as musicians, these students developed study-buddy relationships both within the student community and in the larger local community that helped improve their progress in other subjects.

Musical concerts in the wider community were a recognised part of developing learning/performance experiences, and raising money for charity. The students often arranged every aspect of these performances themselves, from deciding and liaising with community organisers about where a concert would be held, seating and performing arrangements, the place and times, and approximate numbers. Students also arranged the program, organised their practices and rehearsals, and made transport arrangements so that all participants were able to attend. The music teacher explained that at first he had helped the students make the arrangements, but gradually they had assumed responsibility, and successively taught their peers the skills and techniques of organising performances.

Bill, the music co-ordinator and a long-term staff member at Valley School, described his perspective on educating adolescents as social change agents:

One of the most important things we do is educate these young people as whole human beings who can contribute to a community in helpful ways.

We help them to understand that we are all capable of making positive contributions, whether that's through the arts, fundraising, through being part of a community's health, but essentially, helping them to find ways to connect with that larger community so they can see themselves going from the passive observer to the active participant. (Interview, 14/10/09).

Clearly the music program was at the centre of the integrated curriculum, in addition to fulfilling other aspects of the Montessori curriculum, such as identity development through collaborative relationships with peers and community folk.

### **Student Assessment Strategies**

Students wrote reports about their community service work for presentation to class and also to add to their study/assessment portfolios. They also kept running records of place studies, such as regeneration of part of the local river, trash cleanups, and roadside weeding, as well as narrative experiences relating to community services, farming work, and concert performances. Some of these were published in local newspapers, or in the school newsletter. The review nature of such writing constitutes understanding, and an evaluation of the learning activity.

On the whole, community members were not contributors to student assessment, apart from casual verbal reports. However, reflections shared between students and farm-workers, students and community organisers, and more frequently, ideas shared within the school community meetings, integrated experiences into the learning arena and contributed to the learning of the whole middle-school community.

Debra explained how she was able to realise students' readiness for high school, from their understanding that middle school evaluation strategies were essentially a means to guide the student's work habits and attitudes, and that those assessments did not carry over to high school:

I hate it when we have these grades when we're evaluating their academic ability. I mean I think we have to evaluate something but at some point the penny drops and they say, "These grades aren't gonna [sic] count in high school..." and that's when I know they're ready for high school. Cos they've understood at their own level, "What I'm doing here isn't gonna [sic] have a giant effect on my life" although the things they're learning will have a giant effect, those aren't the things we're evaluating. It's empty

evaluation. When they get that, they're ready to move on (Interview, 15/10/09).

In general, students and teachers evaluated students' work, through peer assessment, and individual assessment, according to rubrics negotiated by students and teachers. Performances, class-presentations, exhibitions of artwork, or poster projects, were frequently held.

The athletics coach, Colin, described how he encouraged students to self-assess, review their efforts, and change their tactics and behaviour, through watching replays of student sporting performances:

When we watch a replay of the game, we ask the students, 'What could you have done differently here?' It puts the onus on them to identify, to self-evaluate, and to change their tactics. That's a powerful learning tool. They accept their responsibility for looking at ways to better themselves. And if that transfers to every other aspect of their lives, then they can't go wrong (Interview, 12/10/09).

Bruno explained that his approach to assessment was through reflection, in which he guided his community students, assisting them to critically reflect on everything:

Reflection is paramount. It's at the top of the list in all realms – about their work, their personal interactions, about their own growth, their role in their family, and I think I address all those things openly and constantly. I ask them to self-evaluate their work, always, on major projects as well as minor things like homework, too. I use lots of different techniques to help to get them to a point of reflection, often by indirect means, because I think that quality is essential to them becoming healthy whole adults. I think that one skill leads to all the other pieces as well. I want them to be compassionate, and respectful of everything and everyone, life and all the earth. I think those things grow out of the ability to reflect (Interview, 4/2/10).

Several of the other teachers also mentioned encouraging reflection, allowing students time to consider as a means to evaluating their approach and their work. Many teachers employed the use of rubrics to assist students in producing and then assessing their efforts. Creative arts and humanities

teachers insisted on written evaluations of students' own assignments and those of their peers, clarifying their thought processes.

### **Three-Way Conferences for Self-Assessment**

The 'three-way' conferences at Valley School were more often two-way in actual style. All of the parents of students in each community came into the community room together. They took a seat at a table with their child, and all over the room, students discussed with their parents their personal work portfolios. The two teachers associated with the community kept careful watch over the proceedings by walking among the tables, guiding students and parents where necessary.

In effect the conferences involved the student and parent/s, which could be a more daunting prospect for the student than three-way conferences because the teacher was mostly not present to mediate for the child when necessary.

As the teacher Anna explained:

On conference nights I already know the families I need to keep a close eye on. Even if it's the first conference of the year, with Year 7s, I know from interactions with parents, from parents' comments on the child's work, from things the student has said, which students I need to look out for. Some parents have exceedingly high expectations, and some are aggressive. You know, the usual mix of people in a community. Parents who are under stress can be unreasonable (Interview, 11/10/10).

### **State Standards**

The PBEPR links the establishment of clear and challenging learning goals to the educational program's ability to meet or exceed state standards. This latter ability is the accountability link in which public schools, charter schools, and even private schools to a lesser extent, are required to demonstrate how their programs incorporate or align with the state standards. Clearly, schools must manifest knowledge and awareness of state standards in order to receive necessary funding. Parents and students also demand sufficient alignment between school and state standards that the student is enabled to progress through the education system.

The teachers and administrative staff at Valley School, however, were universal in their dislike of state standards and standardised testing, because for Montessori

teachers, adolescent personal development and learning is not related in any way to the measures employed by the state to gauge the content knowledge of individuals and the success of schools.

Laura, Valley School's Deputy Principal, regarded the state standardised tests as irrelevant to the measures of development that a Montessori staff regards as indicative:

The way we use standardised tests to punish schools, or to punish teachers is crazy. The content of the tests is not relevant in a lot of ways to skills that are really necessary...Can our kids think? Can they write? Problem solve? The tests are not good measurements of what great kids we have. We're lucky that we do fairly well on those, because we're not paying attention to just the test. We're building confidence in our kids, so the tasks that come before us are not so stressful (Interview, 2/2/10).

Some teachers felt that there was inconsistency between establishing clear and challenging learning goals in Montessori programs, and the imposition of standardised testing. Bill, for example, mentioned the difficulties of meeting such conflicting goals:

What I see is that the teachers end up being overworked, and that's to some extent because we end up serving at the altar of government standards testing, and Montessori education. You can't sacrifice the testing and the requirements that are mandated by the state, and yet you still want to be true to Montessori, so the teachers are simply tackling both almost all the time (Interview, 14/10/09).

This provided further explanation for the long hours the teachers spent at school.

Clara, like many Montessori teachers, felt that good (Montessori) teaching ensured that the standards would inevitably be met. She continued on to describe just how difficult she found the demands of teaching in a meaningful way as she tried to cover the scope and details of standardised test material:

My personal opinion on that question of Montessori curriculum and state standards, is that if you're doing a good job teaching you're meeting the standards. If you're doing a good job, if it's good education, if it's sound, the standards will come. The reality of that is that with all of our high stakes

testing, I really have to plug through and make sure that I'm meeting every single thing, so I just try to find the balance, um, which is hard, so hard, because a lotta [sic] times it's not what I find to be the most meaningful or important but I know that I have to. None of it fits with the Montessori model, but you just have to teach them how to go about being successful on the tests... That's the hard part about being a Montessori school in our current public school system is that we have to figure out a way to do those things and still make sure that it's meaningful and that we're not wasting time (Interview, 4/10/10).

Marla explained her feelings similarly:

We walk a tightrope, trying to figure out a compromise between state standards, and our own Montessori curriculum. It's a mish-mash of just being creative, and trying to work all the experiential stuff into the standards somehow. It's not the easiest part of teaching here. And when our own approach or curriculum does not fit into the standards, what do we do, and how do we justify the time we will take away from the standards material? (Interview, 5/2/10).

Bruno spoke for all the staff at Valley School, when he described the process of standardised testing as responsible for limiting the incentives for critical thinking in students:

One thing I think that standardized testing has done to this country is we've lost a lot of our ability to think critically and to think abstractly, and so it's something that I still focus on even though it's not on the test. One of the things that is a huge disaster in this country is that there's a huge disconnect between educators and politicians and lawmakers and I think in the world of education here, there's a very big push for critical thinking, and our lawmakers are not there with us. A lot of the people in this country who are responsible for making laws about education have never been educators or trained in education in any way. So even our elementary schools are being affected by it (Interview, 4/2/10).

Bruno also mentioned that the staff spent hours collaborating so that the subjects were integrated and mutually supportive. They also compared the Montessori curricular areas to match them to state curricular requirements. Teachers at Valley School found that working collaboratively in this way ensured that State standards were met while they found support and time-saving in teamwork.

In effect, the academic learning at Valley School was ‘advanced’, according to the combined criteria of Montessori and PBEPR principles. There were some areas, such as in class-work, where students did not “own” the work as fully as they did in the music department, or in their community work, athletics, and experiential studies. This aside, a ‘maturing’ standard described the students’ decision-making process as observed by the researcher in several of the learning arenas, most notably in classroom work, where teachers were predominantly directing the work, for efficiency of time, ensuring that State requirements were met, and management of student class numbers.

As a Montessori public school, it was incumbent upon the teachers to ensure Valley School’s adherence to State requirements. They managed this task by collaborating across subjects, and integrating their programs so that the learning of their students was being reinforced in a variety of ways and approaches. Collaboration among such a large number of teachers, particularly given their long weekly school hours, was a challenging demand, but as a group the integration of learning material proved more efficient and thorough. Such an approach also ensured that teaching staff was aware of exactly how other teachers were approaching and covering the learning topics.

## **Aspect 2: Community Learning and Empowerment**

### **Community Service Work**

Valley School’s temporary location in a low socioeconomic area prompted a novel approach to community service, which now focussed on the specific interests and needs of the poor, unemployed, children, and mentally disabled individuals and their families in the larger community. Students discussed and initiated community service activities, and according to several teachers, they had become much more attuned to

issues of social justice than previously, because they were involved at a fundamental and practical level.

One of Valley School's most distinctive community services was the 'blood drive' held three to four times annually, in which students and teachers donated blood as a community service.

Bill explained that such a community service made a valuable contribution to the wellbeing of the community:

Since I don't help students contribute to the infrastructure of the city, whether it's roads, bridges gardens or whatever, I look at the blood drive I manage as contributing in another way that is similar; contributing to the blood supply of the city, to the health and wellbeing of the people (Interview, 14/10/09).

Bill also mentioned the self-worth generated in each student by donating blood. Although he didn't employ the term, 'valorisation'<sup>25</sup>, despite his deep knowledge of Montessori theory, his statement carried the same import.

During his interview, Bill also mentioned the positive ramifications of blood donation in terms of raising awareness of health issues, drugs and alcohol, with the students:

It means that they learn the reality in practice, rather than as dry theory from texts. The same goes for their work in the soup kitchens. It's confronting to see the ravages of drugs and alcohol, poor education and terrible diet, but it's a real-life awakening to the realities of those choices (Interview, 14/10/09).

Other community work that was mentioned or observed during the visits to Valley School, involved working at the Society for the Protection and Care of Animals (SPCA), working regularly in a soup kitchen for the poor and unemployed, assisting children at the soup kitchen with homework during scheduled after-school sessions, helping in a daycare facility for children of poor families, working in a women's

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<sup>25</sup> Valorisation is Montessori's term for the adolescent's process of becoming a strong and worthy person. It is experienced by the adolescent as pride in capability and trustworthiness in meeting the challenges that work and life place before them.

shelter, shovelling snow for elderly citizens, and sorting goods and clothing for a charity outlet. Much of this work served as the basis for academic research and writing in class. In other words it was not simply labour, but a springboard for intellectual development.

The students' community service work produced real results that positively affected the wider community, with regard to adding numbers to the volunteer contingent, but also in the impact of such relatively young people serving and cleaning at soup kitchens and other charity food and clothing outlets. Students also observed and began to understand aspects of social justice, as well as gaining a deeper understanding of themselves as they grappled with the emotional and moral issues involved in serving those who are less privileged.

Through the community work and the place studies that form a large part of the education of students at Valley School, students learned about and discussed social issues in community and place. Those issues and concerns were linked through meaningful discussion to state, national, and global connections, deepening students' understanding of their place in the context of the world.

Most middle-school students at Valley School, were able to articulate these understandings:

I love this school because we do community work, helping people who have problems, and learning to understand that we are all one people (Focus group Interview, 15/10/09, Student 1).

We get to help out other people and make their lives better so you know what it feels like. Helping others makes the world a better place for all of us (Focus group Interview, 15/10/09, Student 2).

Parents also expressed, in written surveys, their appreciation for, and understanding of, the experiential learning and critical thinking in which their children were engaged:

Again, I think my kids [sic] education is enhanced by first the ability to work with a diverse group of people, second the ability to use their well developed critical thinking skills, and third the willingness and need to to see themselves as an intrical [sic] part of their outside community and truly

want to have an active, positive impact on that community (Parent Survey response, 15/8/2010).

Valley School's community service work provided many avenues for students and other groups and community members of diverse interests, ages, and backgrounds to collaborate in caring for members of the larger community.

Mark explained that one aspect of 'the *erdkinder* [farm-school] pieces' is the emphasis that Montessori placed on social construction of the individual personality through community:

The fact that we encourage the community concept is great for the kids. I do feel that the bonds that the kids have is a great thing to pick up the deficits that I think our society embraces. So the fact that we do these group-initiative things, you know, the *erdkinder* pieces that we try to give them, I feel as if we're giving them more opportunity to understand themselves, and connect with each other, and the whole of society. Hopefully this will carry through to their adulthood. The community thing, is, in my opinion, one of the big things for this age (Interview, 1/2/10).

Parents generally reported a high degree of satisfaction with the community service work, experiential education aspects, the diverse nature of the people and the activities encountered by their children:

My daughter is truly a member of a community of learners. She has a broad diverse view of the world. Her peers respect each other and have fun together. They experience real active learning by going out into the real world. Her teachers are deeply committed to excellence in teaching and learning (Parent Survey response, 4/2/10, Parent1).

I think our children are "grounded." They are very responsible and articulate. They have been trained to believe their education is not about just the textbook, but, the entire world and does not end with a diploma or two. They care about others, and trust in the processes of social justice (Parent Survey response, 7/10/10, Parent 2).

### **A Caring School Community**

The fostering of community concern and closeness at Valley School began within the school community itself as this student attested:

In the community we care for one another, and everyone stands up for one another, and the older ones will stand up for the younger ones. At this school we respect one another's feelings. That carries over into our community work (Student Focus group Interview, 3/2/10, Student 1).

Many other students voiced similar feelings and opinions with respect to their close school community ties.

Parents reported almost universally that their children responded to the community ethos of the learning program. For example, this parent reflected on the rationale for choosing Valley School for the education of her daughter:

We wanted her to learn in a nurturing environment focused on her own pace to build her self-confidence. We wanted her in public school so she had the opportunity to grow up in the world community where she would learn equality and appreciate her place in society. The community service aspect was very important to us as well. We felt all these things combined would enhance her independence and make her a stronger individual better prepared to make a difference in her own life as well as the lives of those around her (Parent Survey response, 7/2/10, Parent 2).

Some of the parents also wrote that they liked the graduated social and learning experiences that begin within the school community, and classes, and extend outwards into the community. One parent expressed that commonly held opinion thus:

We love the community spirit of this school, and the way that real, true, meaningful experiences are built into their learning community, and extend out into the rest of society (Parent Survey response, 5/2/10).

Debra described the idea that caring and concern for others in the smaller community of the school carried over into adolescents' behaviour in the larger community outside the school:

I love teaching math and science, but the biggest work we do here is teaching them how to interact with other people. I think our students are ambassadors for goodness in adolescence. When we go out into the world, they really amaze people because of the way they get along and the way they have fun (Interview, 13/10/09).

## **Identity and Leadership in School Community**

Collaborative leadership was regarded as one of the core values at Valley School. From the very first leadership camp, students were challenged to find their strengths, and to lead in those areas, sharing roles in a flexible, responsible model to provide for the welfare of the community. This was apparent in a variety of models and reported from multiple perspectives, by respondents at Valley School.

Bill encouraged his students to organise music performances and concerts. He supported their choices, explained organisational details, and enthused about students who took initiative in leadership, whether by practising, organising, teaching, or conducting:

Showing kids that they can teach, that they can lead, that they can really contribute to people around them. And for myself, I still ask this question all the time: ‘How can I best serve others in my communities?’ (Interview, 14/10/09).

One of the students explained that from her perspective, development of trust and respect for others paved the way to leadership in group initiatives:

We do a lot of group initiatives, building trust so that we are not afraid to go above and beyond, to ask questions, and to take lead roles. We are one big community in a way because we’ve all learned the same things about caring and respect (Student focus group interview, 3/2/10).

Parents also frequently mentioned the development of leadership qualities in their children, due to the encouragement of the Valley School community and the emphasis on promoting empathy in social relationships:

She is a very confident and is not afraid to step up when leadership is needed. Her Montessori education has taught her to dig deeper into the reasons behind why things are the way they are and what she can do to make those things better. She is stronger, more thoughtful, more caring and understands why others feel the way they do because she has formed a bond with individuals of many backgrounds due to the opportunities her community service has afforded her (Parent Survey response, 6/10/10).

With one third of the students in Valley School living in the vicinity of the poverty line, the ability to pay for incidental excursions, in addition to the major odyssey trip<sup>26</sup> costed at \$1600 per student, would be near impossible. Yet, some of the Year communities perceived this as a community responsibility, assuming leadership in fundraising efforts, as Laura, the deputy Principal, explained:

Some of the little communities see the big debts that are part of the longer more involved excursions as community debt. They try to help each other with community fundraisers, and they come up with all sorts of creative ideas to help them raise the money so that the whole community is able to go on that excursion. Parents of students in the community help too, with organisation, ideas, transport, support and energy (Interview, 2/2/10).

In order to realise such goals, the program of learning at Valley School revolved around the notion of students developing as independent, responsible, caring, and productive members of society. To that end, the place-based and integrated curriculum, musical performances, small school communities, excursions and community service were all intended to produce well-adjusted young adults, capable of undertaking the challenges of leadership according to teachers and administrators at Valley School. Parents attested to similar outcomes, in their observations on the effects of the learning program at Valley School.

### **Farming Experiences**

The school Principal, Rita, explained that the goal of Montessori's education principles at every stage of development is to produce an independent person for a productive life in society. She questioned the necessity to achieve this end through farm-schooling, because as she understood the philosophy, the goal is the essential component, rather than the means. In Valley School's urban setting, the means to that end, she opined, must be achieved according to the place in which the school is based:

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<sup>26</sup> Odyssey Trip in Montessori adolescent education is a recent concept in which students and guides take a trip together, usually lasting for longer than a week, and often involving camping and exploring the natural surrounds and local community of an area. It is a regular event, usually held once per year per group, and was instituted as a means of bonding students in a tighter more trusting community, as a substitute for the community bonding that would be a natural effect of boarding at farm school.

Back then [in Montessori's time] they did everything to build their independence by teaching them to respect hard work. The purpose is to appreciate the world and the dignity of labour. It is to appreciate what goes on, instead of taking things for granted. That's what makes a whole person. I think we can do that. We have to live in the world as it is now. The whole principle was to prepare them for life – and life now is different. You have to look at the advantages and the prospects of your own place. What is the goal? To prepare an independent person for life in society. We are questioning the means, but that's what's wrong. We should be looking at the goal, and using the means that we have to reach that goal. It's not about the farm. It's about looking to the philosophy, and interrogating the principles that will inform the outcomes. The outcome is to produce a person who can make their way in the world with grace and dignity, who cares for their community, and who is productive in that community (Interview, 11/10/10).

On the other hand, some teachers were reluctant to abandon Montessori's inclusion of the farm as a means to adolescent education, and continued to question ways and means of incorporating an agricultural component in the curriculum. Debra explained that she had initiated a farming/market gardening elective that introduced practical experience from the academic elements that were studied in the classroom:

Even without regard for food, we all need to understand how the natural world provides for human existence. We do talk about the progression from being on the farm to doing what we're doing right now. It's not exactly the same as the vision that Montessori had, maybe. So as I say we try to put all of the things we learn in the classroom to use when we go outside the classroom. We actually take the academic piece that we're learning and apply it outside of the classroom (Interview, 13/10/09).

The farm that students visited for agricultural experience, was about fifteen miles from the school. Students relied on teachers' and parents' private transport to travel to the farm, so only 12 students visited once each fortnight, for two hours of work, plus travelling time.

The farm owners grew vegetables, soft fruit and herbs to sell at the weekend markets. Valley School students were reimbursed for their work in fresh produce, which they carried back to school to prepare for themselves, their class, or their families. It was not deemed to be a micro-economy study, because there was no exchange of money. The farm managers decided how much produce should be exchanged for the students' work. They also explained each visit's work to the students, which included the details

of how to accomplish the requisite tasks. Detailed explanations explaining the rationale behind activities, techniques and methods were not shared, due to the constraints on the farm managers' time.

### **Reciprocal Learning Relationships**

The program at Valley School encouraged adults to step outside of their conventional roles as teachers, leaders and directors, creating opportunities for adults to take on new roles as learners, and in supporting positions, as recipients and beneficiaries, in activities led and organised by students.

For the teacher, George, the purpose of education was to create motivation and valorisation in service to the community (although none of the teachers at Valley School use the term 'valorisation' in their references to Montessori adolescent theory):

Recently there's been this thing in the high school where they've been, "Are these kids job-ready? Job, job, job... I think that's a terrible way to look at things, because education's purpose isn't to make a bunch of drone workers, ya know what I mean? It's to create these spirited human beings that find worth in their own life through being able to serve a purpose in the community. So that's our goal. (Interview, 7/10/10).

### **New Relationships**

Colin, the athletics director, commented on the sustained relationships between coaches and some of the athletes, which extend beyond the standard school coach-athlete responsibilities:

Working in an urban environment like us, you have more involvement as a father-figure with a lot of our students. We're fathers to a lot of our students, because their home life is so poor. The coaches and I check their homework, their diet, check up on their grades, make sure they get home safely. It comes naturally, because we care so much about our students. So that's been a new part of it for me. I hate that it is so, but for me, it is immensely gratifying that I get to fill a gap in their lives in such a close and satisfying manner, because everything I put in is so worth it. It's the most uplifting part of the job. Those are the guys that stay with you at the end of the day, and make the work so deeply satisfying (Interview, 12/10/09).

For George, new relationships were elicited by grouping students of varying abilities, as naturally occurs in any community. He explained that when students of diverse

backgrounds, abilities and learning styles were included as contributors in open discussion, as a community, that everyone benefited from the broader range of perspectives and ideas:

This whole idea of developing the human spirit, community ... our five goals at this school are peace, community, hard work, respect...the whole idea of having everybody from different abilities work together. Just because you have a certain way of learning doesn't mean you can't learn. The one thing about Montessori is that she had this idea of giving kids challenges at all different levels. So when we have seminar, for instance, you can have kids of wildly varying reading ability discussing a novel from their different viewpoints and having something valuable to say. And the kids at the top end can help those kids down here. I hate tracking systems where you put all the smart advanced kids together. I think it's really important to share all their ideas and abilities because we have kids from such diverse backgrounds. This promotes a true community spirit of tolerance and respect, which they take home, and into the larger community (Interview, 7/10/10).

Within an educational setting in which development of personal and community values has priority over the standard discourse of quantifiable assessment standards, the basis of school accountability must necessarily be discernible in qualitative evaluations of the school community, and the school's relationships with the broader community and the place.

Whereas Montessori described the small community as the springboard to learning about the adult world, one of the students explained that community work also reflected in a reciprocal manner on behaviours in the smaller school community, with the implication that the larger community is engaged in the shared responsibility of guiding adolescents:

Our community work reflects on our school community life. What we see outside makes a difference to how we act with each other (Student focus group interview, 4/2/10, Student 1).

Another student, discussing the shared responsibility of individuals in community, and by the absence of manifest competition in the Montessori practice<sup>27</sup> of Valley School, connected competition with bullying behaviour:

We're not competitive and we're taught to love and embrace the differences between ourselves and others. When there's competition there's often bullying – in school, and in society (Student focus group interview, 4/2/10, Student 2).

Parents reflected on the shared model of caring and teaching that extended beyond the classroom, and into life itself, in which parents and community were charged with the responsibility for teaching adolescents, and the school in turn became accountable to the community in a reciprocal exchange:

The staff treats the students like they are their own children. The parents treat students that aren't their own as their own children. Parents are an integral part of the Montessori triangle so the entire triangle of staff, students and parents form a bond of sharing, caring and teaching one another things that are missing in so many other types of educational opportunities. Students don't just learn the 3 Rs. They learn about life as a whole at [Valley School], all aspects, all socio-economic levels. It is a complete education of life as it truly is (Parent survey response, 11/10/10, Parent 1).

## **Lifelong Learning**

Virtually every teacher interviewed at Valley School, and many of the parents who were surveyed, revealed that they were constantly in a state of learning, regardless of the duration of their association with the school. The aspects of learning that were detailed by respondents varied in every respect.

The Principal of Valley School, Rita, mentioned institutional learning, in which staff learned to think and manoeuvre around limiting factors involving legalities that can hamper aspects of experiential learning, such as transporting students to the farm without a school-owned bus:

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<sup>27</sup> Competition is considered anathema in Montessori education principles because Montessori believed that it did not contribute to shared human empathy or radical social justice in a reformed, just, and caring society.

Slowly, slowly we've converted the staff to where contract and liability is more the standard than it was two or three years ago. If you really want to continue to do things, you have to find a solution. We have to push people to think around the problems so that we can do things with the right parameters (Interview, 11/10/10).

Participants in every role mentioned the positive learning culture at Valley School, in which learning roles were undertaken as part of involvement with the school, not only by teachers and students, but parents, community members, the city blood bank, bus drivers and charity representatives.

Learning concrete life-skills including basic academic skills that would enable students to become competent, adaptable, and independent in the adult world, were also valued aims in Montessori education theory. Bill mentioned some of those he felt were important for adolescents to become contributing members of human society:

Another role of ours is to give them concrete skills which better enable them to do all those other things to contribute more, whether that's being able to have fundamental math skills or understand the natural environment in which they live and work and play, to the extent that they will respect it more, to be able to write well, to communicate verbally, to read music, and to collaborate and cooperate with others (Interview, 14/10/09).

Bruno's attitude to learning involved reciprocation between students and staff:

We learn from each other. It's not just us teaching the students, but the students teach us new and wonderful things every day. I look around at our staff and I think that's why they're so committed; because they're in on the secret, that the students are teaching us every day, and we love it. That's what keeps me excited about coming back every day (Interview, 4/2/10).

Some of the students were also cognisant of the idea of reciprocation in learning:

At this school everybody has many different roles because students can be teachers and teachers can be students. We all learn from each other (Student focus group interview, 11/10/10).

Marla, one of the teachers, explained that in her opinion learning ability and critical thinking were essential, but another aspect of learning culture that she identified was the notion of a safe place to facilitate learning:

Learning how to learn, is key, for adolescents. The ability to question received values. And as the students sort out their own values, we adults have to be as supportive as we can, to encourage them to be articulate as communicators, with deeply held values which they've really thought through. We provide a safe place where they can be, to do their homework, to talk with a friend, to discuss a problem with a teacher, or just be secure because home isn't always so (Interview, 5/2/10).

In sum, Valley School respondents were cognisant of the notion and the significance of lifelong learning. They were able to articulate the connections between lifelong learning, reflection, change, and social equality. In essence they were communicating that they understood the catalyst for Montessori's passion for education.

### **Aspect 3: Deepening and Spreading Place-Based Learning**

#### **Community Learning**

Valley School's impact on the greater community had ongoing significance, with respect to changing social attitudes to adolescents, transforming community ideas about education, race, socio-economic status, and community. Valley School students, at their temporary location, entered their school in a national evaluation of schooling, and discovered a sense of whole-school valorisation when they found themselves ranked third among great schools in the nation, despite their rating as 'effective', rather than 'excellent', based on the school's performance on State standardised tests.

Students of Valley School adopted their role as agents of change seriously, with regard to social attitudes to adolescents. Debra explained that the example described below was not an isolated case, but a frequent occurrence:

My students talked about the fact that people think almost all of the time that adolescents are terrible because they themselves never want to go back there and they had a terrible experience. So I tell them, "Your job when we leave this building is to show people that that's not true." And that's what they do (Interview, 13/10/09).

The comment cited below, from a parent of two children attending Valley School, reflected a profound change in attitude. This parent confessed that although she had preferred to send her children to a private school for secondary education, her husband

had insisted that they support public education initiatives. For her, particularly, the experience of education at Valley School represented a transition from a preference for uniformity of background and socio-economic level, to one of diversity:

My children are in classrooms that reflect the community. There are kids from all backgrounds, economic levels and ethnicities[sic]. I don't think it serves our children to educate them in a classroom of kids who look like them and are being raised in families with similar political, religious or cultural beliefs. They need to be comfortable when faced with differences and form their own ideas while still being respectful and empathetic to those differences (Parent Survey response, 12/10/10).

### **Celebrating with the Community**

In the years since Valley School transferred to this area, the school had become involved in the local community, and immersed itself in the local culture in many respects. Because of these close relationships, students and staff were invited to share in celebrations and festivals. The school had also shared the burden of making protests when a local housing commission area was flooded. Even during winter break when snowfalls were unusually heavy, students and teachers rallied together to help those who were living on the streets, to relocate to church halls for shelter. Students, parents and teachers assisted in the emergency accommodations, though school was on vacation at the time (Researcher's conversation with parent).

During Halloween, Christmas, New Year, and Thanksgiving, students, parents and teachers from Valley School regularly donated time, energy, and food to ensure that those who were disadvantaged were included in celebrations and festivities. This was an ongoing commitment that had been sustained throughout the time of the school's relocation.

### **Community Partnerships**

The list of organisations and individuals who partnered with Valley School in order to make the place-based program possible, experientially, financially, and academically, was extensive. Parents as well as community and business organisations assisted in numerous ways to publicise the work and the learning outcomes of Valley School students. Collaborators with the school came from diverse sections of the community, and assumed contributory roles that included mentoring, volunteering, teaching and

learning. Gifts of time advocating for, and representing the school, as well as professional expertise, financial donations and practical assistance were the mainstay of a public school program such as evidenced at Valley School.

Community needs, interests, and services, were a priority in the place-based program at Valley School. Reciprocation between the school and community partners was a large part of the exchange that drove the relationships. Parents contributed by supporting the work with provision of transport, chaperoning students and provision of expertise. Community and school potentiated one another through the exchanges.

Mark explained that it was this mutual cooperation and reliance that produced the social reform that Montessori envisaged:

So, for the society to be impacted by them, they have to get out there in society. They can't just keep it here in a building. And I like that by taking the kids outta [sic] the building, then I think we are giving something back to society a little bit. They conduct themselves in a way that changes people's minds about kids, and about society. It changes their perceptions of adolescents. I think that becomes part of that change in society. Let's get out there and show them what we're about. And that gets right to Montessori's idea about social reform. I don't think she'd want us to keep it to ourselves. She'd want us to go out there and share it with the world; to create that change (Interview, 1/2/10).

Several of the parents of students attending Valley School reflected on the experiential nature of the place-based program and the community service work that was central to adolescent learning about collaborating, understanding, and empathising with others in community:

Montessori education prepares kids for real life. When we are out together, my daughter is greeted by people from all walks of life, and most of them are people she's met in community work or experiential studies. Her broad learning and compassionate understanding about society is the best part of her education (Parent Survey response, 3/2/10, Parent 3).

## **Teacher Training**

The Montessori training of teachers at Valley School was a unique condition of their employment contract. The Montessori program founder and director of Valley School,

Melanie, an AMS-certified<sup>28</sup> teacher and trainer in both elementary and adolescent Montessori teaching, initiated the in-house training of teachers at Valley School. Later, the training program evolved to become a recognised AMS certification program in its own right, which was still organised and directed by Valley School's program director.

This connection to the school had the added advantage of ensuring that there was a readily available training program for teachers, so that their contractual obligations for training could be fulfilled, and that it originated specifically from the very program in which they were teaching. All of Valley School's teachers were Montessori-certified or in the process of becoming certified.

Clearly, one of the most influential of Valley School's policies and practices was that the teaching contract obligated teachers to begin training to become certified Montessori teachers within the first year of employment at the school. Even those teachers who had attained some other Montessori credential were encouraged to undertake the adolescent teacher-training program. This ensured that the whole of the school teaching staff was unified in their understanding of Montessori philosophy and practice.

Bruno (also employed as an instructor in the teacher-training program) explained that the outcomes were consistency and unity of teaching philosophy:

One of the great benefits of Montessori is that there is an existing philosophy, and if that matches you and your style, or if you grow into that and it's a good match, then all of the teachers in your building and the administration, hopefully everyone, shares that philosophy and that's what normalises the child so that the thing is much larger than the transfer of knowledge, much larger than that; it's about the work of the spirit. So there's a consistency and unity, a consolidation of their experience of learning (Interview, 4/2/10).

Laura, the Deputy Principal (still undergoing Montessori training), explained that teaching quality was driven by teachers' commitment to Montessori philosophy. Since

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<sup>28</sup> American Montessori Society

this certification was also state-based, it had the secondary result of reducing teacher-drift to other schools, states and systems.

The commitment of every single person in this community is to the Montessori philosophy, despite all the outside influences that demand us to be traditional in a lot of ways. We have an incredible commitment from the teachers here, and an equal commitment from the parents (Interview, 2/2/10).

### **Peace Education**

Bill explained that with peace as the goal in Montessori's theory of education, adolescents and the adults who guide them should place themselves in a position to learn the principles of mediation:

Another learning role for adults and students alike, would be to understand principles of mediation. Just watching how people, especially adults, can interact with one another in ways that do not have to be aggressive, but that they can be thoughtful, and ultimately, peaceful (Interview, 14/10/09).

He explained that the art of negotiating peacefully was an essential aspect of influencing social change through peaceful means. He described social reform in the following way:

To me, reform is all about educating people for peace, because the primary reform, above all, to me, is how well people consider each other, and think of other people as people rather than as units, whether that's consumer units, military units, or whatever (Interview, 14/10/09).

### **New Resources and Connections**

There was evidence that the relationships between school and community groups were netting financial support from a variety of groups and organisations in the community, as well as various in-kind resources from businesses and parent groups, which helped to sustain the ongoing work of Valley School. These resources included transport, assistance with trip arrangements, specialised professional support, and repairs, as well as donations of necessary technology items, equipment and musical instruments.

A number of the teachers and staff regularly attended conferences to lecture and demonstrate the work of Valley School, encouraging other schools to initiate similar

programs in their own schools, offering support and advice in particular to urban schools that were attempting to organise similar programs in their own communities.

For Valley School, the changes that accompanied the long-term shift to a different socioeconomic area of the city gave rise to many questions and complications that emerged from their work in community. Examples include the doubts and objections of parents to their children doing community service in soup kitchens located in the most undesirable areas of the city, tighter school building security, transport difficulties, differences in ethnic composition and socio-economic levels in the student population, which created problems of financial sustainability in some components of the Montessori program. There was also a number of homeless students, and a much lower ratio of students with previous Montessori experience. These represented a very small number of the obvious problems that the community of Valley School found themselves negotiating with the transfer to the new location. Yet, teachers, administrators, and students were positive in their outlook, and although eagerly anticipating the return 'home', they created a network of learning experiences from the situation.

Grant, one of the teachers, addressed the question of dealing with the complexities, by referencing the 'progressive' nature and spirit of Montessori:

We think of ourselves as being involved in progressive education – and change is progressive, right? Progressive means constantly moving, changing, responding. For Montessori, she wasn't afraid of changing the whole notion of education: the role of the teacher, the central active role of the child, the manipulatives, the environment, the idea of following the child – wow, that was progressive. We're called to be progressive still, to respond to the times, the children, the circumstances, the world. And just because it's hard, does that mean we shouldn't? Did that put Montessori off? Not one little bit. Maybe we get too caught up in our adult existence and demands, and we just go on doing the same old thing because it's too hard, too complex, too energy-draining to change, even though we are here to serve the child (Interview, 5/10/10).

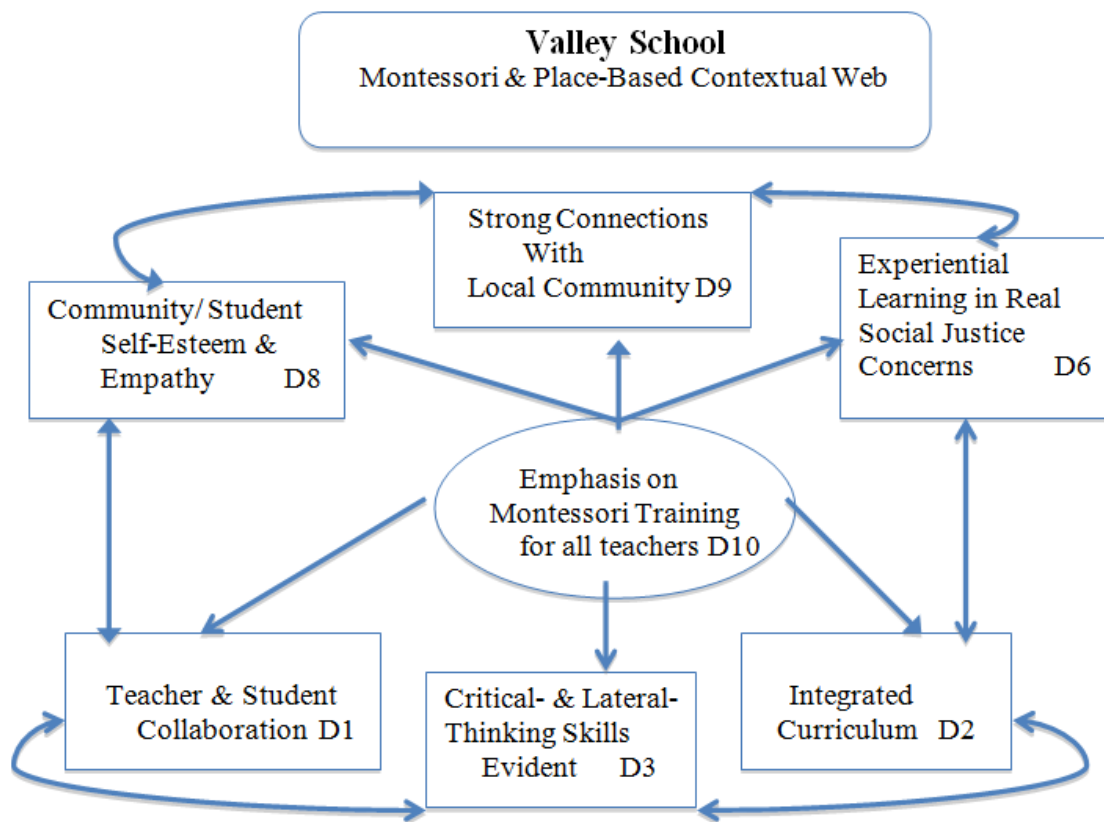
## Summary of Findings, Themes and Issues at Valley School

As a result of its move to a lower socio-economic area, Valley School community exemplified the ideal of adaptability that Montessori considered “the most essential quality” (1948/1994:61) for adolescent personality development. They turned a challenging situation into an educational opportunity not only for their students, but also for the larger community with whom they came into contact. The students recognised their roles as agents of change, and reflected their experiential community-based education in positive ways. Teachers and parents also communicated that the temporary move had resulted in a closer school community that resulted in more responsive and compassionate relationships. Although every school member eagerly anticipated the return to the school’s ‘home’ ground, they also spoke with regret about the aspects of the new place that they would miss.

In a variety of ways, Valley School improvised upon Montessori principles to create an urban place-based learning experience that responded to the needs of all students regardless of socio-economic status in a public school setting. At the same time experiential learning in actual social justice concerns revealed the social, health, and material realities of urban community life, and these concerns were incorporated into the academic and personal development work of middle school. All of these adaptations of the Montessori *erdkinder* plan to an impoverished urban school setting were facilitated by the emphasis placed on Montessori teacher training for all teachers employed at Valley School.

The philosophical underpinnings of Montessori adolescent education with a focus on pedagogy of place, promoted among all staff a unity of approach and the ability to collaborate successfully to create a more holistic and integrated educational experience for Valley School students. This above all, was perhaps the factor that ensured that such a radical move from an affluent to a high-crime, low socio-economic area resulted in a flourishing new lease of understanding about the role of place-based learning in the realm of Montessori adolescent education.

The interweaving of significant themes and dimensions that were apparent in Valley School’s educational framework, with respect to the Montessori place-based hybrid model, are illustrated below, in Figure 4.1:



**Figure 4.1 Valley School Configuration**

The salient features that emerged from the study of Valley School that are depicted in in Figure 4.1 clearly reveal a strong and integrated relationship between theory and practice of Montessori place-based principles of education. This contextual web forms the scaffold for the ensuing summary of Valley School, while employing the Aspect headings for the dimensions illustrated in Figure 4.1.

**Aspect 1, Student Learning and Contributions** of the combined Montessori and PBEPR approach, includes deep learning and thinking skills, student ownership and control of the work, as well as academic rigour and assessment. In Montessori adolescent education, this equates to intellectual growth, personal and community development through self-directed and collaborative learning, together with critical thinking and self-evaluation. Both the PBEPR and Montessori education imply that deep learning involves cross-curricular studies. All of these themes were well established at Valley School, with evidence that most themes reflected a ‘High’ level that was ‘transforming and sustainable’. Assessment alone, registered at a ‘Medium’ level due to the fact that community members were not equally involved in assessment, and students were not always involved in negotiating assessment

strategies. It is clear, however, that the other three Dimensions of Aspect 1 formed an essential part of the framework that saw the manifestation of an integrated network of collaboration and community.

**Aspect 2** of the PBEPR and Montessori combined principles, involving **Community Learning and Empowerment**, describes the relationships that encourage reciprocal learning and leadership between students and community members. These themes were clearly evidenced at Valley School with strong connections between the school and community, in which leadership roles and relationships were encouraged, and community learning was fostered in all aspects of place-based study and community service. In their former locale, Valley School's Montessori curriculum had been focused on farming, self-sufficiency, and sustainability. In some ways it could be said that Valley School encompassed in their history, the conventional *erdkinder* model, and the urban pedagogy of place model – and that the school's emphasis on Montessori teacher training ensured that the urban model was also successful.

Some teachers considered the absence of a farm as problematic, although all agreed that the urban model in practice at Valley School resulted in enhanced levels of personal development and empathetic community spirit among students. The general consensus among staff-members was that the goal of adolescent education was preparation for life in the twenty-first century, rather than to slavishly follow Montessori's precepts with regard to the farm. Every teacher reported that their own learning was augmented through their work with the students.

A further noteworthy point was that some students were able to articulate the ways in which the Valley School community and the local community mirrored one another, and that work and social practice in the one, was predicated upon participation in the other, and that these understandings translated to involvement in both the smaller and the larger community.

**Aspect 3** of the combined PBEPR and Montessori principles is concerned with **Deepening and Spreading Place-Based Learning** as the means to consolidation of school-community relationships both within the local area and further beyond to other schools and communities. The data showed that Valley School's place-based program was not only an integral part of the curriculum, but that through community

engagement, supporting structures – such as school and community policies and practices, and new resources and connections, it also informed community and family life on many levels.

Most Montessori principles were clearly supported and well-established at Valley School, although one Montessori theme that was conspicuously absent was the working micro-economy. Students were, however, expected to earn at least fifty percent of the \$1500 cost for their odyssey trip at the end of Year 8. To some extent this practice accords with Montessori's 'essential' educational reform of guiding the adolescent to economic independence, even though it was individually practised.

Formal parent education was apparently minimal, with an introduction to the school for parents of Year 7 students, and a 'parent night'. However, most teachers related that the majority of staff spent eleven to twelve hours working at school on schooldays, and some also spent Saturday mornings at school. Some of that time was expended in assisting students with study tasks, and on lesson/trip preparation, but it appeared that a large portion of time after school was spent in parent-conferencing.

Virtually every member of the teaching staff at Valley School had completed the 'in-house' Montessori teacher training. This was associated with the fact that Valley School's program director instituted and directed this course for the purpose of providing locally available, AMS-accredited training for Montessori teachers. In addition, Valley School's teaching contracts specified that teachers must begin Montessori teacher-training in the first year of employment. The availability of an accredited course of Montessori study in the locality ensured that there was a high rate of conformity.

The ubiquity of Montessori teacher training ensured philosophical unity and collaboration among teaching staff. School policies and practices were consistent with Valley School's interpretation of Montessori adolescent education theory. Teachers referenced peace education, social reform, and community care as the predominant motivations in their teaching philosophy.

## **Conclusion: Case Study of Valley School**

The case study of Valley School suggested that with high levels of teacher training and collaboration, this public Montessori school located in an urban area was enabled to forge strong relationships with local community groups. The transition of Montessori farm-based adolescent education to an urban setting was assisted by the application of pedagogy of place principles as evidenced through the aspects of the PBEPR. The continual self-appraisal of teachers and administrators indicated a school community that was actively engaged in successfully balancing the Montessori principles of adolescent education with the requirements of public schooling through the focus of place-based learning.

## **Case Study 2: Mountain School**

### **The Background**

Mountain School is a farm school. For years, the staff, parents and supporters of the school had dreamed of the ultimate site for their Montessori middle school. Eight years of meetings and fundraising eventuated in the realisation of their vision, in the purchase of this farm site in the outer suburbs. After all that thought and planning, the next step was simply to put the Montessori ideals into practice on the farm...

Mountain School's farm manager elaborated on the early plans to incorporate the farm into the curriculum at Mountain School:

I thought about how to make the farm look like a Montessori adolescent classroom, read Dr Montessori's words and asked, "What did she mean by that?" and "How can we do that?" and "What on earth are we gonna [sic] do with 150 kids up here?" and "How can I translate this to adults that may/may not wanna [sic] be up here?" (Interview, 10/2/2011).

The purchase of the land had clearly created questions and problems, rather than an epiphany with regard to the nature of Montessori's vision. The remainder of the story unfolds in the pages below.

The school was designed as a three-village model organised around an indoor Commons area, like the spokes of a wheel fanning out from the hub. Each village had space for individual work, group projects, and quiet independent study. This central farm-school building also housed classrooms for art, music, foreign language and special education surrounding the commons area. The commons was an extensive area that provided a dining, learning, meeting, and social environment. A huge fireplace that kept the whole building warm in winter separated the commons from the library at the other end. This building also contained a large commercial-style kitchen, capable of producing food for the whole school population on a daily basis.

Essentially State-funded, Mountain School was a charter school permitted by special charter with the State to educate according to Montessori principles. In consideration, charter schools are expected to perform well on all State and National standards and achievement tests. For a Montessori farm school such standardised tests and national

curricula represent educational contradictions with which the school continually grappled.

The Mountain School student population amounted to 315 in total (K-12), of which 115 students were in the middle (farm) school with 7 full-time teacher/guides and 2 part-time guides. Years 7, 8, and 9 comprised the middle school, attending classes together as a multi-age group, according to the Montessori principle of the three-year human developmental cycle. During middle school, learning activities included farming work.

### **School Day Structure**

The middle-school day started at 7:30am and finished at 2:30pm. Students reported to their Advisement (group of 18 students to each guide-advisor, with each village divided into two groups) at 7:30 in the morning for 20 minutes. They retained the same advisement guide (teachers were called ‘guides’ at Mountain School) for their three years of the middle school. During Advisement, the roll was called, discussion of school events, and then more general discussions covering news events, weather, entertainment, and topical interests were all part of the agenda. It was a means of bringing the small communities together in a relaxed social way for the beginning of another day at farm school.

Following Advisement, students followed a loose timetable for their group throughout the day. From 8:00–9:40am every student in the farm school attended Spanish and maths for 50 minutes of each. Classes in both subjects ran concurrently. There were three maths guides and three Spanish guides (of which two Spanish teachers were ‘specialists’, meaning that they were brought in for specialist subjects, such as language, music, dance, martial arts, and other specialist subjects, and may or may not be state-certificated teachers). About 18-20 students attended each class.

From 9:40am to 12:10pm students attended lessons in one of the “Occupations” (explained below), or one of the ‘Studies’ which included geography, history, literature, and the sciences, for 50 minutes and then switched. Each village was advised by two guides who team-taught, switching their group of students at the 50-minutes mark, with one double block included in the 150-minute period.

Students signed up for lessons with either of the two guides in their own, or one of the other two villages according to study-specialties. In this way, the adolescents were able to exercise choice about when, where, and what lessons they would attend each day. Sign-up sheets ensured that the numbers of students were limited to about 18 per class. The same face-to-face lesson in each subject was offered four times per fortnight, so that students had a chance to attend one of the sessions. There was a great deal of flexibility in the class arrangements, as students chose from a variety of Occupations and programs with regard to face-to-face lessons, study, and experiential activities. Though farm school students were technically accountable to their village advisor all day, they had a great deal of liberty to choose their work and workspaces.

Between 12:10 and 1:00pm, lunch, prepared by the Culinary Arts Occupation from the middle school, was served to the whole school. Guides lunched at this time with the students in the area known as the Commons. After lunch students played sport or socialised until 1pm. Some club activities also operated during this immediate post-lunch period.

After lunch-break, all middle-school students spent the remaining time in independent study until 2:30pm when the school day ended. During independent study time, student groups were supervised by a guide who helped with study or social problems. Once per fortnight this independent study time was given over to a whole school student/council meeting.

Wednesdays at the farm school were designated as Occupation days, that is, one day per week dedicated solely to the work of the Occupation, during which Occupations could tackle large-scale projects, schedule presentations by visiting experts, or plan Montessori-style, student-led ‘goings-out’, without disrupting any other classes, activities or schedules.

### **The Occupations**

The ‘Occupations’ (experiential studies) formed the basis for much of the students’ experiential learning. These included:

- A rudimentary bike shop, where integrated studies were offered in the mathematical concepts, geometry, physics, history, and design relating to

bikes. This was an experiential learning approach actualised by the concept of the bike shop. Customers from the entire school community were encouraged to bring in bikes for repair, and students practised problem solving and used their growing technical skills to independently perform the necessary services. Money earned from repairs was directed into the community micro-economy to help poorer students to pay the costs of excursions, trips and outings.

- Culinary Arts Occupation provided an opportunity for the students to work in an organised capacity towards the daily provision of lunch for the whole school campus. To that end the students were trained in food safety, working in the Occupation alongside adult assistants who demonstrated techniques related to the preparation of different foods. The students were also trained in the formulation of menu plans, timetabling preparation of dishes, order of tasks, cleanliness, and serving techniques. Mathematics and Sciences were incorporated to facilitate understanding and learning.
- Farm Occupation made the connection between the farm and kitchen by growing, harvesting and washing produce as well as preserving food for later use. The pigs on the farm were raised from weaners to pork, butchered (at a private abattoir by professionals<sup>29</sup>) and sold in advance to parents and other interested citizens. Chickens and ducks were also kept for eggs, a couple of sheep for wool, and angora rabbits for fur. In addition to the work of farming the Occupation was also concerned with the production of fibre and fabric through spinning, weaving, knitting and sewing lessons, particularly in the winter, when snow prevented outdoor farming activities. Students produced textiles and design products for use and wear.

Mathematics was incorporated for collecting data on farm harvests, planning for crop yields adequate to feed the school community, calculating the amounts of water necessary to trickle-feed a crop of vegetables, or to keep animals in sufficient space for food and health needs, or calculating, measuring

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<sup>29</sup> In Montessori's time, butchering was part of the farm curriculum: with anatomy and preservation methods included in the learning process. Two hundred years later, health and safety regulations in addition to concern for children's sensibilities, has ensured that such activities are conducted under different circumstances.

and cutting components to design specifications.

- In the Language Arts Occupation, one of the primary works involved developing and publishing a monthly magazine to include students' creative writing, reporting, and cartooning. This involved study of newspaper and magazine layouts, reporting styles, paper qualities, printing fonts, inks, and binding styles.
- Theatre Studies Occupation involved a 'village theatre' that was intended as a community theatre for the farm school and the greater school community. Students gained experience in the work and activity of operating a successful arts entertainment venue on campus. Students were guided in a variety of areas, including technical theatre, performance, and literature. Performances were produced twice annually for the entertainment of the school community including parents.
- The Water Inquiry Occupation explored the many different facets of water; its properties, geologic role and function, environmental impacts, and uses by humans. The work of the Occupation included studies of the laws, ethics, and socially critical and controversial issues that surround water, stream studies in the local river watershed, and the development and maintenance of the school's aquaponics and farm irrigation systems. Studies in earth science were also a significant part of this Occupation.

### **The Teaching Staff**

At Mountain School a small core of guides read and discussed the philosophy and practice of Montessori adolescent education theory on a regular, though informal basis. These few guides shared ideas, talked about Montessori principles at meetings and casually, while exhorting colleagues to attend training so that the whole school might function as a more dedicated unit.

These same guides led the Occupations, among a variety of other tasks, such as advisement-guide, library duty, bus duty, assisting with theatre requirements such as building props and making costumes. At staff meetings these guides were acknowledged as the 'experts' in Montessori theory and practice.

The ratio of Montessori-trained to untrained guides at Mountain School was in parity with most other schools included in this study— that is, two of eight teaching staff had completed a Montessori diploma. Half of the remaining guides had completed a five-week summer intensive course called “Orientation to Montessori Adolescent Education”. Of the remaining staff, all had been teaching in other progressive/alternative schools prior to employment at Mountain School.

Those guides who mentioned the imperative of Montessori training were also those who became responsible for developing Montessori curriculum and advocating for Montessori practices in the school.

The Principal herself had completed the five-week Orientation course, but had no other Montessori, or teacher training. She was one of the school parent-founders, and had stepped in to lead the school from its inception. Kirsty maintained that the Orientation course was a requirement of employment as a teacher at Mountain School. Three of the direct teaching staff had no Montessori training at all, despite employment at the school for several years.

## **Aspect 1: Student Learning and Contributions**

### **The Dichotomy: Standardised education and Farm-School**

The words of Celia, Mountain School’s adolescent program curriculum advisor, expressed her understanding of how this school addressed the relationship between Montessori adolescent education and pedagogy of place principles:

In my mind it [pedagogy of place] is a pedagogy quite distinct from Montessori (though certainly not inconsistent); one that came out of the sustainability movement in the U.S. I admire the philosophy behind Pedagogy of Place, and see that it could play a significant role in an urban Montessori adolescent setting (Interview, 2/12/2011).

Celia was adamant that pedagogy of place is an unnecessary addendum to Montessori’s theory, though she acknowledged that it might be useful in the urban schools. But with ‘a farm in our own backyard which easily serves as the hub of the curriculum’ she questioned the logical necessity for pedagogy of place as an inclusion in Mountain School’s learning program.

Kirsty, the Principal of Mountain School described the program of learning as a whole in these terms:

Instead of following a prescribed curriculum, students are given a curricular framework and they deeply explore their interests within that framework. We are trying to get away from prescribed education as much as possible and really going for self-discovery (Interview, 4/2/2011).

As Principal, Kirsty was answerable to the sponsors and the state for funding, and for the renewal of the charter (every three years), dependent upon the numbers of enrolments, student attendance rates, alignment with state standards, and parental perceptions of student achievement. The balancing act between Montessori ideals and the charter was, understandably, a delicate one.

Fundamentally, the Occupations as such were presented as Montessori described them in 1949. Study of the remaining subjects appeared similar to traditional methods of teaching and learning, partly due to the onus of accountability required by the state charter, and represented by standardised testing. Other factors contributing to the adoption of traditional education methods in this school included the statistical requirements of the charter school treaty, including attendance records, teacher retention numbers, and student retention rates, and graduation requirements for tertiary education. Parent expectations of their children's future prospects also influenced Mountain School's program of learning. Kirsty, the Principal, regarded these limitations to the overall Montessori program as essentially unproblematic:

That's where we're lucky to be a charter school, because as long as we're meeting the state standards and proving it by demonstrating growth by the state criteria, those are the rules, and that's the limits, then we have freedom within those limits (Interview, 4/2/2011).

### **Student-centred Learning**

In many respects the program of education as reflected in the Occupations lent itself to the notion of student-directed learning. The students generally described the Occupations as stimulating, useful and motivating:

It teaches you to go beyond the basics, learning how to manage money, the farm, the kitchen, to work hard. It teaches you to be independent. It teaches you about the economy (Student Group Interview 21/2/2011).

Students had several opportunities to engage in inquiry and investigation during their activities in the Occupations on the farm, in the hoop house (covered garden for growing vegetables), and in the water inquiry, culinary, and bike repairs areas. In these pursuits, students were encouraged to employ lateral thinking, to be independent, and to find innovative ways of solving problems.

Tom, guide-director of the water inquiry Occupation explained:

The kids are being encouraged to pursue things that they're passionate about. Then there's the group work and the communication...and the teamwork that emerges from shared chores and passion (Interview, 9/2/2011).

The students also took obvious pleasure from working on the farm, as noted in the researcher's journal:

The boys suddenly matured when they were working on the farm...they applied themselves with diligence and seriousness to their tasks. They moved compost from the heaps into the hoop-house in order to create beds for transplanting seedlings from the glasshouse. They worked alongside one another solving problems and achieving results (Research Journal 10/2/2011).

### **Classroom Learning**

Classroom lessons in language, maths, geography and history, on the other hand, were not always engaging to the same extent. The researcher's journal notes exemplified this lack of engagement:

Observed a Spanish class guided by one of the specialists. She was reading a newspaper article with the students, who all had their own copies. She was finding it difficult to maintain their attention and to keep discipline because the students were not sufficiently engaged in the activity. The body language, the small table of 6 female students gossiping and whispering, the students lying on the floor during the class...the teacher occasionally called them to order, but only with a mild suggestion. It seemed that only 25% of the class was involved, and even those students weren't fascinated (Research Journal, 8/2/2011).

From observations and incidental comments, it appeared that the traditional aspects of the teaching program established moderately challenging learning goals for only some students.

Many of the students had little previous experience in Montessori learning, so a good number of those students had not yet established the practices of independent learning, and collaborative goal-setting that are hallmarks of Montessori theory.

Some students who did have prior Montessori schooling experience, opined that the traditional classes were too guide-centred, and deficient in the freedom to pursue their own interests:

I don't really like the classroom stuff, where we just do what the guide says. Some guides just tell us to read the texts, and research for assignments, but we don't get to choose so much, so it's not interesting (Student Group Interview, 22/2/2011).

### **Integrated Learning**

It was almost as if there were two separate schools at work within Mountain School. There was some indication of integrated learning in the classroom with two (Montessori-trained) guides team-teaching in history and science, but for the most part, the Occupations were not related to other classroom work. The notes from the researcher's journal described one instance of plant biology integrated with the study of history:

Beth and Denise were team teaching their two groups. One of them was guiding students in horticulture and the other was teaching mediaeval life, but in fact they are a team, in which the students step into the mediaeval life of farming, and grow the seeds ready for the glasshouse and then the hoop barn (Research Journal, 7/2/2011).

There was clear demand for integration from both students and guides, but the emphasis on state testing and state standards hampered the introduction of a curriculum that encompassed a wide variety of approaches to incorporate challenging learning goals. The farm-manager/guide, Sonya, vocalised these thoughts:

What I'm hearing from so many teachers around here is the necessity to build curriculum around the farm. Some sort of curriculum needs to be developed for the third plane [early adolescent developmental stage] because everyone's just floundering because they don't quite know what to do. They don't know how to turn Montessori's ideas into Montessori adolescent education that holds up against the state/national curriculum (Interview, 10/2/2011).

Within the separate Occupations, however, as in real life, many subject areas were integrated in the work. The Occupations, as the name suggests, engaged the students in real co-operative work resulting in products that were meaningful to students beyond a record of their learning. For example, art and music were integrated with theatre studies, to enhance theatrical productions, but were not evident as separate specialised studies.

In the kitchen, the preparation of the lunch, discussing and designing menus, catering for the parent community during fundraisers and working-bees afforded students practice in assessing supplies, purchasing necessities, and the preparation and serving of food to a large number of people.

On the farm, adolescents employed their knowledge of physics, mechanics, geography, geology, and plant biology, to construct a gravity-feed watering system for the vegetable gardens. The researcher's journal provides evidence of the students' enthusiasm in performing their farming tasks, and their enjoyment of this work:

Other students were cleaning out a water tank and raising it, so that it can be used to gravity feed the seedlings in the hoop house by drip hoses. They were very interested in solving the problems that emerged from the chore. It was fascinating to see how patient and willing they were to assess and reassess the approach in order to find a solution and how they cooperated so willingly without the guide's intervention (Research Journal, 4/2/2011).

In the bike shed students repaired bikes for students in the whole school community, including those of the primary students. This was a natural adjunct of their explorations of physics and mechanics in their classes. The real work of solving problems, returning a bike to a sound state of repair, providing fellow students with the pleasure and practicality of independent mobility was attended with such enthusiastic collaboration that students often returned to the bike shed after lunch, and spent time there before and after school, to meet the demands of the work.

One of the students reported:

We take bikes in, assess them, and write a work plan for each that is attached to the bike. We work as a team, deciding the parts that are needed. We note the parts and the price for each. We worked out an average time for each task, so we mostly use that time calculation for labour costs. It's like being a member in a club, where we do real things repairing bikes. It's great

to work with buddies and finish up with a bike that's roadworthy. It feels really cool to do such a worthwhile thing (Student Group Interview, 22/2/2011).

These were authentic tasks that resulted in products that illustrated what the students had learned, although no state standard would include such knowledge as quantifiably testable. As the farm-guide explained:

And on some level in schools, more academic or more quantifiable is deemed better than more experiential with depth. There's a big focus on breadth, but not such a focus on depth because depth would have to be quantified in another way that we haven't actually managed to compass. Standardised testing is like taking a snapshot of the community here and saying "That's it. This is the whole essence of our community in total. There you are. That's it. You have one picture. Good luck" (Interview, 10/2/2011).

### **Difference in Classroom Styles**

Foreign language study (Spanish) was taught by two specialists and one in-house guide. The distinctions in teaching-styles between the specialists and the guide were marked, as was the level of engagement, although the guide's class was also teacher-centred and traditional in approach with printed materials, turn-taking, with standard teacher-question-and-student-response mode of achieving learning. From the researcher's journal, a description of the guide, Tom's class in Spanish:

A total immersion class in a small circle, no escape, but he is sensitive about who is able and who is feeling "off". Guide works really hard in this class to engage and involve students. Uses text (copied) as basic stimulus for vocabulary. Shows and practices pronunciation of vocabulary, then engages students in conversational practice of vocabulary. After concerted practice, students engage in group work to translate and understand the text, then regroup after 15 minutes or so to discuss the translation (Research Journal, 9/2/2011).

In contrast, the researcher's journal described a plant biology class, in which the experienced Montessori-trained guide unobtrusively observed the students as they carried out the observations, noting and discussing the changes in plant growth, according to experimental and control conditions:

Beth was encouraging some students to do scientific observations of seedling varieties and their growth and production, by observation,

description and measurement as a useful study for future food production, as well as understanding the nature and requirements of plant growth. There were seedlings of tomatoes, red peppers, lettuce, cucumbers, squash, basil, broccoli, and rocket under examination in the glasshouse (Research Journal, 7/2/2011).

This class was student-directed, reflecting independence, motivation, engagement and self-discipline. Students referred to the guide for advice, or assistance, occasionally. The guide noted student engagement and participation in her anecdotal records.

### **Student Assessment Strategies**

Assessment criteria in the Occupations were based on teamwork, time management, responsibility, independence, and problem-solving. Students were able to discuss the learning criteria of given projects and how they related to the learning goals. They also assessed and discussed the work of their own team, and occasionally, other teams in their area of work. With the encouragement and assistance of the guide, students could set the parameters for assessment of projects. The latter form of independence was the exception, rather than the rule, however.

In the more traditional arenas of the classroom-work, students had little say in establishment of criteria, though most subjects were subject to ongoing assessment, rather than examination. The expectation that students behaved in a responsible manner by completing their work in a timely fashion, and by working independently of the guide was generally regarded as standard procedure. Assessment was the guide's responsibility in almost every case.

Student progress was monitored by such measures as student work plans, guide observations, narrative reports, portfolio analysis, and anecdotal records. All of these methods were guide-controlled methods of assessing students' work. Even the portfolio work would be more accurately described as a collection of the assignments completed, but not self-assessed by the student.

Denise, a guide in the middle school explained her position on assessment tasks as an ideal in which guides as well as students ought to assess each other's work performance in order to achieve more satisfactory outcomes:

Assessment ought to be achieved by direct observation as well as indirect, so we can best work with our students, and it must be done between adults as well. How can we expect our students to live authentic lives, to assess themselves authentically, if we are not prepared to do the same as teachers with open honest dialogue and transparency? (Interview, 11/2/2011).

Staff-peer assessment had not been adopted at Mountain School however, due to staff opposition to the concept. Students did not individually assess their own work, but in some Occupations, such as the Farm, students assessed themselves as a team, and then legitimated that assessment result through discussion with the guide.

Montessori Progress Reports were completed by the guide-advisors in each 'village', and described individual students' progress in areas of personal development, responsibility, independent learning, community care, social skills, and attitudes (researcher's journal). In other words, the Montessori Progress Reports were aimed at emphasising the Montessori aspects of student learning, rather than the State Standards.

### **Three-way Conferences**

One aspect of assessment in practice was observed in the three-way conferences between guides, parents and students that were held twice annually. Students and guides discussed the students' progress and attitudes with parents. In these three-way conferences, the student was relegated to a third-party role, with occasional inquiries about rationale or organisational habits. The conduct of these three-way conferences appeared more akin to traditional parent-teacher conferences.

The results of assessment practices at Mountain School allowed guides a perspective on how students responded to specific programs, for curriculum planning purposes. In one respect, such an outcome of assessment results could be said to facilitate learning, due to the fact that curriculum adjustments were calibrated to assessment outcomes.

Assessment results were also employed in the general evaluation of personal developmental changes in individual students. In this way, the school used changes in individual attitude and application as a yardstick by which to assess the effectiveness of school programs and initiatives.

Mountain School's assessment practices in the Occupations were much more interpretive and student-centred than was evident in the classroom studies. Students worked in groups and therefore the assessment was based on group achievements and application, rather than individually focused. Students also had some personal control in the assessment of their work. They reported and discussed their own assessment as a group with the guide, who in turn made suggestions for improvements, collaborative efforts, behaviour, safety, or consistency, among other parameters.

### **State and National Standards**

Students in grades K-12 completed appropriate District Assessments, and State Assessment Program tests (or equivalent). Montessori Progress Reports or portfolios were kept as a measure of students' growth from year to year (Parent Student Handbook). With the heavy emphasis on state and district testing, more time-consuming methods of ongoing assessment, particularly where the students had a say in establishing criteria and engaging in self-and peer-assessment, were not practised as such.

The farm manager, Sonya, explained her thought processes about standardised testing as a skill set like any other skill set to be practised and mastered, as a means to an end:

Standardised tests? That's how our world functions. We don't have to change that if that's the way they wanna [sic] measure. But we can practise it, like hitting a ball, or shooting a basket. These are skill sets that have their own rules. But great players don't just have a collection of skill sets. No, they see and understand and intuit and improvise in play, and the skill sets are the glue that binds it all together (Interview, 10/2/2011).

Overall, there was a variety of factors contributing to the medley of different approaches to Montessori and place-based learning principles adopted at Mountain School. The Occupations revealed a strong commitment to Montessori and place-based education principles in many respects. At times, practice and theory segments were lacking in cohesion, in part due to incomplete understanding of Montessori and place-based principles due to lack of guide-training.

Curriculum learning and assessment practices were substantially influenced by Mountain School's charter agreement with the State Education Board. Whether that agreement was more prescriptive than those of other schools included in this study is

difficult to assess, but it is certain that Mountain School's leadership-style and top-down direction was responsible for the Principal's, parents' and school board's investment in higher test outcomes for Mountain School students.

## **Aspect 2: Community Learning and Empowerment**

In Montessori adolescent theory, local community involvement is considered by some to be the cornerstone of pedagogy of place. Montessori's approach restricted community interaction for the young adolescents (ages 12, 13 and 14) to primarily that of the safer more secure school community. Older students were encouraged to interact with the greater community outside the school once the vulnerabilities of early adolescence had dissipated through personality development in the smaller school community. Mountain School policies adhered to this principle.

In the twenty-first century, with information technology providing young adolescents with greater access to virtual social interaction than ever before, some Montessori teacher-trainers rationalise that more actual contact in the real world community during middle school, is essential for balance.

### **Community, Micro-economy, and Service Learning Combined**

School community needs were addressed in the growing of vegetables and the provision of daily lunch for the whole school. Both the culinary students and the school community derived pleasure, benefit, and a sense of unity from this program. The resulting empowerment/valorisation was an important aspect of the appeal of this program to these young people.

The money raised from the lunch program was returned to the farm and the culinary program for purchase of materials and equipment. By these means students felt that they had a degree of influence in the financial balance of the school budget. The ability to work as a team to turn farm produce into a nutritious meal was an intensely empowering learning experience for students.

Other evidence of the micro-economy in practice was visible in the use of farm animals, for egg production and pork. Most of the eggs are used in the lunch menus during the winter, when egg production is low, but in summer, eggs are sold on the

farm-stand (produce stall) at the school to parents collecting their children after school. Pigs are raised and processed for meat on a bi-annual basis. The students felt that their contributions to the farmwork were not only an enjoyable bonding experience, but were powerful learning experiences. The fact that their work made a contribution to their school community, and to their family communities was also a powerful motivating factor for them.

The students were in the process of building an aquaponics system in which they planned to breed and grow fish, the fertiliser from which would nourish the herbs sold as part of the micro-economy. Here again, the students were empowered by their abilities to design and create, and their plans to make a significant contribution to the “Farm to Fork” program, in addition to providing ‘homegrown’ fertiliser. Students also spun lambswool, which was sold by the hank, or knitted into simple items for sale. Students really enjoyed this aspect of the curriculum. Their participation in the production of useful and attractive clothing, from the raw material to the finished item, allowed them a sense of achievement that was evident in the items they produced. It was clear that the Montessori concept of valorisation was a significant ingredient in the adolescent development of the personality, despite the fact that the word was rarely mentioned at Mountain School. The concept was most certainly reified in the school’s Occupations program.

The bike repair shop was another area in which both the micro-economy and community service was a feature. The services offered have had a positive impact on both students and community. Students performing the services enjoyed their roles as mechanics and repairers because they recognised the utility and the effectiveness of their work. The fact that their work was self-sustaining, with profits used for purchase of more materials, rendered the work more effective in the students’, teachers’ and parents’ opinions. Helping other less financially able students to cover the costs of excursions was a feel-good bonus. As a means to community-building it was an empowering and effective program because it bonded the students in visible, personal and empathetic processes that resulted in valorisation and increased closeness for the group.

It was notable, however, that the micro-economy was barely mentioned by students, or guides. It was apparent, but at a beginning level.

## **Limited Interaction with Local Community**

Mountain School, although outer-suburban, is located on a farm. Prior to the purchase of the school acreage, service work in the local community was the preferred mode to personality development, as Sonya, one of the founding guides, described:

For service, we had a service afternoon every week. In the sense of authentic worlds of learning, service was always a huge part of what we did. I took kids to food banks, and we did a variety of projects. We sorted food, we worked in a soup kitchen, and local hospitals... and the students who weren't able to do service in the community without the direct supervision of an adult, would come back to the school with me and do community service at the school (Interview, 10/2/2011).

Now that the school has the farm, service work in the community is a much lower priority. There is limited interaction with the community outside the school, but for the most part, it is as the Principal, Kirsty, commented:

We are challenged with pedagogy of place. We have units called pedagogy of place, but I'm not sure we've grounded ourselves enough to manifest that. I would say that's a challenge that we haven't figured out yet as a team (Interview, 4/2/2011).

In part, the service work aspect is incorporated into the high school section, where it is a recognised requirement of the International Baccalaureate curriculum adopted by Mountain School for its High School curricular commitments.

The farm manager's view of community with regard to service work, was illuminating:

On the farm, growing food, through the fruitfulness of the earth, leads inevitably to a service experience. In the city, you have to begin with community and service, because they're the currency you have in the city. On the farm, it's the earth from which all else, including morality, springs. In the city it's about community, service, people and hearts. Both arrive at the same place eventually (10/2/2011).

In fact, the students appeared to experience both city and farm aspects of service. The bike-shop work approximated the kinds of services that Sonya designated as "people-based", whereas the farm-work might be described as "earth-based".

There was some evidence of service in the community beyond the school. The farm manager mentioned that during trips she organised service activities for the students, in which they assisted charities and foodbanks in the places they visited:

A group of students and I went up to a foodbank, where we assembled boxes and filled them with supplies for a drop program for elderly people and those living below the poverty line (Interview 21/2/2011).

She spoke of this work as ennobling for the students, taking the concept of a trip to something beyond the idea of travel for experience and learning, but also contributing in a real way to the places and communities they visited.

When we serve others, we learn a true sense of who we are. We step into the shoes of those less fortunate, and we truly begin to understand the oneness of human existence and the essence of human community. I think it's one of the deepest learning experiences for the students, because it so clearly involves the development of the personality in such a concrete way (Interview, 22/2/2011).

Students supported this evidence:

We also learn about the larger community on our trips, and in town. We can relate what we know from our school community to thinking about and understanding the greater community outside of school and how to be a part of that larger community (Student Group Interview, 22/2/2011).

Although there was little apparent interaction with the larger local community, the vestiges of the original service program remained in various forms. The significance of these traces lay in the framework they laid down for further development in the future.

### **Identity, Valorisation, and Leadership in School Community**

From the Montessori viewpoint, for the young adolescent or “social newborn”, the school class, and the whole school community constitute safety zones for developing trusting relationships, networks of friends, and strong interpersonal skills.

The program at Mountain School placed emphasis on the development of self-esteem and increasing social skills throughout middle school. During high school, (Years 10 to 12), students left the farm school activities, and gravitated into the wider community for their experiential learning through service work and work-experience.

The range of school community services in which the middle school students engaged, namely, food production and preparation, bike repair services, entertainment (through theatre studies and student newspaper), and the water inquiry Occupation, all provided a context for building access, communication, and trust within the school community. This school community service constituted a means to developing interpersonal skills, as well as laying the groundwork for increased and sustained connections later with the greater community.

Denise, one of the guides explained the fundamental ideas that provide the foundations for young adolescent social development:

...to teach them how to negotiate self, interact with others and the world around them. Helping them explore and discover their role in the community and the world at large while providing them with the tools with which to do so. Showing ways of dealing respectfully with members of the community who they may not like, and guiding them in self-esteem and collaborating with others (Interview, 11/2/2011).

When students assume leadership roles in the school community they begin to understand on a concrete level, the personal development that accompanies thoughtful leadership. Such roles were encouraged in the school community, particularly in relation to the culinary and farm Occupations, theatre studies, and school fundraising events, in which a flexible model of shared leadership was accepted procedure.

The valorisation project at Mountain School was a hybrid of standard Montessori school interpretations of valorisation, and Montessori's own definition of valorisation. Mountain School's approach required every Year 9 student to initiate a year-long project that enhanced their self-perception, and their roles as leaders, assisting them in the transition to high school and adulthood.

This special construction of the valorisation program at Mountain School was introduced as a means to induce Year 9 students to remain at the school, since they felt that the farm school was too restrictive for them at a time when students at other public schools were acknowledged as high school students. The valorisation program allowed them a chance to be acknowledged as leaders, engaging in activities that allowed them to be regarded as stepping into the adult world.

At Mountain School, the idea of valorisation was transformed from a nebulous ideal to a specific program of self-empowerment. It was so fundamental to the middle school Montessori program that graduation to the Montessori high school was dependent upon concrete evidence of personal transformation. Some of these individual projects were school-based, while others were sport-related, or founded in youth citizenship ideals, among others.

The valorisation project was also a powerful influence in the cultivation and assumption of leadership roles. An example of this was observed at Mountain School and noted in the researcher's journal:

After lunch I went to visit the rock-climbing club. They were working towards passing tests in harnessing and belaying. One 9<sup>th</sup> grader was in command and led the whole session in an admirably professional manner. I learned that this was his valorisation project. A guide was in attendance but acted only in the capacity of a club-member (Research Journal, 8/2/2011).

### **Reciprocal Learning Relationships**

In some areas of the program, particularly those associated with the valorisation project, both students and adults were encouraged to adopt new roles in relation to education, leadership, self, and community.

The farm manager explained her views on the role of the adult:

It's still experimental stages and as long as we just try to make it something that's theirs rather than something that revolves around us as adults...It's hard for adults to think differently.... For us, as adults, the crucial trait is maturity. They don't want you to be their confidant, their buddy, their special friend. They need to have someone that can hold a space for them to do that with their peers without trying to constantly insinuate themselves into it. So, having boundaries and being mature— that's crucial. It's all about the "Help Me Do It Myself" motto (Interview, 10/2/2011).

One of the guides, Denise, considered the transformation of the adult in this way:

What Montessori asks of every teacher, is that you change yourself first, and then to reflect those changes in the way you interact within the school community (Interview, 11/2/2011).

In a variety of minor ways, adults who assisted the students with projects and farming skills, or who interacted with the students during trips, in community service, and during farm-stays, adopted roles alternatively as teachers, learners, guides, advisors, demonstrators, supporters and colleagues. These were still minor and temporary roles, previewing greater possibilities for transformative and lifelong learning models for both students and the adults involved.

### **New Relationships**

The Occupations and the valorisation project both offered scope for promoting new relationships between school and community, and also for individual roles within the school community. Community service projects, because of the nature of service, encouraged new relationships that would offer mutually supportive benefits to school and community.

Among the special Occupations, the procedures of water inquiry, for example, showed potential for encouraging and supporting relationships between community citizens and students, with students reporting water-testing results as a community service. The Culinary Arts Occupation too, was occasionally requested to cater for community functions, and although these relationships were usually temporary, there was potential for new relationships to be nurtured in all of the arenas in which students and community participated in the life and activities of the farm school.

The relationships of exchange forged by the Occupations exemplified the possibilities for shared responsibility in the supply of farm produce for the culinary students, who in turn, were responsible for producing nourishing and tasty meals for the school community on a daily basis.

Accountability was also a feature of the water-testing responsibilities of the water inquiry Occupation. The guide associated with this Occupation, Tom, described the Occupation's perspective on shared responsibility and accountability:

They learn to budget their time, they learn responsibility, they figure out the boundaries, they make alternative choices, they know how to be responsible for their work (Interview, 9/2/2011).

Individual valorisation projects cultivated opportunities for new approaches to project evaluation and student assessment from the community perspective. The school Principal explained, however, that it was a system still in the early stages of becoming something more reflective of Montessori's vision for adolescent education:

This is about an evolving system. It's about bringing the student community along as we settle into an agricultural lifestyle, in tandem with the community. It's about a small community growing together in order to find our place within the larger community. Such is the connection between the farm and consumers (Interview, 4/2/2011).

### **Lifelong Learning**

For adults involved in Mountain School's program of education, ongoing learning was a necessity given that the program's intention was a closer approximation of Montessori's principles of adolescent education as laid out in her *erdkinder* model. Sonya, the farm-manager, explained that with reference to every Montessori adolescent program regardless of site:

Some sort of curriculum needs to be developed for the third plane because everyone's just floundering because they don't quite know what to do. They don't know how to turn Montessori's ideas into Montessori adolescent education that holds up against the state/national curriculum (Interview, 10/2/2011).

As a result of the farm environment of Mountain School, the aims of Montessori adolescent education, and the individualised nature of the Montessori approach to education, a culture of learning was promulgated to all associated with the school. This was communicated to students generally by the farm-manager, but also by student leaders during the fortnightly whole-school community meetings.

For the adults within the school, and those from the community who had some association with the school, whether a visiting gardener learning about the watering system on the farm, or the butcher who collected the pigs for processing, or the representative from the organic food organisation who evaluated the organic practices of the farm, each individual was in the process of learning about Montessori adolescent education, and about adolescents engaging in experiential learning on the farm.

As the guide, Denise, explained:

This is truly life-long learning. My greatest learning experience has been as a guide in an adolescent Montessori community– that is, I believe I’ve learned far more about myself, and the students have been my teachers. Any guide in a Montessori community who does not have the humility to understand that they are also a student, brings something less than honour to the work (Interview, 11/2/2011).

Denise also mentioned mutual learning and reflection, explaining that guides ought to observe, learn from each other, evaluate each other’s lessons and guiding styles, and be prepared to accept advice:

Practising self-care through reflective process, the role of the life-long learner in both the external world and the internal self. How do I reflect this learning to my students? It’s very easy to take parts of the philosophy that you like and leave others by the wayside, and I think that teachers in this life need constant guidance. They need constant observation, and the guidance that arises from that. This can be realised by observing other teachers and asking questions (Interview, 11/2/2011).

### **Developing the Model**

The Principal, Kirsty, discussed her attempts to schedule longer blocks of work-time, meaning that instead of 50-minute study periods, the work periods aimed to reflect Montessori’s principle of longer blocks of time that allowed students to immerse themselves in their interests:

As in authentic Montessori we are attempting larger blocks of uninterrupted work time, although not as long as I would like them to be (Interview, 4/2/2011).

Several guides discussed areas for potential improvement, including the long periods of independent study-time often not beneficial for study purposes, (although this was contradictory to the Principal’s outlook), the lack of integration of Occupations with academic studies, lack of Montessori curriculum, and too much time ensuring that state standards were covered.

The curriculum advisor, Celia, mentioned a list of areas that challenged guides to closer observation and ongoing learning:

Understanding the whole child, ensuring that they're taken care of socially emotionally and academically, hand and head, that they're exploring the Occupations, they're trying different things on, and really it's about the process, rather than the product. In honouring the process, the product is automatically a quality outcome. Care of the environment, care of the self, and how to move forward as a community (Interview, 7/2/2011).

The farm-based nature of Mountain School presented a challenge to the implementation of place-based curriculum that profoundly impacted learning, particularly as Montessori-trained guides attempted to structure an integrated program of work and peace studies together with development of the personality, around the centrepiece of the farm.

The ongoing difficulty could be attributed in some respects to the Mountain School Principal's prioritising of State educational requirements. Kirsty was a business woman, and her attitude was that the school's performance figures were paramount as an indicator of the school's focus and success. On the other hand, the Montessori trained staff opined that the Montessori adolescent education principles in practice would be more than sufficient to go beyond any State performance requirements. This disagreement in principle and in practice resulted in a rift between opposing teaching staff and administration, resulting in contrary decisions at School Board level and confusion regarding actual school policies and curriculum.

### **Aspect 3: Deepening and Spreading Place-Based Learning**

Although Mountain School's program was not deeply based in local community exchange, nevertheless, it was the Occupations that ensured the beginnings of integrated studies with an experiential component, while the nascent micro-economy and the multi-age composition of the middle school contributed to the integrity of the *erdkinder* program. There was potential, however, for the curriculum to generate more local community involvement in many of the Occupations studies, and for the Occupations to diversify and replace the classroom studies altogether. In doing so, the Occupations would become the link between Mountain School's farm and the local community.

The Montessori component of peace education, with its connection to social justice learning and service work was one plausible area that held possibilities for deepening and spreading place-based education. Other concomitant factors included informed leadership, and appropriate teacher training, so that teachers practised their guidance from a platform of philosophical insight reinforced by school policies and practices that supported the place-based underpinnings of Montessori adolescent education principles.

### **Peace Education**

Essentially peace education constitutes Montessori's springboard to social change, which is the implication of "new community understandings" in this Aspect of the adapted PBEPR. Sonya, the farm manager, expressed her understanding of Montessori's view of peace education as the chief way forward to human development and survival:

That's what she [Montessori] said: "An education worthy of saving mankind." She's not talking about an educational practice. She's talking about the evolution of human consciousness through peace education, to understand that conflict of any kind can be addressed, re-educated and peace can be manifested in the entire world (Interview, 10/2/2011).

Several members of staff viewed peace education as an area closely affiliated to community involvement and particularly to social justice and service work in the community. For example, Gary explained his view:

We're covering a peace education model here. We want to see the kids involved in social justice and service work (Interview, 8/2/2011).

This same view was evident in Sonya's explanation of service work:

When we serve others, we learn a true sense of who we are. We step into the shoes of those less fortunate, and we truly begin to understand the oneness of human existence and the essence of human community. I think it's one of the deepest learning experiences for the students, because it so clearly involves the development of the personality in such a concrete way (Interview, 10/2/2011).

Denise felt that the peace education aspect of Montessori's principles could be expressed as a continuum from school community to the local community:

Montessori's writing on the subjects of politics and war still resonate with current events. She also speaks eloquently for the importance of community. This is particularly important in America where so many are struggling with the breakdown of the community (Interview, 11/2/2011).

For such teachers, a more service-based curriculum would provide the key to integrating the farm into the local community, while also creating the impetus to reflective interactive learning, viewed by Montessori practitioners as integral to adolescent personality development.

At Mountain School however, the question of community service was a complex problem in relation to Montessori's theory about adolescent social development. For some staff, aspects such as personal development and socialisation within the confines of the farm, the limitations of a small school community, and little development in the micro-economy sector, were hindering the progress of the peace education curriculum.

On the other hand, collaborative learning practices, such as those observed in the Occupations, fostered a growing appreciation for peace education dimensions in Montessori education because they could also be viewed as a service to others in the small community of the group.

For Sonya, peace education was the conduit to personal and community transformation:

We have come to a strange place in our consciousness, today, where we're willing to accept such violence and suffering as recent times have shown, as if it were immutable...to an acceptance, yet. Whatever happened to a passion to change the world? That's why being a Montessori teacher requires passion, commitment, limitless energy and love. You have to love the world. We need to welcome this role in the farm school, and further, modelling to the larger community: peace, not conflict (Interview, 10/2/2011).

The students understood and articulated this connection between peace and radical community change:

The trips are another way of building community because they help you to get to know and understand others in a different context from classes and school routines (Student 1, Group Interview, 21/2/2011).

When we stay in tents at the beginning of the year trip, it's very bonding because you have struggles with lots of unfamiliar things, so it forges friendships and close relationships when you try to help each other (Student 2, Group Interview, 21/2/2011).

It teaches you to resolve conflicts in peaceful ways (Student 3, Group Interview, 22/2/2011).

Sonya's articulation of the connection between radical social change, community service, and modelling peace in community interaction, revealed a profound understanding of the paradoxical inclusion of peace education in the Montessori curriculum. For many guides untrained in Montessori philosophy, the notion of peace education is problematic, particularly because it doesn't accord with anything included in the multiple choice displays of factual knowledge required by periodic State testing. Montessori teacher training and staff collaboration would dispel such incomprehension of the place of the Peace education curriculum in Montessori adolescent schooling.

### **Teacher Training**

Montessori teacher-training was found to be an area that was generally overlooked, although much discussed by Montessori-trained teaching staff at Mountain School. Mountain School's Principal, Kirsty, apparently promoted the necessity for Montessori training for all teachers at the school as a condition of their teaching contract. However, this provision was bypassed in favour of the practicality of getting on with teaching in order to achieve good accountability ratings in the State testing regime. The agreement between Mountain School and the State Education Board may have been more closely regulated in this regard, than other schools covered in this research study.

As the farm manager suggested however, it is crucial to train as a Montessori guide in order to find meaning in the work:

For adults to be effective and successful Montessori practitioners, they need to understand Montessori philosophy, and Montessori human development, and buy into it wholeheartedly. They have to agree that that is all true, to whatever degree it is, and know that the other part is the fact that this is an education worthy of saving mankind (Interview, 10/2/2011).

Denise spoke of Montessori teaching as a vocation:

I can't think of many other professions that demand this level of continuing self-appraisal. I feel that the role of the adult is a vocation, to live a fully authentic life, to constantly assess one's efforts and adherence, one's beliefs. What Montessori asks of every guide, is that you change yourself first, and then to reflect those changes in the way you interact within the school community (Interview, 11/2/2011).

There was no program of guide education in Montessori practices and principles offered in any shape or form at Mountain School, just as there was no parent education program. Guides occasionally discussed among themselves the desirability of regular meetings for the purpose of discussion of Montessori education principles and philosophy. This was a topic that had been raised many times, but evidently teachers were not willing to relinquish lunch-times, after-school time, or holidays, in order to generate a more integrated and supported approach to Mountain School's curriculum. Leadership decisions were a major factor in this unenthusiastic attitude to Montessori teacher training.

### **School Policies and Practices**

Mountain School's policies and practices supported the ideal of place-based education to some extent. However, due to several issues, namely lack of training at teacher and administrative levels, the priority of standardised testing as per the State charter agreement, the absence of parent education, and a general lack of trust in the Montessori theory and practice of education, Mountain School remained divided between apparently traditional and Montessori practices. As the guide, Tom, expressed:

We should totally let go of the benchmarks and the [State Assessment Program] I say, trusting that the work is being covered in the Occupations. At the moment we're spending a lot of time on prep for state testing. Not teaching to the test, but making sure all the content is covered (Interview, 9/2/2011).

This is the statement of a guide with no Montessori training, but with a teaching history in alternative and experiential education. He implied that time wasted on test

preparation could be more profitably spent on place-based pedagogy, as expressed in the Occupations.

The charter school budget was supplied in part by the state government, which made Mountain School a free public school. However, the complement of funding came from benefactors and patrons of the school. This often meant that there was simply insufficient funding for the school to institute more suitable (place-based) programs. By deepening and spreading the rationale and the practice of place-based education principles effectively, financial support would become more achievable. This was a Catch-22 that had remained insoluble for some years, and could really only be addressed by prioritising place-based Montessori training for all teaching staff.

As parents freely chose to send their children to such a school, then the curriculum was, to the extent that it deviated from the traditional model, determined by the parents, and by the largesse of benefactors. Despite general tacit support for the concept of lifelong learning, parent education was a largely neglected area, with respect to the place-based focus and Montessori principles that represented the aspirations of Mountain School. The goal of deepening and spreading the place-based nature of Mountain School's approach would have benefitted immeasurably with greater parental understanding and support.

Benefactors also had some say in how their money was spent. The Mountain School Board was not employed by the State, and it too, determined how the budget was apportioned, and whether the curriculum sufficiently represented the particular needs of students in that specific location. These aspects of school policy, in the case of a charter school, necessitated clarification and reiteration, so that place-based learning requirements were endorsed and subsidised.

Karen, the curriculum advisor, explained that the farm and the excursions in particular, were central to the *erdkinder* curriculum and the development of personality:

We strive to present them with opportunities so they can truly discover themselves. We meet those needs by the curriculum, through the farm, trips, field trips and the odyssey (Interview, 7/2/2011).

The issues that diminished Mountain School's adherence to place-based and Montessori principles were readily apparent from observations in the classrooms and from the interviews and observations at staff meetings. The latter were extended meetings lasting many hours, with low-impact outcomes because only three staff members (one part-time) were able to articulate Montessori principles and philosophy as the basis for decision-making. The majority of the staff held quite different opinions based on their previous experience in other (generally progressive) schools.

With Montessori teacher-training for all of the staff including the Principal, a place-based curriculum grounded in local knowledge and characteristics could be drawn up and put into practice, with collaborative support based on actual knowledge of Montessori principles. In this way, the divide between the farm and the classroom lessons would be dissolved, and school policies and practices would in fact support the ideals of place-based Montessori adolescent praxis. In turn, these changes would profoundly affect the deepening and spreading of the place-based education component in Mountain School's program.

### **Summary of Findings, Themes and Issues at Mountain School**

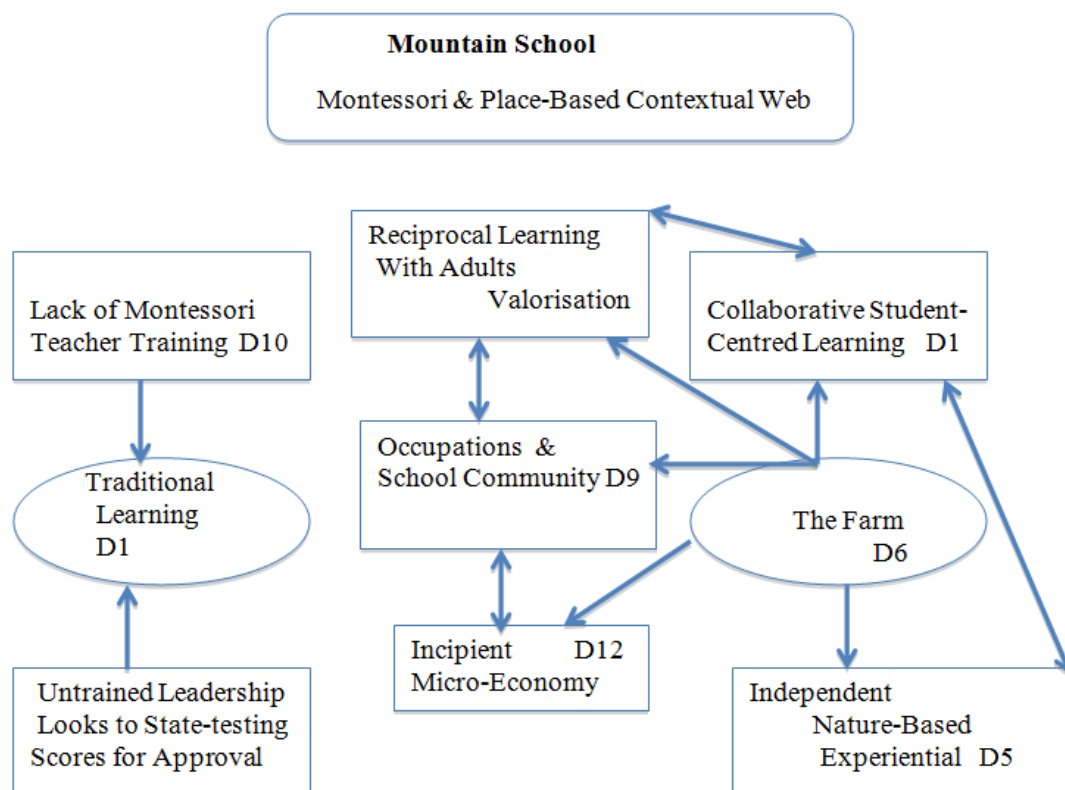
Mountain School's community experience was primarily confined to the school, apart from opportunities provided by trips and excursions to mingle with wider communities. This meant that data relating to all Aspects of the combined Montessori and place-based learning principles were based on the *school* community rather than a wider community interpretation, although the latter was referenced wherever possible. Mountain School's rationale for limiting wider community contact for middle school students was that Montessori's writings indicated that the young adolescent's personality is developed within the safety of the small school community. Mountain School's high school students (Years 10, 11, and 12) spent more time practising service work in the local community, and internationally as well, as befitted their adoption of the International Baccalaureate to furnish a Montessori-equivalent curriculum.

To the extent that Mountain School was divided between, on the one hand, the influences of traditional, teacher-centred and state-standards based education and, on

the other hand, Montessori education principles, then the evaluation of Mountain School's accordance with the combined Montessori and place based education principles might also be perceived as occurring at different levels of development. To some degree, this demarcation could be attributed to the fact that Mountain School was caught between the necessity to meet the conditions of their charter with the State Education Board, and their desire to realise the theory of Montessori adolescent education in practice.

Mountain School's praxis, incorporating a working farm into the twenty-first century US educational criteria of a charter school contract, was problematic to some extent. This conflict was raised by Mountain School's adoption of Montessori's original *erdkinder* plan for adolescent education, and the concomitant desire to follow the model despite numerous disincentives including parental expectations, legal obstacles, health and safety imperatives, as well as the difficulties of integrating farming and agricultural learning with State Standard benchmarks. Mountain School's farm manager ensured that her initial training, and ongoing reading of Montessori's principles enabled the students' *erdkinder* experience to mesh with place-based and State education learning criteria.

Clearly, the farm structure integrated key dimensions of the Montessori Place-based hybrid model in a learning network that reflected community and personal development criteria, whereas the traditional learning schema demonstrated little, if any, correspondence to the Montessori place-based learning principles. Figure 4.2 below succinctly illustrates the situation:



**Figure 4.2 Mountain School Configuration**

According to the lens of the Montessori and PBEPR Aspects, it is apparent that for **Aspect 1** (Student Learning and [Community] Contributions), in the Occupations, there was some integration of curricular material, in part because the Occupations were based on the tenets of place-based learning and Montessori principles. The focus in the Occupations was, however, found to be in direct contrast to classroom subjects that were taught in a teacher-centred traditional manner, with students having little ability to choose, negotiate, or to follow their own interests.

Some of the teachers expressed dissatisfaction with aspects of the learning environment, such as the lack of integration of curricular learning with the farm activities, the time spent on teaching for standardised testing, the long periods of independent study that they felt were not well utilised, and the lack of community service which they saw as integral to social reform and peace education. A number of teachers also mentioned the absence of a really powerful parent-education program as a distinct disadvantage in unifying school learning with parental understanding and support.

**Aspect 2, Community Learning and Empowerment,** involves arenas such as connections and access between school and local community, promoting school-community relationships and the role of leadership, and stimulating a culture of learning. Mountain School was the only school included in this research study in which Montessori's 'three-year cycle' was operational in full— that is, all of the time, with the whole three years. However, with many other key principles of Montessori adolescent education theory lacking, the three-year cycle did not add any apparent benefit to the learning environment, apart from in the Occupations, where older students assumed leadership in safety, organisational, and operational aspects of activities, and younger students were mentored and guided by the more mature students. There was some vestige of a micro-economy in operation, but students had little or no hands-on experience in the financial management of proceeds from their work.

Mountain School's farm was well-organised and functionally useful, supplying fresh produce to the kitchen for daily lunch preparation, selling excess at the farm stall to parents. Students predominantly owned the farming work, and assumed independence in their activities, organisation, completion of tasks and assessment. The farm manager/teacher had completed the five-week intensive orientation to Montessori adolescent education, but for her, the course was a springboard to deep and wide reading of Montessori theory, which she pondered, interrogated, and discussed, essentially continuing her own education in Montessori principles and practice.

The school community at Mountain School was tightly knit and supportive as an integrated small community. There was little experience with the wider outside community; indeed, the middle school had very little association even with the high school community, which was housed in an adjoining building. Due to transport and distance issues, there was little opportunity to engage with a wider community beyond the school itself. Therefore, with respect to the Community Learning and Empowerment Aspect, Mountain School was observed at levels wavering between 'Low' and 'Medium', due to the fact that there was little contact between school and the wider community, and that the learning culture for adults in the school was increasing, although in a recursive manner.

With respect to **Aspect 3**, pertaining to community partnerships, teacher training, peace studies and micro-economy, Mountain School was also found to be variable in its adoption of the characteristic themes. Peace education at Mountain School, for example, was explicitly incorporated throughout every Aspect and theme of the school-community relationship.

Lack of formal Montessori teacher training, however, was generally found to be instrumental in hindering the application of Montessori principles, simply because many teachers had only a superficial understanding of Montessori adolescent education theory. A good many of the teachers had previously been employed in other alternative or progressive schools, and were relying on their prior practice, because it was ‘non-traditional’. By the same token, however, teachers were required to teach to the State standards, and to prepare students for standardised testing so that the school performed well in comparison to public schools, in order to retain their students, and their charter. Students reported far more incidental adherence to State-test preparation lessons than did teachers, who generally reported that they merely checked that all areas had been adequately covered. This conflict may have been due to divergent perceptions regarding the definition of “teaching to the test”. Students’ perceptions of the pre-eminence of such classes may also have been due to the fact that students found such lessons (and the associated tests) boring and irrelevant.

With a school Principal who was not State certified as a teacher, and had completed only an overview course of Montessori theory and practice (namely, the 5-week ‘Orientation to Montessori Adolescent Education’), actual leadership and decision-making as to the means of combining the State requirements with Montessori practice was not practicable. Consequently, the Principal ensured that State obligations were met first and foremost, and the remainder, which is to say the Montessori aspects, were left to the teachers.

Some of the teachers were Montessori trained, but this only amounted to a ratio of one in four, and it was those knowledgeable in Montessori principles who attempted to guide the school in the practice of Montessori theory. In some areas, they were successful, such as in the farming component. One of the science/biology teachers was also Montessori trained, and she contributed to the whole, through the integration

of science and the farm with history studies, in the ‘village’ that she led in partnership with another Montessori-trained teacher.

In many respects, Mountain School continued to walk a fine line between commitment to traditional accountability-based education, and the Montessori principles they had set as their ideal. In so doing they unintentionally undermined their own transformative education goals, despite having acquired the farming land as an incentive to deeper engagement with the Montessori theory of farm-schooling for adolescents.

Mountain School was observed to have attained a ‘beginning’ level in this Aspect, which reflected the middle school’s minimal contact with the wider community, lack of professional development in place-based education theory and practice, and Montessori training, without which parent education was also deficient. There was also little evidence of stimulating new resources or new connections to promote the interweaving of farm, personality and community development, and education of adolescents.

### **Conclusion: Case Study of Mountain School**

This case study suggested that lack of Montessori teacher training resulted in a limited ability to visualise and adapt Montessori principles into place-specific practice. This lack was underscored by the substandard leadership practices of a Principal lacking in both teacher and Montessori-specific training. The effect of this double strike may have resulted in Mountain School’s administrative and teaching staff’s dependence on legitimising their charter, and the Montessori education they desired, through reliance on achieving higher state testing results. A higher ratio of Montessori trained teachers would presumably have had a positive influence on the application of pedagogy of place principles at Mountain School. As it was, Mountain School appeared to have settled for some state compliance and some Montessori practices, without the theoretical knowledge to align the one with the other in such a way that both were successfully embraced in the one farm-school.

## Case Study 3: River School

### The Background

Arriving at River School for the first time, I was startled to find a Montessori adolescent school in the midst of an extensive expanse of medium-level business and industrial buildings. In fact River School itself was housed in a renovated industrial building complex. Outside, a narrow border of permaculture garden surrounding the school, softened the hard functional lines of the building's previous incarnation.

The Principal, Monica, explained her approach:

You have to negotiate what is, in order to bring this theory to life in some sort of recognizable way. So you have to find the essentials of what Montessori was talking about, and make them happen in your location wherever it is (Interview, 17/11/2009)

According to Monica, River School's learning environment consisted of two learning spaces— the inner and the outer. The inner space consisted of the school building itself, expanded and adapted as a Montessori learning environment. Classrooms, dining areas and community spaces provided opportunities for discussion, learning, and meetings. The inner environment also included a garage space for experimenting, designing, constructing, and general tinkering with a variety of media and machines.

The outer space consisted of the garden, a basketball court, and carpark. Lacking school transport facilities, the ability to travel into the wider community was limited to places within walking or cycling distance, or alternatively, parental transport assistance.

River School had only been founded five years prior to the commencement of this study, and was, as such, still finding its way as a Montessori middle/high school with a pedagogy of place focus, as expressed by the Montessori trained staff members. With 100 students in the middle school, and 240 in the high school (which included Years 9 through 12), the school was arranged with the middle school learning areas confined predominantly to the ground floor, while the high school inhabited the top floor of the building. There was some flexibility, with the art room and one or two other rooms on the top floor shared among all students.

At River School, Years 7 and 8 combined to study as a unit. As this was a public charter school, it was aligned to state determinations of middle school grading— that is Years 7 and 8 were considered middle school. Year 9 was high school and therefore outside the range of this study. As a charter school, this school would have the right to request a conformation of Year groupings in line with Montessori's three-year cycles. Students however, preferred to graduate from the middle school at the end of Year 8.

### **School Day Structure**

The middle school day began at 8:30 am and ended at 3:30 pm, Monday to Friday. Students met in advisory groups (small community group, with a teacher) for the first 15 minutes of each day before moving to a long work period until lunch (12:25pm). During the morning they would be in either Humanities (history and English) or Field Studies (maths and science) for core lessons and independent work. The extended time in core classes follows Montessori principles.

Following the lunch period of 25 minutes, and immediately after, a recess period of 20 minutes for sport and relaxation, the afternoons of each day (except Wednesday) focussed on classes in elective subjects, including art, music, Spanish, or independent work. On Wednesday afternoons, all students participated in creative expressions and community service activities. These afternoons were designed to allow students a chance to engage in creative, physical or service oriented activities, often times out of the building. Extra-curricular activities such as clubs and sport, and additional tutoring finished at 6pm.

## **Aspect 1: Student Learning and Contributions**

### **Collaborative Student-Centred Learning**

Curricular learning was based on hands-on group work, with maths and science denoted as Field Studies. This meant that the students studied these subjects through extended-project field work carried out at home, such as weather projects, measurements and estimations of the home environment, surveys, and neighbourhood projects studied independently, both within and outside of formal school hours.

The extended project style of learning adopted by River School was based on class introduction to a topic of study. Students were expected to formulate their own questions, to design a study in which they investigated, solved problems, analysed the results and presented the project both as a class presentation as well as in some material form. In this way, numerous learning opportunities arose that engaged students in a wide variety of learning strategies. Class updates, and interim checks and reports during scheduled class-time ensured that students were remaining focussed and making progress, while allowing them the freedom to work independently for the most part.

This approach was explained to students and parents as encouraging independence, depth of learning, and personal responsibility for work and study. Independent work time was extended to allow students to collaborate in the formulation, production, and completion of large projects. Much of the State-mandated curricular content was covered by these large projects in these subject areas. Collaborative learning and peer-support were encouraged during independent work-time.

The curriculum advisor for the middle school, Bart, trained as a Montessori guide after graduating as a humanities teacher. He was one of the founders of River School. He described the education at River School as:

Education grounded in Montessori's ideas, that is, based on empirical study of humans, not based on efficiencies or transmission of information, is what we're doing (Interview, 20/11/2009).

Many of the parents referred to the kind of deep learning their children experienced about themselves, place, and society. One of the parents described her daughter's learning, thus:

She has been able to expand her abilities and capacity for leadership, creative writing and deep thinking about a wide variety of topics and interest areas (Parent Survey Response, 5/12/2009).

Another parent wrote:

Here, the education is not about learning facts but how to think, integrate knowledge and learn how to learn! They have stronger critical thinking and problem-solving skills. Plus they have developed a greater awareness and openness to the world around them (Parent Survey Response, 12/12/2009).

## **Independent Learning**

The extended project style of investigation, exploration, and research in their home neighbourhoods allowed students to demonstrate their ownership and commitment to their learning, through designing and sustaining aspects of the project independently. Collaboration in skill-acquisition and inquiry, in addition to the presentation of their work to peers, augmented and supported this style of student-directed learning.

Carl, a guide without Montessori training, who had formerly taught at a progressive arts-oriented school, explained these ideas:

So by giving them a lot more freedom here to study what they want to study in a certain area, you're giving them the passion to learn what they need to do to share ideas and enthusiasms about their interests. When they're inspired, then it's all coming from them, rather than trying to please someone else (Interview, 10/11/2009).

The students were enthusiastic in their descriptions of the degree of independent learning and student ownership of their learning:

... We are encouraged to think in an original way so we don't have to answer in the way the teacher expects, but our answers are valued for our independence of thought (Student 1, Group Interview, 4/12/2009).

Here you have more independence to learn in the way that suits you best. It keeps it interesting for everybody (Student 2, Group Interview, 4/12/2009).

Some of us came from a French progressive school that closed down and here we set up our own French club and we asked French people in to speak with us, and we watch French television sometimes and read French magazines, and have discussions in French (Student 3, Group Interview, 4/12/2009).

Sally, a teacher of many years' experience in a variety of schools including public and private, had undertaken a week's training in Montessori theory and practice in adolescent education. She explained that the students were responsible for their own time-management and self-discipline with respect to study throughout the day:

We talk with the students about how are you going to use your time, what to do, and what are you going to get accomplished today? We're training them to use their work time well. We teach them to prioritise – we're doing that in advisory and, really, all the time. When they have independent time, we

sometimes help them to structure their work into the time they have (Interview, 1/12/2009).

At River School independent learning was promoted by all teachers in the middle school. Students were encouraged to use their independent time productively for collaborative work, or for the chance to make progress in their own planning and writing.

### **Integrated Learning through Long-Term Projects**

The students' work on long-term projects provided them with information about their local neighbourhoods. They learned, in the process of completing these studies, about the places in which they live, the concerns and politics of their local communities, and by extension through class discussions, the implications of place and process in local and global terms.

In science and maths, longterm projects involved issues such as weather patterns and their effects on flora, fauna and people; sewerage treatment, including processes, chemicals and effects; the effects of domestic chemical use on the environment; water use and pollution; domestic and industrial garbage collection, recycling, and garbage disposal.

Cross-curricular studies such as these helped to deepen students' involvement and understanding not only of their neighbourhood places, but also how such concerns relate to the decision-making processes and wider political implications that impact every community.

Bart taught humanities, so his efforts to institute a place-based curriculum revolved around history, language arts and social studies. Bart had introduced a new subject called 'Local history studies', incorporating study of selected elements of the school's place including history, geography and local culture. Students studied the geography of the area, history of American Indian population of the region, the first immigrants from other areas, slavery and its effects in the locality, and all aspects of history through to the present day, over the two-year period of years 7 and 8. As Bart explained:

One of the things we spend more time on than anything is local history, even like looking at our neighbourhood history, and we're trying to find things here that are more place-oriented (Interview, 20/11/2009).

This was also presented as a long-term individualised project-based subject.

The academic goals for each of these long-term projects were clearly articulated and discussed. Students were encouraged to negotiate goals, styles, and presentation details, so that projects met their particular interests. The students explained that the projects challenged and interested them because they were learning much more than standard content:

...here it's more about knowing how to go about learning, how to plan your time, and how to organize yourself (Student 4, Group Interview, 2/12/2009).

You learn to pace yourself because you're always given sufficient time to do the assignments (Student 5, Group Interview, 2/12/2009).

We can follow our own interests within the subject, so it's more interesting (Student 6, Group Interview, 2/12/2009).

### **The Bike Shop**

Within River School's school community, the professional manner in which the students addressed the biking needs of the community flagged the beginnings of a functional micro-economy project. Bike trips were a feature of River School's experiential learning program, and well-maintained bikes were an essential aspect of the preparation. Throughout the year, the bike shop group invited students to bring in their cycles for maintenance and repairs.

Prior to a major school trip, all bikes that would be used for transport were required to be checked, overhauled, and pronounced roadworthy for the anticipated travel. This was achieved efficiently through assessment of the working functions of each bike according to listed functional and mechanical guidelines. A form was completed, noting the areas requiring attention. These were addressed and checked off as they were completed. A fee of \$US30 was charged for a general overhaul, with extra costs for parts replaced.

During observations and interviews, students were enthusiastic in their references to the bike shop:

I'd say the bike shop is one of my favourite activities cos [sic] I've learned so much about bike maintenance and business stuff. We have a great teacher who helps us when we need advice about a problem, and it's great fun working in the garage (Student 7, Group Interview, 4/12/2009).

When we run outta[sic] school-bikes to fix, we're gonna [sic] open the bike shop for locals to have bike repairs done (Student 8, Group Interview 4/12/2009).

I reckon we should open a section for lawn mower repairs...(Student 9, Group Interview, 4/12/2009).

Some teachers mentioned the possibility of extending the bike shop's operations for the benefit of the local community. Any student who wished to be involved in the bike-shop activities was welcome to assist. The bike shop was active during lunchtime and after-school. Some mathematics and science lessons were also held in the bike shop, using the bikes as instructional examples of physics, geometry, and ratios, among other features. Ecological and sustainability concerns were also vigorously discussed.

The student bike-shop could be said to address important issues within the school community— those of independent, reliable, inexpensive, and safe transportation for commuting and for the school biking trips. In this respect, the student bike-shop offered a valuable service to the school community. It had had a sustained, positive effect on the student community, well beyond the immediate learning effects for the direct participants. Students cycled more readily, discussed the health benefits of cycling, and appreciated the independence of cycle transport. In fact it had resulted in a positive cycling culture at the school. The school had responded by providing materials and guidance so that students could construct a covered bicycle parking station where bikes could be secured safely and protected from the weather.

### **Student Assessment Strategies**

A wide range of formal and informal assessment strategies was practised at River School, from peer- and self-assessment to state standardised testing.

Peer assessment was encouraged, particularly in the humanities subjects although student assessment was also an integral part of the final presentation of extended projects in science and maths. Teacher assessment also contributed to the final

reckoning, as did the individual's self-assessment. Students were encouraged to set and negotiate criteria for assessment purposes. One student explained his understanding of assessment:

We get graded more on effort than on absolute correctness. Even though math is based on correctness, we still get graded on the effort we made, in spite of making mistakes. This is even more so in other subjects like geography and language arts (Student Group Interview, 2/12/2009).

Students were encouraged during peer-assessment to refer to the rubrics that were negotiated at the beginning of a project or extended study. The student's reference above, to the grading of 'effort' refers to presentation, design, artwork, clarity of information, detail, problem-solving, and analysis, according to the subject of study.

River School's assessment procedures also involved community members outside of the school who taught creative expressions, such as martial arts, weaving, puppetry, and book-binding. A small number of community members also assisted with gardening and construction projects at school. There was no actual *formal* assessment of students' work by community members, but comments were relayed to teachers through an attendance roll, including a few words about each student's behaviour, progress, or achievement.

The Principal, Monica, explained that assessment issues at the school were in the process of review, due, in part, to her own issues with grades:

On the grades and the assessments, I have questions about that. I'm not a fan of rubrics either, and there's a lot of rubrics...so I'm in process of phasing all those out too. Rubrics are guidelines, but they entrap us. I feel as a teacher that whenever I've used a rubric, and I filled in the boxes with numbers, and I get to the end and I say, "Oh, it came out at such and such... but this was such fine work, and it's not reflected in the final grade. So what can I change to make the total reflect the actuality?" And then you put it in the computer, and it's a Powerschool, (that's a program for recording and accessing student data), and so you plug those numbers in and then you think, "Oh gosh, Sylvia ended up with a D. How could that be? But that's what Powerschool says, so I'll just write good things in my report..." I think it's awful (Interview, 17/11/2009).

Sally's perspective clearly summarised the complexities of student evaluation at River School:

We look at the whole student, that's what I like about our conferences; that we don't just look at their assignments. It's not just about the assignments, it's about who you are as a person, and how you work during work-time and how you interact with the social group and all those pieces that are part of being a developing whole person (Interview, 1/12/2009).

### **Three-Way Conferences for Self-Assessment**

Three-way conferences involving the student, parents, and teachers, were held twice annually at River School. This was in addition to the use of the computer program, PowerSchool, which allowed students and parents to check assignments, personal grades, and assessment comments at any time.

Carl, the music teacher, explained the advantages of three-way conferencing as a method of bringing the student face to face with the reality of their own progress, and as a stimulus for assuming greater personal responsibility for their learning:

... when they [students] have three way conferences and they tell you about how humiliating it was to show their parents all their stuff-ups and their failures and they'll say, "Oh my. I never wanna [sic] be in that awful position again, so I do things a lot better now, cos [sic] I don't wanna [sic] have to go back into the dark place where I admit to my parents that I'm not so great..." That's one of the great advantages of the three-way conferences. They show their stuff, and they realise themselves, where they're really at (Interview, 10/11/2009).

The Principal discussed her wish to see the individual developmental needs of students placed ahead of evaluating the students by grades:

I don't think it's necessary to practise competition before you experience it, so for the sake of evaluation, I'd like to see all comparatives discarded. As adults, we don't refer to others' performance levels as a grade. I reject the disrespect implied by adults grading children, at any time. I think if we work on their developmental needs, by not setting up a competitive environment, they'll be more prepared as well-rounded people to deal with whatever the world throws at them. As long as the social environment is healthy, then competition can be a thriving force, but ...well, I don't think it's been too damaging here, it's just that I see a little too much emphasis, but again, it's just the way we frame it, by the emphasis we place (Interview, 17/11/2009).

## State Standards

River School's charter with the State Education Board clearly required some conformity to State Standards, but it was not as demanding as evidenced in other schools' charter arrangements covered by this study. Teachers at River School were mindful of fulfilling State Standards requirements, while simultaneously able to propose challenging and interesting learning projects.

Monica, the school Principal explained that teachers referred to the state standards as a general guideline:

I think that state assessments and regulated curriculum is partially relevant. They are incomplete as they are, so as long as you're not having to perform them all the time, they offer a relevant piece of the picture. At [River] School we're performing well on those tests, but I just don't want to over-focus on them. I've seen teachers destroy themselves with worry and anxiety about their students' performance on these tests, and it's true some teachers are judged solely on that, but I wouldn't give them that power. We take them for what they're worth at face-value and we're doing well, and yet we're being true to the pedagogy. We keep them in their proper place (Interview, 17/11/2009).

Bart was particular in his approach to referencing the standards:

Without a land-based program, it's a little easier for us to conform, to meet state-standards. For the most part, we look at the state standards, we see what we need to cover, and we work on covering those state standards. The standards don't tell us *how* to cover the material (Interview, 20/11/2009).

Molly, a graduate of the Association Montessori Internationale (AMI) Montessori Elementary Diploma, and a state-certified teacher explained her view:

You have to attach the standards to whatever you're doing in the Montessori classroom. You can find ways to attach anything and connect anything to anything, if you want, and meet the standards. But if you're talking about testing and stuff, you haveta [sic] try to do it without teaching to the test. We haveta [sic] cover certain areas, but it depends on how you present it. I find that what we already do in our study already meets a bunch of standards. Naturally, that is, without having to use a shoehorn. Personally, I like to decide what it is we're gonna [sic] do and then check later to see what meets it. It's kinda [sic] the tail wagging the dog (Interview, 12/11/2009).

Sally, a maths teacher described her approach to teaching in a Montessori setting, while ensuring that standards were met:

I always look at the state standards, and sorta [sic] loosely teach outta [sic] that. I teach in context with the science teacher, and I have my list of state standards. So by the time we got to January I looked at the list again and thought, “Oh look we’ve gotten through two-thirds of our list, so we’re good”. So we’re hitting it, but we’re just not doing it as an abstract study. We’re doing it in context like in context to science stuff, so we’re not doing it in a vacuum.... I’ve taught for a long time, so I know the core components that you havta [sic] hit, and what’s gonna [sic] be tested in state tests and stuff like that, so I can do a lot of it by ear if you will. A lot of that is just fluff. I do extensions with kids that are exceptionally gifted (Interview, 1/12/2009).

It was interesting to note that the teachers in River School were confident that the state standards would be met by the approach they adopted in their Montessori practice. It suggests, in part, that River School’s state charter was more adaptable in this respect than other state charters covered by this study, or that the teachers were more experienced at balancing a progressive approach to education with the demands of the State requirements. In addition, teachers and students at this school were making the best of a challenging situation and in doing so, extending their thinking and approach to create a profoundly progressive place-based program.

## **Aspect 2: Community Learning and Empowerment**

### **Development of the Personality in Community**

River School followed Montessori’s guidelines with respect to the young adolescents as “social embryos” developing aptitudes and understanding to make their way in the larger community, through the medium of the responsibilities and relationships of the middle school environment. The focus in the middle school was primarily on the development of the personality, as Montessori envisaged, through independence, collaboration, responsibility, and adaptability in learning. Emphasis was also placed on social skills, and learning the social mores of the adult world through the small community of Years 7 and 8, with the guidance of the adults employed at the school.

The limited access of classes to the wider community from the school base supported this interpretation.

The Principal, Monica, related her understanding of Montessori principles to twenty-first century global citizenship requirements:

I see that the skills we value in Montessori such as cooperation, intuitive thinking, emotional intelligence, multi-tasking, integrating and connecting ideas are all skills that are valued in global economies these days. If you love learning and if you are curious, you'll be better at *anything* you want to do. Anything at all...It's the complete whole productive well-adjusted person we aim to nurture and guide, whatever role they choose in society (Interview, 17/11/2009).

In essence River School's young adolescent social curriculum was concentrated on creating a caring co-operative community within the school. At this stage River School middle school students were rarely involved in significant local community exchange. The teachers explained that this was an aspect that was evolving in the school, beginning with the school community and the long-term projects undertaken in their own neighbourhoods.

There was an expectation expressed by many staff members that a community-based school was the preferred eventuality. Molly, a teacher at River School, described her vision of the ideal education system:

The whole education system needs to be thrown out, and replaced with a site-based, community-based system of small schools, because then the societal community outside is right there, so it could go hand in hand with the work of the neighbourhood in making peace and community gardens and parent involvement which would be a whole lot easier if you were on site, and you didn't have to [sic] bus an hour to get there and then you could have community and school working together and peace as a result. I see school as an integral part of community (Interview, 12/11/2009).

Several other teachers concurred with these ideas.

Until the student transport issues were solved, students' work in the local area could only amount to limited interaction with the surrounding communities, through service. The extended project opportunities enacted in their neighbourhoods, however, were

meaningful in helping to further develop students' social and personal values that would enrich their membership in any community.

Sally, a guide, explained her view on the value of even the most simple community service activities:

We're creating opportunities for them to develop as better people. We take them into parks and they clean up and beautify the area as a community service. We expose them to opportunities. We can't make them do service, or to care about their world, but we can expose them to issues of injustice, and help them to experience their caring community and to become caring people. When they show that they care about each other, and when they solve problems related to each other's care, that's gonna [sic] be much more helpful to developing world leaders and better people than solving linear equations. So through the community they become agents for social change because of their experience of caring and through being exposed to the diversity of the community, and the demands of community life (Interview, 1/12/2009).

River School's connections with the community were still at the beginning stages, with few sustained relationships, apart from those with volunteer instructors in creative expressions, and perhaps those relationships in connection with the long-term neighbourhood projects.

### **Identity and Leadership**

The volunteer teaching program for creative expressions, sports, and after-school clubs, supported adults from the community in taking on new roles as advisors, teachers, and guides in the respective activities. Volunteer parents assisted in organising fundraisers and cycle trips, while parents and community members led workshops in props-construction, costume-making, dance, and set-design for the theatre project. Engagement in such activities encouraged adults and students to exchange roles at times, as teacher, learner, expert, and entertainer – among others.

New leadership responsibilities were encouraged in school community meetings, in which students took turns to chair the weekly meeting. Students called the attendance roll in morning advisory meets, and also maintained responsibility for introducing the topic of conversation for each morning advisory meeting. The students involved in the

bicycle shop were peer-led, with students taking voluntary turns as workshop manager, accountant, facilitator, and as bike mechanics.

For community members, leading classes, teaching sports, and supervising craft and theatrical workshops encouraged new leadership roles among the adults involved in the exchange between school and community.

Bart commented on Montessori's theory of adaptability of the well-adjusted person, as an expression of finding one's place in society, and life-long learning:

The fact of Montessori children being flexible and adaptable, and developing what people are calling 'executive functioning', so, being able to plan your day, organize your materials, follow cycle activity, working in small groups. All of these pieces are very much a part of the working world, no matter what century, because I think it's a human need of being able to be a productive person. The whole point of life, one's cosmic task, is finding what is one's purpose in life. That doesn't always one hundred percent centre around employment...finding a part to play within society is critical for every person (Interview, 20/11/2009).

### **New Relationships**

The after-school projects and clubs, creative expressions, fund-raising activities, local studies projects, and cycle trips initiated new relationships between students, teachers and community members. All of these initiatives nurtured strong and sustainable relationships between individuals, groups and institutions both within and outside the school community.

Although the extended projects were primarily designed and implemented to address student learning, there is some observable evidence for new community understandings. The researcher's journal highlighted one such example:

Students reported with high enthusiasm about their neighbourhood survey results after distributing a ten-point list of suggestions of ways to save the earth for Earth Day. Sounds as if the social aspect was as enjoyable as the teaching/learning portions of this project (Research Journal, 18/11/2009).

From the researcher's observation of creative expressions classes, it seemed that specialist volunteers who came in to teach a variety of skills and crafts were impressed by the students' sense of community and their enthusiastic welcome:

Creative expressions this afternoon, and I managed to observe about nine different groups including jewellery-making, a high-energy and very demanding martial arts session, a wool-spinning and crafting class, gardening (planting shrubs to attract birds), inventions class (students design and create mechanical models), book-binding, folk-guitar, cooking, and building a rockery garden as part of beautifying the school surrounds. Students were completely immersed in their activities, and didn't want to finish at the end of the school day. Teachers expressed profound pleasure in helping the students (Research Journal, 12/11/2009).

This kind of exchange develops mutual respect between school and community. From such connections, a deeper school relationship with community becomes possible. Similarly, the local history studies, community service, the extended science/maths projects, the theatrical performance, the French club, and the fundraising ventures were all observed to create goodwill with the larger community. For the prospects of a school that is still relatively new, such contacts and community understandings are crucial for the successful development of a place-based education program.

### **Reciprocal Learning Relationships**

River School's contact with the community, though still in the early stages of development, with transitory rather than sustained interactions, has positively affected the learning of adult participants as well as students.

This was observed by a shift in adults' attitudes associated with the program, discussions with teachers, observations by students, conversations with adults involved in the program, and the comments of some who were simply casual encounters, such as bus-drivers, librarians, and community members.

Where place-based pedagogy is established, it is inevitable that the adults involved, as well as students, are part of a learning culture, finding what works, adapting to circumstances, discovering new perceptions of the world around them. At River School, this attitude was embraced through all quarters, with teachers, students, and community members learning how to locate themselves in the specifics of place through a flexible approach. As a school still establishing itself, this was particularly evident from visit to visit (of the researcher).

From the researchers journal:

Returning this time [after 4 months], I've found surprising changes throughout the school. An after-school club for the computer savvy, with the school's computer technician, learning about the finer technical details of dealing with communications technology; an early-morning yoga group has started; and another group of students are offering lessons in computer use to those with fewer skills.

A volunteer, community member also comes in one afternoon per week to teach computer keyboard skills, and an established artist has organised a specialised outdoor scenic painting class as an after school-hours activity.

The garage space for the bicycle workshop has been expanded into another room, and stairs have been constructed for a door from the garage opening onto the carpark. There is a new garden, and the whole environment inside and outside, seems much more visually orderly since the last visit (Research Journal, 16/3/2010).

This was evidence of a whole community learning and changing in response to the conditions at hand, making the most of the environment, encouraging learning across all sections of the school community.

One of the teachers, Carl, commented on his learning, adapting to the learning culture of the school:

Every year I've been letting go more and more of being the teacher, and I'm finding that the more I stop doing all that stuff, the more they [students] do it, the more they produce, and the more kinda [sic] real learning they do. In a sense, I'm planning fewer lessons than I did before, and now I spend most of my time planning how to manage the space, and how to ensure that everyone has what they need (Interview, 10/11/2009).

### **A Shift in Attitude**

The ways in which River School adapted to the circumstances of their location in an industrial area, by initiating the extended neighbourhood projects, for example, provided sound evidence of how the place-based program had impacted the curriculum. The plethora of after-school activities, the increase in numbers of community members to assist the teachers and students, the numbers of community members who supported school fund-raising events— all these factors inspired flexibility and adaptability because of the changes they stimulated in the teaching/learning culture of the school.

Place-based learning was an integral part of the curriculum at River School, incorporating state standards, engaging students of diverse abilities and interests, developing community and personality, and changing in response to varying conditions.

The majority of teachers at River School had adapted to the place-based program and the community ethos of the learning environment, and reported modifying their teaching style to incorporate a more integrated curriculum, individualised learning, independent study, a more open approach to meeting state standards, and a variety of assessment strategies. There was more collaboration and sharing of ideas and resources among teachers than they reported from previous school-teaching experiences.

For Bart, an AMI-trained elementary Montessori teacher, encouraging students to engage in communal sharing of learning, opinions, and ideas had become a priority:

I think helping them develop their voice is another really important piece, helping them be vocal so they can learn that skill of advocating for themselves, speaking out, becoming engaged, especially for those who belong to that group where they're more shy, or apathetic and who sit back and don't engage (Interview, 20/11/2009).

Similarly, Carl, (still completing River School's home state teacher-training) felt that self-expression and critical thinking skills were essentials for personal and learning development:

I feel like the really important skills when they go to college are about expressing yourself in written words, and orally. Being able to read well, and I think all those things happen in a Montessori environment. I don't find facts to be that important, and all those state standards and tests. I think if you have the ability to think critically, you'll be set (Interview, 10/11/2009).

Montessori's ideology of adolescent education encapsulates the notions of helping students to improve and develop themselves as learners, problem-solvers and leaders, which accords with place-based education ideals. At River School, several teachers described their rationale for teaching adolescents, and their approach.

Bart explained his view of adolescent education from the Montessori principle of self-construction in the 'prepared environment':

The crucial thing is to provide them with an environment and activities that help adolescents to construct themselves, individually and socially in community (Interview, 20/11/2009).

Sally echoed Bart's viewpoint, that educating adolescents involves development of the individual personality in community with others:

...giving them tools to succeed as an adult. Actually, it's not about educating the adolescent, it's about providing a community of support for the adolescent to experiment and figure out who they are as a person. It's not the math itself that's important, it's what they can get out of math study that helps them to understand and develop themselves. It's using math as a vehicle to personal development (Interview, 1/12/2009).

Bart expanded further on the question of adolescent education by referring to Montessori's ideal of education for social change and ultimately, peace:

If young adolescents can be engaged here, they can learn to develop themselves here, they can learn how to solve problems peacefully and respectfully, and they can build that ideal community. Then they take that experience with them out into the world, although much of the world does not function that way. There's also self-advocacy, learning how to speak in front of other people, learning how to find purposeful work, learning how to maintain their humanity rather than merely becoming a cog in the machine. By helping them to find their voice, to think critically, and to co-operate in peaceful ways, it leads them into a role as agents of social change (Interview, 20/11/2009).

These kinds of statements indicated a shift in the teachers' thinking away from conventional ideas about educating adolescents, as represented by the State standards. Instead, they reflected a variety of approaches to the immediate and contemporary requirements of adolescent education, by reference to Montessori philosophy and also to place-based learning principles. They also point to a willingness to challenge the status quo, and the capacity to think critically about their teaching and mentoring of students, as well as an awareness of the necessity to evaluate their teaching to become learners in a challenging environment.

### **Aspect 3: Deepening and Spreading Place-Based Learning**

#### **Community Partnerships**

Community participation in River School's education was beginning to spread, with new individuals becoming involved and new interests appearing. Some community partners were beginning to see themselves as collaborators in the work, serving as teachers, mentors, coaches, partners in shaping projects, and critical sources of time and expertise. Some organisations were involved as providers of resources and committed patrons. Several community members expressed in school newsletters and in private conversation, how much they were learning from the experience, with the implication that Place-based education was a novel idea/experience for them.

Bart explained that from his perspective, shared responsibility and accountability were essentials for a successful place-based Montessori adolescent school. He emphasised that integration and interdependency with the local community were determinants of the authenticity of the program (with respect to Montessori's theory of work), evolving economic independence, and community as a pathway to development of the personality. He specified that:

If there's integration and interdependency, then it's real. The city programs just have to make it real. So in the city you have to put it in a neighbourhood where you do have those businesses and organizations that need, or desire, or require what you produce. Or even, need the labour of mind/hand of the students and what they can do. It has to be proximal- so it becomes the whole campus (Interview, 20/11/2009).

It is notable that River School was located in a neighbourhood that apparently did not feature "businesses and organisations that need, or desire, or require what you produce." Nor was River School situated close to such facilities.

In an area where there were 41 charter schools catering to middle and high school students out of a total of 54 charter schools (including primary and elementary charter schools), and with 6 of those middle/high schools in the immediate proximity of River School, competition for patronage and financial support was fierce.

Many of the 41 charter schools listed among their attractions: individualised education, small class sizes, emphasis on community, peace programs,

interdisciplinary studies, life-skills, active citizenship and community service, cultural and ethnic diversity, field studies, caring staff committed to lifelong learning, and academic responsibility, as characteristic of their curriculum. All were tuition free schools. Most of them originated within the previous ten years. In short, on paper there was little to distinguish them from River School, unless River School emphasised the Montessori and place-based nature of their adolescent educational approach.

The university that was ‘authoriser’ for River School also acted in the same capacity for three other charter schools in the area. This meant that River School was obliged to be seen as ‘successful’ in order to maintain its protected status, by graduating a high percentage of its students to that particular university, and to others, with sound grades justifying the university’s institutional support and community partnership. There were scores of other charter schools ready and willing to take River School’s place under the university’s umbrella of authorisation. Therefore, it would appear necessary that River School emphasise the place-based nature of their Montessori program, perhaps spelling out some of the advantages of incorporating a place-based pathway in their Montessori approach.

In part, because it would help to distinguish River School from the other Charter schools in the area offering alternative education, Bart, the curriculum advisor, continued to promote the idea of a farm school as instrumental to the success of a Montessori adolescent program, despite the many viable urban Montessori adolescent programs that are changing the face of Montessori adolescent education in the US.

In the urban Montessori schools one of the things we are truly lacking is an appreciation of life in its simplicity and its complexity. We are part of the natural world as much as we try to separate ourselves from it. Being on a farm puts students face to face with life and the natural world (Interview, Bart: 20/11/2009).

None of the other teachers, nor the Principal were as attached to the idea of the Montessori farmschool concept. In fact, not one of the other staff members mentioned the idea. Their approach seemed more focussed on the notion of making the best of the situation in which they were currently situated.

As far as the nature aspect of Montessori education, these urbanised middle-school students all experienced farm-life during their annual summer odyssey trip to another Montessori school's farm in a neighbouring State. In addition, they enjoyed working in the school garden, and contributing to the upkeep of local parks. A more practical approach that merged with the program already established, would be to encourage home-gardening practices as a long-term project in a similar style to those already in place.

### **Teacher Training**

The particular characteristic of River School that distinguished its curriculum from other progressive schools in the area, was the Montessori philosophy underpinning its practice. Therefore teacher training in Montessori principles and practice would appear to be a critical determinant of employment at the school, at least with respect to ensuring the continuing focus of the program, and the deepening and spreading of a place-based education approach. In reality, of eight teachers interviewed, only two were graduates of a full Montessori Diploma. One had a Montessori teacher's assistant certificate, and one had completed one week of the five-week orientation to Montessori adolescent education.

The Principal herself had no Montessori training. She described her primary role as providing teacher support:

... my primary job... is to support the teachers in their work, so that they're free to do their work, which is to remove obstacles for adolescents so that they can thrive, so I think that does match what Montessori said about removing hindrances to children's development. I think the retention rate for teachers is evidence of that working well. In previous years that rate was 25 percent, so now they feel heard and supported so they can just get on with their job using innovative ideas to support and guide the kids. (Interview, 17/11/2009).

Bart, the curriculum advisor, addressed the lack of training of teachers employed at the school as a problem that required other teachers' assistance and guidance:

Many teachers coming into our school without training fall into the trap of thinking that the students get to do whatever they want to do, and it turns into chaos (Interview, 20/11/2009).

Bart also described his ongoing struggle to include the farm aspect as one that was compounded by lack of Montessori teacher training among the staff:

And then in terms of the actual land piece, one of the things that we continue to struggle with here is how to incorporate that in a meaningful way and I think that without trained teachers, and without much real land around us, I think it's hard to have that as a centerpiece of our program, so I think it will continue to be a, you know, side piece really, an attached piece rather than a central piece (Interview, 20/11/2009).

Sally explained that she had commenced Montessori training and that this experience had produced an immediate effect on her teaching approach:

This year I did one week of the summer training and since then I've been doing a lot more small group instruction, and really trying to give them material that has substance to it and is not just abstract information, and it's this idea of individualising education that I'm really interested in...It's a lot of work but I'm really trying to meet the kids where they're at, so I've ended up with five or six different groups, because they're all at different points that way, and have differing abilities, so that's my work (Interview, 1/12/2009).

Without teacher training that specifically addresses Montessori principles and pedagogy of place, it is almost impossible to speak of deepening and spreading place-based education, as a concept in a more progressive approach to adolescent education that is also relevant to twenty-first century social and economic requirements.

### **Supportive Policies and Practices**

To some extent at River School new policies and practices were being developed that actively supported the place-based nature of the program. One example of such supportive practices would be the commitment of one afternoon per week to creative expressions and community service, in which community members were instrumental in the support and learning endeavours of students. Inviting community into the school marks the beginning of closer relationships with the community. "Deepening and spreading' the idea of place-based principles would be a natural outcome of such affiliation.

Budgeting was structured to ensure that all students were included in trips, and excursions, even where they could not afford the cost as individuals. On the other hand, there were limitations that the Principal found regretful:

We yearn for a different kind of space where we can gather and garden. We have no library. Four different specialists share one small room upstairs. We'd like storage for gear so we can store all our camping equipment, so we can all go at one time (Interview, 17/11/2009).

These deficiencies were unable to be rectified up to the time of this study by patron donations, fundraising drives, or philanthropic support. As a fairly new school, these deficiencies are understandable. One might assume that with further dispersion and transmission of the Montessori approach coupled with place-based principles, that financial and organisational support would be forthcoming.

Bart's philosophy concerning school policies and practices encompassed a similar whole-school management perspective, with respect to the unified mission of the school:

I think that from the top, the Principal, all the way down to part-time assistant in any school if they have a unified belief, a unified mission, a unified teaching philosophy, an educational philosophy, then it's a benefit cos [sic] it's truly a mission driven school and organization.

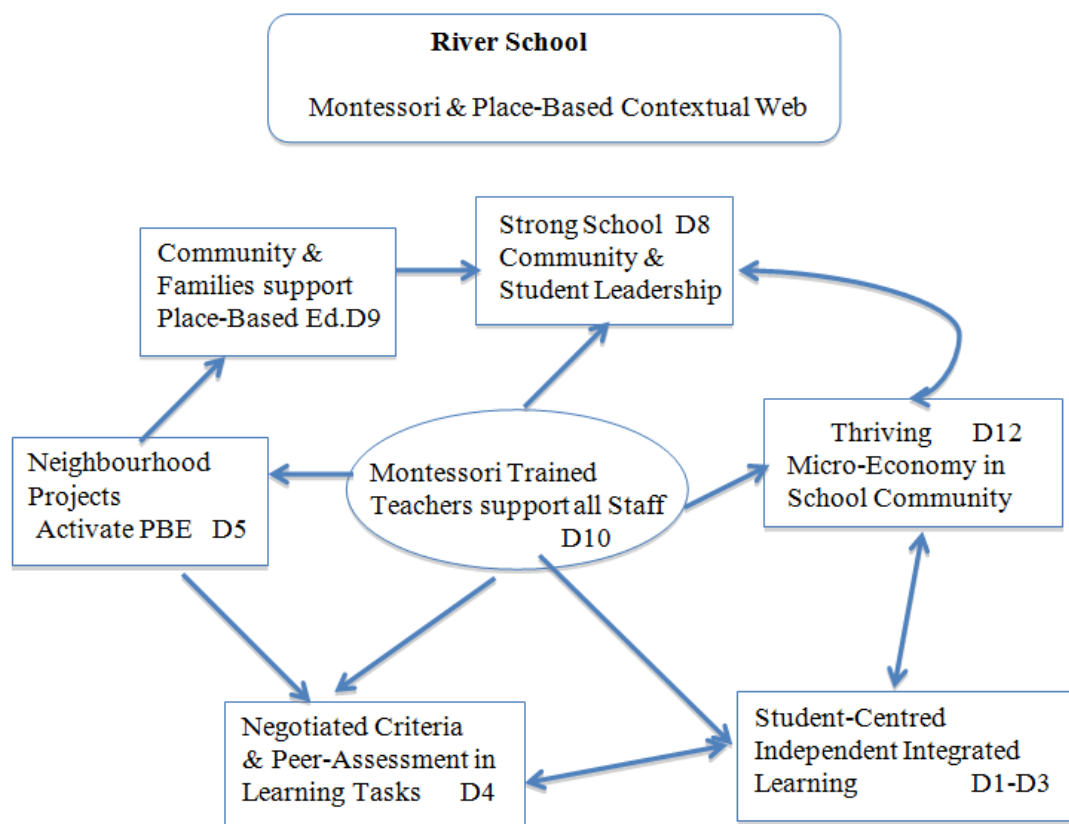
The heart of Montessori is that it's about looking very carefully and working to understand what's happening developmentally with a human being at a certain age, um, and really taking that into account, and trying to work with that person and those needs, and I think that's where conventional education is totally off-track (Interview, 20/11/2009).

Until River School more actively encouraged or insisted that staff undertook Montessori training with a priority on the practice of place-based pedagogy, the whole-school management perspective was unlikely to be effective. Despite a low ratio of Montessori trained teachers, River School had managed to invest its staff and the whole-school population in progressive place-based practices that appeared effective and profoundly satisfying for all participants including parents.

## Summary of Findings, Themes and Issues at River School

River School was one of the ‘youngest’ schools included in the study, and thus, was still attempting to negotiate the intricacies of combining pedagogy of place with Montessori principles, while reconciling such an approach to the rigidity of State standardised curricula and testing. In addition, River School was situated in a challenging locale, in which ingenuity and innovation were required to create a practical and powerful place-based Montessori adolescent educational approach.

In addition, River School was required to comply with a State Education Charter agreement with respect to accountability in many areas including school attendance rates, staff retention, subsidised funding, and school authorisation. Furthermore, the authorising university required River School to perform well academically, conform to State standards, yet produce independent thinkers capable of self-motivation in the pursuit of higher learning. Figure 4.3 below accurately summarises River School’s contextual web:



### **Figure 4.3 River School Configuration**

#### **Aspect 1: Student Learning and Contributions**

As a recently established Montessori school located in an industrial/business offices area, and lacking school transport, River School found itself at a distinct disadvantage especially with regard to establishing a place-based focus for student learning. The problem was resolved by instituting a program across the curriculum involving extended-project fieldwork studies carried out in the students' home communities. Independent study time in school was devoted to research and peer-collaboration to facilitate the neighbourhood project work. This individualised program of study also had the effect of markedly reducing the divide between Montessori education principles as practised at school, and at home, by incorporating the home environment into the school studies.

Critical thinking was encouraged in the extended-projects field studies by the inclusion of questions and discussions that required students to consider and extend beyond the neighbourhood findings to the wider implications of global policy and practices. It was also featured in the peer- and self-assessment strategies that formed an integral part of student responsibility for their own learning outcomes.

In addition, the curriculum of study included trips, camps, and odyssey experiences to promote independence, community-building activities, leadership, broader understanding, and integrated learning across the curriculum. Community service was also incorporated in these trips, where possible.

Aspect 1, incorporating Student Learning and Contributions was evaluated as attaining at a high level in all themes related to this aspect. The extended project fieldwork studies conducted in home communities, combined with ample independent study time at school, ensured that student intellectual growth, academic rigour, authenticity, and assessment supported the place-based nature of the projects.

#### **Aspect 2: Community Learning and Empowerment**

This aspect of the combined Montessori principles and PBEPR approach reflects the community emphasis of the learning program, including experiential education in the form of outdoor nature-based and/or service work as a means to deep understanding of the local area. Incorporating Montessori priorities for adolescent education, an emphasis on personality development, community relationships and creative arts expression were woven throughout the curriculum to create a framework of development of the whole person.

At River School, due to its relative isolation from the greater community, the “little community” constituted the focal point for the development of personality and community learning. The school community was found to be empathetic and supportive, with clear communication and shared leadership opportunities. Students had some influence in school policies, initiating discussion and action towards a common vision. It was clear that River School was democratically organised to benefit the student community and their learning goals as a priority.

In addition, the creative expressions program was supported by members of the local community to the extent that a large variety of activities was offered, and essentially guided by voluntary expertise from the community. This constituted the beginnings of a program that staff and students hoped would progress towards a partnership with community personnel and organisations in a mutual relationship of give-and-take.

The Community Learning and Empowerment aspect of the combined Montessori and PBE model, was evaluated as present at a high level, due primarily, to adaptation of the curriculum to the possibilities that could be incorporated into the program. These possibilities were realised through a supportive community of student families and interested citizens, in addition to the creation and consolidation of a closely integrated school community. With respect to River School’s own *middle school* community cohesion, collaboration, support, mutual respect, mentorship, and leadership were clearly visible characteristics of the ongoing functioning of a small community.

### **Aspect 3: Deepening and Spreading Place-Based Learning**

This third aspect of the combined Montessori and PBEPR themes encompasses making connections with community to form school-community partnerships, maintaining those relationships, and extending them further. The necessary corollary

to such relationships is that teachers are grounded in the theory and practice of place-based and Montessori principles of adolescent learning, so that the curriculum reflects the development of ‘the greater good’ of the community-school relationship in shared responsibility and trust. In Montessori terms, such an outcome would emerge from peace studies, personality development through shared roles and leadership, a culture of learning, and a sustainable micro-economy encouraging financial contribution and broader understanding of economics theory.

Although there was no particular mention of a micro-economy, River School’s bike shop incorporating math and sciences, commerce, and community service, constituted the beginnings of such a program. Students were involved in other fund-raising activities for the school’s financial management, including music performances, an annual theatrical performance, an occasional student-run coffee-shop also selling arts and crafts, and an international food market-day. However, although students were instrumental in the organisation and participation of these activities, they were not involved in determining the distribution of revenue, or purchases made resulting from their efforts. In other words, the essential understandings of a micro-economy had not been appended to the actual practice of such a program.

River School was located in an area in which there were 41 other charter schools of middle and high school level, all of which purported to offer many apparently similar curricular and social aspects to the Montessori curriculum upon which River School was founded. With the ever-present necessity for additional capital that is fundamental to charter-school execution, competition for benefactors and financial resources was intense. In order to distinguish itself from such competition, it was imperative that River School differentiate itself in some particular manner in order to maintain its student enrolment and operational dynamics. Throughout the course of this study, River School had not yet managed to assert its individual focus, apart from the Montessori label. The curriculum advisor was focussed on the incorporation of a land-program for River School, which, in his perception would characterise the school by separating it from other local charter schools, and that in doing so, River School would more closely conform to Montessori’s writings about adolescent education.

Crucially, the proportion of teachers who held Montessori credentials was limited to two staff of the eight teaching at the middle school level, which resulted in those less

familiar with Montessori theory and practice requiring support and guidance from Montessori trained staff. Morale and collaboration among the staff was high, but in this area alone, a substantial difference in delineating River School from other charter schools in the area could have been effected by ensuring Montessori teacher training was an imperative.

Instructional spread and community engagement as Themes of Aspect 3 were observed to be ‘progressing’, while themes focused on supporting structures (such as the nascent micro-economy), and new resources and connections, were evaluated as at the beginning level, as described by the PBEPR.

Overall, River School incorporated many of the themes and aspects that are fundamental to Montessori adolescent education theory and practice, successfully integrating an innovative program with its focus on place-based learning.

### **Conclusion: Case Study of River School**

This case study of a relatively new school revealed that flexible thinking and innovative approaches could overcome the limitations of location and lack of transport in successfully instituting a place-based learning program. The cohesive nature of River School’s community, dedication of teachers and enthusiasm of students united in a common vision, resulted in a school that ultimately reflected its mission statement with integrity. Furthermore, over a period of two years, improvements in learning opportunities, school layout, supportive structures (such as the covered bicycle park), thoughtful renovations, and new policies were clearly evident at every visit by the researcher. As a fairly new school therefore, energy and innovation were directed at developing the ideals of a Montessori adolescent approach, with a particular emphasis on the advantages that place-based principles could contribute to an inspiring twenty-first century education.

## **Case Study 4: Forest School**

### **The Background**

Forest School was a small private Montessori school nestled on a 12-acre wooded property in a semi-rural area of the USA's Midwest. It attracted 245 students ranging from kindergarten to Year 8. The middle school section of four teachers and 19 students was housed in a picturesque two-storey country cottage at a small distance from the primary/elementary school-building.

Helen, the learning director of the middle school program at Forest School, had had 28 years of experience as a specialist in Montessori adolescent education and was actively involved in teaching, coordinating the adolescent program, training Montessori teachers, and writing and presenting papers about Montessori adolescent education.

In Helen's opinion:

Place is integral to Montessori's ideas, so pedagogy of place is nothing new. It's not an add-on. It's simply a term describing the reality— a term that Montessori never used (Interview, 15/1/2010).

She viewed pedagogy of place as the theme that binds all the various subjects of study into an integrated curriculum, promoting not only development of the personality, but also “deep learning as students actively experience the whole arena of interrelationships between forces and motivations in society.”

The middle school comprised Years 7 and 8. In Montessori theory, classes are arranged in three-year cycles, so Year 9 would be expected to be included. However, the building that contained the middle school was not sufficiently spacious to accommodate an extra Year. An adjoining property had been purchased for the purpose of extending the middle-school environment so that Year 9 could be included, and a small farming enterprise might be commenced. Council and legal hurdles were still being negotiated for building and land-use approvals at the time of this study.

## **School Day Structure**

The day began at 7:30 a.m., with early study preparation and “Tech Check” which was used for printing, final preparations for submitting work due, and readying notebooks for the day’s study.

A daily listing on the whiteboard in the meeting area informed students of expectations for the day’s activities. These lists included due dates, reminders of excursions, notifications of changes to the week’s schedule of activities, choices of activities during any of the day’s work-blocks, notices of weekly inspections of folders and notebooks (for orderliness and ongoing assurances that students were completing the contracted work), useful vocabulary for particular discussions, and seasonal reminders about exercise and craft options. Mind-maps describing how studies and subjects were connected within the integrated curriculum could also be found on the whiteboard, together with a listing of students’ duties for the day/week.

At 8 a.m. students gathered in a circle with the learning director and one other guide for roll call and greetings managed by a rostered student. This was followed by discussion of the day’s work, as well as (usually) some community discussion related to behavioural matters, including appropriate behaviour on excursions, dress code, work and study expectations, time management issues and the like.

At 8:30 a.m. a formal Spanish language class commenced in the primary/elementary building with the language specialist. During this hour, guides met to discuss Montessori principles, work and timetabling issues, and concerns about individual students.

The Spanish language class was followed by workshop blocks of 1.5 hours before lunch and 2 hours after lunch. Interspersed with these work-blocks there were occasional short instructional classes lasting about 15 to 30 minutes, to discuss the aims, rationale, and assessment options for any new activity.

Lunch and snack breaks were shared among the middle school students. A rostered group of students on a weekly rotation prepared and cleaned the dining-room and kitchen before and after meals and snacks. Food and drink for snack breaks were provided from home by a set group of students for the week.

The final period of the day of 30 minutes was allotted to table clearing and then reflection/reading time. After the final period at 3:15pm, students all cleaned the school-house completely, including the bathrooms. At 3:30pm departing students packed their books, shook hands with the teacher, and left for the day.

After 3:30pm, students could remain at school until 5:00pm with a supervising guide for strictly silent study time in which homework and study were undertaken. Three days of the week, this time was also allocated to optional micro-economy activities. It was an optional choice to remain until 5pm, but most students stayed for the opportunity to study silently, or to receive extra coaching. Helen, the middle school director, explained:

We've extended our day so they stay until five... School hours are not really geared to adolescent needs at all (Interview, 15/1/2010).

### **Weekly Routine**

Monday was the day for small workshops in creative expressions; a choice of drama, art, culinary arts, photography, child development, story-telling, and various other choices. There were also options for dance, sport and yoga in the morning. These choices rotated every three weeks, except for the child development course work, which was on a six-week rotation.

Friday was the allotted Micro-economy/Service day in which students either visited the farm for micro-economy activities or did service work on the school grounds for the whole morning, following the Spanish lesson and snack time.

Students were 'in the field' for at least one day of the school week, observing and collecting data related to their current 'place studies'. As Forest School's adolescent education prospectus explained, "Place teaches through experience and promotes active engagement within the learning process" (n.p.).

## **Aspect 1: Student Learning and Contributions**

### **Student-centred, Collaborative Learning**

Because the work of adolescent students at Forest School was individualised, students were expected to discover their own interests within the content of any theme, to investigate and research accordingly, to develop their ideas, to analyse and express their findings, and to solve problems related to every facet of the work, whether theoretically based, or experiential. Mostly the students worked in groups.

Helen, the learning program director explained the rationale for this approach, as:

...reflecting that social cognition of being able to communicate, and work with others, and have something meaningful to say that goes to the intellectual development that is incredible at this stage (Interview, 15/1/2010).

Aspects of rigour within the place-based learning program were fostered by academic challenges and opportunities to pursue study-activities, peer-teaching and collaborative-learning roles, exploration of skills and intellectual problem-solving, development of thinking tools, philosophical discussion, peer-led Socratic seminars<sup>30</sup> in every subject, publishing and computer skills, and in the process, developing sophisticated research skills.

The ownership of the work was perhaps most evident when the students were planning a trip to their own local city, or even one of the large cities four hours or more distant. It was the students themselves who planned the entire outing, from making appointments and hotel reservations, planning for finances, time management, meals, and transport, and presenting them to the entire group for discussion and

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<sup>30</sup> “The goal of a Socratic seminar is for students to help one another understand the ideas, issues, and values reflected in a specific text. Students are responsible for facilitating a discussion around ideas in the text rather than asserting opinions. Through a process of listening, making meaning, and finding common ground, students work toward shared understanding rather than trying to prove a particular argument. A Socratic seminar is not used for the purpose of debate, persuasion, or personal reflection, as the focus is on developing shared meaning of a text” (<https://www.facinghistory.org/for-educators/educator-resources/teaching-strategies/socratic-seminar>)

ratification. In this way, planning and budgeting for trips promoted awareness of financial factors and provided authentic opportunities for practising adult organisationnal skills.

‘Independence’, was defined as a form of responsible self-expression by a student in these terms:

We have self-expression in all our work and play here. I think that’s one of the things that differentiates us from a traditional school. It’s the independence we have to express ourselves truly and thoughtfully in multiple ways. It teaches us integrity and credibility for all the work that we do and all that we put out there, and to really take responsibility for your actions, because even if you really mess up, then it’s your responsibility to fix that (Student Group Interview, 8/3/2010).

As Dani, one of the guides explained, student ownership and control are further supported by encouraging individual choice and initiative:

...by offering as many opportunities for choice, because when they have choice that means they own it a little bit more, they’re more interested, they’re more deeply engaged than if they’re just given an assignment and told you have to study this and just ‘Go’ (Interview, 11/1/2010).

This was a refrain repeated by students and parents in interviews and surveys conducted during the data collection visits to this school. Some parents mentioned attempts to encourage similar self-direction in the student at home, although this would be more likely in the case of parents who had extended experience in Montessori education:

We encourage our children to be self-sufficient. We also encourage them to be self-directed learners. We pay attention to their study areas so we can be sure they are meeting expectations (Parent Survey Response, 2/3/2010).

Collaboration was considered essential in shared projects on the farm, in the micro-economy, and in service work carried out in the school and the wider community. Essentially, development of personal adaptability, independence, and lateral thinking were regarded as necessary skills in the conduct of successful completion of learning projects.

With smaller numbers in the context of a combined age classroom, the expectation that every student would respond at a level that was consummate with their own personal development, was not only possible, but clearly reflected in the work portfolios of each student irrespective of academic level, and in their developing social skills within the community.

May, one of the guides described this kind of education as ‘relevant’ in these terms:

...it’s hand-on, experiential, you’re always doing something in groups of people who are never the same age, and have different ideas and learning styles, different perspectives and abilities. This is a materials-based education and in the real world you’re always dealing with some sort of material so it’s useful to be able to transfer those skills. Lots of outings too into the real world, which makes it so much more relevant than sitting in a classroom all the time (Interview, 18/1/2010).

### **Integrated Learning**

The integrated curriculum for the two adolescent years was based on studies of society since in Montessori terms, the adolescent is considered to be a “social newborn” and, as Montessori asserts, “...this should be the goal of secondary school – the preparation to find one’s place in the society in which we live” (1937/2001: 195). Accordingly, in Forest School, the integrated curriculum was built upon studies of society from prehistoric times to city-dwelling eras, followed by city studies from ancient times through to the students’ local city in contemporary times. These topics were interwoven with peace studies revolving around explorations of social structures, leadership, and hostilities, leading to studies of wars involving America. As Helen explained:

They’re social newborns and the big piece is to respect the social cognition that needs to take place at that time, where they’re integrating everything they’ve learned before and they’re really understanding the need and are learning the arts in terms of relating and respecting other people in this education in the way of peace (Interview, 15/1/2010).

With respect to place studies, Forest School students investigated their township, locality, and society through geography, history, local businesses, social, personal, and institutional perspectives. Pedagogy of place was viewed at Forest School as,

...providing a frame of reference in time and place, which helps the adolescent to recognise themselves in the continuum of events that have shaped history, society and the environment, both locally and nationally (Forest School Curriculum Map, [n.p.]).

Classroom observations at Forest School revealed that expectations of learning goals were clearly established through discussion and collaboration, rubrics for self- and peer-assessment were often referenced, and discussion of goals and progress checklists were clarified consistently. This was routine, repeatedly observed during the discussion of the day's work after morning circle, and in every new assignment discussion as part of the integrated curriculum.

Since students were essentially responsible for their own learning and progress, learning goals and rubrics were considered central to the process of engagement and accountability so that students were aware of expectations, guided by the rubrics and learning goals that had been negotiated.

It teaches you responsibility and accountability because you can't just check it off or brush it off with the attitude that it's done, no matter how poorly (Student Group Interview, 8/3/2010).

Students capable of working at advanced levels were further challenged by extensions and expectations of more sophisticated thinking and analysis.

### **Student Assessment Strategies**

Forest School had chosen a combination of self-assessment and peer-assessment dependent upon rubrics that were produced by collaborative discussion and agreement. This was an interesting decision, given that the middle school only extended to Year 8, and that its students would subsequently transfer to high school at the beginning of Year 9, usually through a highly competitive and non-negotiable system of grades and test-results.

In practice, students maintained portfolios of their work across all academic disciplines. These portfolios included student reflection on every piece of their work, and the whole portfolio was evaluated thrice annually in conference with a guide, using rubrics that were negotiated and clearly explained. The students consistently

reflected satisfaction in their contribution to the criteria employed in their self-assessment strategies:

Here our work is appreciated for being expressive and imaginative and creative. We don't have to worry about conforming to rigid modes of grading, but we get to assess our own work according to rubrics that we suggest as well as those of our guides (Student Group Interview, 8/3/2010).

Local community member reflections might be reflected in the assessment criteria, when community members were involved in the particular project under study. For example, students interviewed elders of the community for their memories of World War II and its influence in the local area. The students transcribed their interviews and produced several pieces of writing based on historical research, on the interviews, and their reflections on their findings. Interviewees and other members of the local community were invited to listen to readings of the reports, and to assess them using the same rubric as students and guides had employed. These community assessments formed part of the overall student assessment of that specific project.

Students self-assessed each of their completed tasks according to rubrics clearly outlined at the beginning of every thematic unit. Qualitative grades were derived from papers, projects, group work, tests, Socratic seminars, and homework. Guides discussed the assessment rationale and outcomes with individual students, for accountability and consistency.

A wide variety of alternative sources of assessment was accessed through reports from the local farmer (farm shared with Forest School), community farming guides, community members, school teaching assistants, such as music, Spanish and sports specialists.

Evaluation data arising from such in-depth assessment were used to modify and enrich teaching strategies and learning activities, to discern class and individual needs, and to extend student independence and responsibility, as well as achievement. These outcomes were regularly discussed in the guides' morning meetings, and also discussed openly with students in an open-learning forum, in which students were encouraged to take an active part in decision-making and evaluation of teaching and learning.

### **Three-Way Conferences**

Students engaged in three-way conferences that included parents, guide and student. During these conferences, students reviewed and evaluated their goals for the past trimester, discussing their work, achievements, and development, showing the documented evidence of their skills and mastery.

Amy, one of the guides, talked about the three-way conferences as an empowering function in the development of students' independence and focus:

To realise the importance of the process requires guidance from the directress. The students have to gather their work, prepare their particulars, decide what to show and how they'll talk about it. We help them to set goals for the new trimester, discuss how they've achieved the goals they set in the previous term, and just really help them to focus their work (Interview, 12/1/2010).

Dani, a guide, reflecting on her experience of the student-led conferences, alluded to the fact that the conferences were not simply about the students' work, but also referenced the personal development and responsibility of the adolescents:

...that's what I really enjoyed about our student-led conferences. I was able to brag about the student in front of their parents not in a superficial way but in much more socially significant ways. They show their own work and they explain things to their parents, which is wonderful, but this is also an opportunity to build up their confidence in whatever ways they're showing personal development within our community (Interview, 11/1/2010).

The Principal of Forest School referenced the variety of sources of assessment including self- and peer-assessment at Forest School, compared to State testing and traditional school assessment and testing:

At the same time, we know that assessment is much broader than a test score; that authentic assessment has to be day-to-day living and work in the environment, and that's what we use as our measure...but we have to speak a language that someone else understands when they [students] attend a high school, so it's a very fine balance... We're interested in making sure that our students leave here reflecting about their work, having a good understanding of who they are, and what they need to do to either improve or better understand learning, and who they are as a learner (Interview, 3/3/2010).

The idea that “we have to speak a language [about assessment]” that others outside Montessori education practices can understand, is significant. Firstly, those outside Montessori education frequently report achievement in numerical scores and statistics – quantitatively, whereas Montessori education ideally uses qualitative non-numerical language. Secondly, while this might not be a significant issue if schools were not being compared, it is certainly an issue in the current social/educational context of comparing schools using standardised quantitative scores. In such a situation the credibility of Forest School’s teaching and assessment strategies can be undervalued. Furthermore, Forest School’s students are often required to sit entrance examinations when graduating to Year 9 at another school, due to the fact that their non-numerical assessments are considered neither applicable nor acceptable.

### **State and National Standards**

Most teachers at Forest School reportedly checked State curricular guidelines as a reference, although the order and themes outlined in the State standards were altered to allow students to work on place-based projects at the particular level and style that facilitated their learning. State objectives were realised through extra coaching where necessary, peer-teaching, and a mastery approach.

At Forest School, the reference to State standards was necessary, particularly because students would transfer to other high schools to complete their education. By referencing State standards, guides and parents were assured that transitions to other schools would be facilitated.

Parents appreciated this policy, because it assisted their adolescents towards greater personal responsibility:

Also, students are encouraged to go beyond the minimum requirements for their work and to strive for excellence. I don’t believe the school fosters an environment of mediocrity (Parent Survey Response, 9/3/2010).

The Principal of Forest School referred to the contradiction between Montessori education and meeting state standards:

Montessori believed that education was preparation for life and so in that respect we know our students are moving into a society especially in high school here that is driven by assessment. But that doesn’t really speak to

whether or not that's a valid approach...The thing is, Montessorians are required to think outside the box, and the strongest practitioners are those who can do that, meeting the state requirements while remaining true to the philosophy (Interview, 3/3/2010).

## **Aspect 2: Community Learning and Empowerment**

Montessori principles emphasise the acquisition of personal qualities such as independence, lateral thinking, self-discipline, co-operation, and responsibility in education from the pre-school years. Among the young adolescents of Forest School, much of the work of consolidating these personal qualities was begun in the small community of the middle school, extending outward to the whole school, and further beyond to the local community where students were able to practise the necessary skills and leadership in the adult world.

Helen described this aspect of adolescent education by referring to adaptability, a key concept in Montessori adolescent education principles:

They need to develop the ability to adapt, to deal with life. Adapt means struggle, not in a negative way, but more as a challenge, to see discomfort as not negative but something that is stirring and that will help us to grow. But that's the building of this personality that helps them to become resilient, despite the inclination for comfort and ease. It's seen in intellectual optimism, where you can look at something with all its disparities, but you can strategise and understand how to get through it...To see beyond the moment, to have some sort of future orientation and to see that it has to go beyond their own needs to the common good. And on some levels they're so wired to be able to do that, but on so many other levels, 'specially in this day and age, we stop them in their tracks and tell them that 'we can make this comfortable for you' (Interview, 15/1/2010).

Adaptability was an essential criterion of the program at Forest School, as place-based education was interwoven with the integrated curriculum and the micro-economy in the context of community-based learning.

### **Within-School Community Service**

At Forest School, students practised community roles within their own middle-school community, initially, by leading morning circle, or chairing Socratic seminars,

(organised discussions based on clearly defined rules for discussion of a set topic), organising class community meetings, and overseeing the cleaning and dining room duties each day.

Amy, one of the guides, described the development of personality that occurs when students are required to communicate openly and honestly:

Any interaction the students have with each other or in the community, whether that's speaking up or understanding or presenting an idea that they have, is building them up as a person (Interview, 12/1/2010).

Within the school community, adolescent students contributed with service work to the school, both indoors and outdoors, and in fund-raising, and sports activities. They contributed money raised from their micro-economy activities and farmer's market stalls to the middle-school excursion funds; they renovated school gardens, and moved playground equipment in the junior school. In the process they experienced work, they learned skills with the guidance of a teacher or a member of the local community, they met the needs of the school community; and the outcomes were observable, in learning, improved self-esteem (valorisation), and labour exchange.

Caring and sharing with elders and children in the local and the school communities, as community service, provided experiential opportunities that enriched the students' real-life understanding of moral values, ethical principles, humility, intercultural skills, and social equity. According to Helen, the learning director:

They're practising the art of social integration, they're weaving in and out of social relationships and the whole area of social cognition and integration of their personalities with others... it forms a new community (Interview, 15/1/2010).

### **Local Community Interactions**

The PBEPR document describes assessment of student capabilities and development in this sub-theme, with the implication that responsibility for the education of adolescents is shared between school and community, and thus, that evaluation of learning could be split between community members and school. Forest School had not yet reached this advanced level of shared responsibility and accountability, although there was an appreciation of student indebtedness to the community for the

opportunities and availability its members extended in support of adolescent education.

The guide, May, described adult roles in the students' education in this way:

It's not about how much I can cram into their brains, but it's that they know that they have adults in their life who care about them and who want to help them find their path...to guide them in that way (Interview, 18/1/2010).

The implication is that all those guides, specialists and community members were participants in the education and guidance of the students, whether they were contributing to the assessment and evaluation of students' work, or simply assisting them in their endeavours to develop as responsible and capable adults.

The guide Dani explained that learning expectations were so much greater than simply project content, but that personality development was an important aspect of the evaluation of education in this setting:

I think that every interaction teaches them civility and grace and courtesy when working with other people, showing respect for the other, so having to work through those problems and disagreements equips them with ideas and confidence and skills (Interview, 11/1/2010).

Forest School's Curriculum Map described the middle school study program as contingent upon the Pedagogy of Place focus, with the micro-economy as central, and the integrated curriculum as the binding for the whole. In summary, much of the learning was experiential, actualised in relationship with the local community.

A program of community service provided a means of becoming contributing community members. Access, communication and trust were achieved through internships in which students participated in adult work, working alongside adults on the farm, in the micro-economy and local market, in service work in the school and local community, and in the school gardens. All of these activities were part of the pedagogy of place context through which learning and personal development were explored and internalised.

In the local community, students contributed as volunteers, donated micro-economy funds to local charity groups, attended town meetings, and involved themselves in town-related activities such as clean-ups, celebrations, and community market-days.

Adolescent students from Forest School also visited retirement villages and aged care facilities to interview the elders, engaging socially, and learning from their experiences, whilst immersing themselves in history, geography, and writing as they transcribed their interviews and recorded their impressions of the elders' experiential stories. Elders benefited from the shared time and interest, the companionship, and from teaching adolescents about the world as it was in the past half century or more.

Much of the initiative in making contact with the local community was still the responsibility of the adult/s or guides. Once the contacts were made, however, students continued the association, managing communications and dealing with organisers and recipients with respect and trustworthiness.

In terms of Forest School's adolescent group and the local community connections, much of the energy and commitment remained one-way, in the sense that the impetus for interaction arose mostly from the school seeking ways into the community for place-based study purposes. It is difficult to contend whether community members felt that the exchange was one-sided, in the absence of recorded data from that contingent. It did not approximate a true partnership at that point, although the community was always supportive of school projects.

Helen, the learning director described the local community/school relationship in the Montessori terms of "preparation for life":

This is another key element in the adolescent program, according with Montessori's views of the integration of economic independence, work, study, social awareness, character development, self-confidence, freedom, responsibility and moral values as central tenets in the preparation for adult life (Interview, 15/1/2010).

### **Reciprocal Learning Relationships**

Guides at Forest School readily admitted that they were constantly learning about the adolescents in their care, about providing place-based experiences effectively, and about relating to the students individually. The guides reflected on and evaluated their learning during staff morning meeting,

sharing their experiences, incorporating Montessori theory for interpretation and understanding. In this latter respect, the morning meeting assumed a profound significance for inexperienced teachers and those untrained in Montessori education, as well as providing daily reminders and reinforcement for those with training and practised expertise.

In addition, in the absence of boarding, which is considered an essential characteristic of adolescent education in Montessori theory, the guides were constantly learning to negotiate the discrepancies between Montessori school and the home environment. Helen the learning director explained:

There's the discordant nature of what you're trying to do with them at the school and then sending them home into all sorts of home situations. That's the reason for the boarding requirement in Montessori— so that the community work can continue uninterrupted through the academic and the extracurricular, from schoolroom to domestic...to farm. It sets up such a conflict that we have to deal with, and worse, they [the adolescents] have to deal with (Interview, 15/1/2010).

She pondered the difficulties of understanding the nature of adolescence, and alternatives for providing for their needs in a day-school, as opposed to the farm:

And I'm sure that the creative arts and music and all those endeavours can take the adolescent into the aesthetic and peaceful place that Montessori intended by the rural environs of the farm. It's as important in their development as the earth is. There's so much more we need to understand about the adolescent. How do I make this real and new in the place where I'm serving these adolescents? (Interview, 15/1/2010)

The challenge is to compensate for the lack of boarding by creating experiences that might approximate those of the boarding school farm, without compromising other aspects of the program. For example, the extension of the school day from 7:30 am to 5:30 pm permitted an approximation of a boarding program for community building, without the cultural and administrative difficulties of providing a student residence.

## **New Roles**

The micro-economy activities particularly, provided a plethora of opportunities for change in traditional notions about relationships, roles and power. Students who had prior Montessori experience were already adapted to a variety of roles and responsibilities, both for themselves and their teachers.

Incrementally, however, significant numbers of community members and guiding adults were engaged in new roles at all levels. For example, students decided how they would value-add to their farm produce, by making jams, or constructing corn dollies. They experimented with various methods until they found the most suitable, and then they were able to teach adult/parents who volunteered to help in the kitchen and craft room. On garden-harvesting days, adults who volunteered were directed by students with respect to the type and method of work to be completed. Students who excelled in Spanish speaking were able to translate for adults during history excursions. Students demonstrated their work in three-way conferences, where parents became the learners.

The PBEPR refers to community skills and knowledge, where ‘new’ experts are identified, and disappearing skills are restored to the community through new roles adopted by individuals as teachers, as learners and intermediaries. This kind of role-modelling demonstrates the power of adaptability that Montessori describes as essential in the education of adolescents. In addition, it actualises the notion of lifelong learning, which is portrayed as a priority in the education of all individuals.

The guide, Amy, described this idea with respect to the students, but it extended to the practice of inviting ‘specialists’ in the community to demonstrate skills and discuss ideas with students, as lifelong learning in actuality:

I think a lot of their learning at this time is about finding out who they are and about learning how to learn so even though they’re learning about concepts and ideas and remembering information, they’re really learning how to learn so that that can continue throughout their life, so that wherever they are and whatever it is they know how they can learn best and be an advocate for their own learning (Interview, 12/1/2010).

Place-based pedagogy fosters a culture for learning for the simple reason that it takes education out of the classroom and into vestiges of the community, so that teaching and learning becomes a resource owned and shared by the community. That is to say, pedagogy of place leads to a shift in understanding about what education is, and what education is for.

In Montessori's words: "It [education] must aim at improving the individual in order to improve society" (1948/1994:59). She described in this lecture, a culture of universal lifelong learning that informs social change.

### **Leadership Skills**

The combination of the place-based nature of the Montessori program, together with the micro-economy, and the fact that educational goals were related to development of the personality and independence, all ensured that leadership roles operated on a shared flexible model. Within such a model, established leaders exemplify and teach leadership skills, and leadership is regarded as an acquired facility, rather than as an instituted right.

As one of the students explained with regard to the micro-economy:

Everyone has the chance to do something in the micro-economy. If you want to, you can ask to be an apprentice for one of the leadership roles like production or management (Student Group Interview, 8/3/2010).

With a variety of options for leadership roles across the micro-economy activities, the adolescent community, the whole school community and the place-based nature of the program within the local community, students had ample opportunity to teach and learn leadership skills. There was an expectation at Forest School that every individual would augment their self-development by undertaking one or more leadership roles during the two years of middle school.

The guide Amy explained that regardless of the level at which a student began, individual development was encouraged by the safety and companionship of the small, caring community:

Any interaction the students have with each other or in the community, whether that's speaking up, or understanding, or presenting an idea that they have, is building them up as a person (Interview, 12/1/2010).

### **New Relationships**

For Montessori, social relationships are the means to personality development at the adolescent level. Therefore, for the young adolescents at Forest School, the expectation was that social relationships would be nurtured and strengthened through

the micro-economy, service activities, and place-based studies. Parents too, were aware that there was more to this education than tests, grade-point averages and conformity to state standardised curricula. As one parent responded:

In addition... I like the social climate of the school– kindness, acceptance, and respectful social interactions are expected of students. It provides a safe environment for my children to express themselves (Parent Survey Response, 22/2/2010).

The relationships forged between the students themselves were respectful and demanding, based on the requirements of collaborative work, and the needs of particular work/study groups. Every student had responsibilities in relation to those groups. The guide Dani, made this observation concerning the relationships between students at Forest School:

They really hold one another to a high standard, and they are extremely respectful of one another...and if someone steps outside the boundary of what the students have deemed appropriate, they call each other to that and they really are so kind and supportive of one another (Interview, 11/1/2010).

New relationships were also forged between members of the community and students during community social work, community festivals and celebrations, market days, history and cultural studies of the city, and also during the individual interviews, especially with the elders, and the community leaders, that formed a large part of the theme work in history/geography/multicultural studies.

In addition, younger members of the school community were mentored in buddy relationships with the adolescents, in order to sustain links between the two sections of the school, as well as to generate responsibility in a ‘family’ setting. These relationships generally transcended the limitations of particular projects and extended across social boundaries of class, school, age, work, and local community.

### **Social Change**

Forest School was still evolving in this respect. Students took part in council meetings, spoke out about community decisions that affected them as young people, or as an educational facility in the local area, and canvassed members of the community in relation to their opinions. At school, and in the community, students participated in lively discussions incorporating community ideas with the study and

reading they had undertaken, together with political opinions, essays, and guest speakers' ideas.

From Forest School's "Course of Study and Work" document:

Places help the adolescents to recognize themselves as part of the continuum of events that have shaped society. They see themselves in partnership with the larger community, as they serve the needs of that community in tandem with the established businesses... The role of the guiding adult is to ask the questions that promote critical thinking on all topics of community life (1995: n.p.).

In this document the ideal of Forest School's program approximated the outcomes of the PBEPR advanced level. Other critical factors previously mentioned interfered to some extent with these ideals: Forest School was a private school in an upper middle class area. Parents of the students were mostly influential professionals, and students were required to transfer to other schools in the district in order to continue their high school education. The school was dependent for ongoing support and funding from the community. Partnership assumes a level of equality that invites critical input, "leading to a shift in power, as seen in access to decision-making positions and control of resources", according to the advanced level in this theme of the PBEPR.

A remote rural community struggling to survive is likely to be motivated to change through collaboration, and to embrace new approaches and challenging solutions to that end. A thriving community may not see the necessity for change, and may find challenges to the status quo inappropriate as well as threatening.

### **Twenty-first Century Complications**

The questions that arose from the place-based nature of the teaching and learning at Forest School were fairly predictable from project to project, with students connecting to established contacts and spokespersons for the community, while school policy controlled access and schedules. Child-protection issues compete with freedom and flexibility to learn and communicate in a small community.

School guides mediated students' interactions with locals to some extent, so that contentious issues did not arise, and the school remained untainted by the social

problems that arose in documentation of school relationships with small communities, as evidenced by school reports in the PBEPR documentation.

This separation ensured the continuation of the Place-based program, but also generated fairly predictable results, so that there was reduced necessity for lateral thinking and problem-solving in the realm of students' relationships with the local community.

Given that Montessori's plan for secondary education specifically alludes to training adolescents in adaptability as a means for successfully negotiating the unpredictability of social life, her prescription becomes problematic when juxtaposed with current legal issues of educating young adolescents, and the administrative policies of an exclusive private school.

Montessori contended that, "...the human personality should be prepared for the unforeseen, not only for the conditions that can be anticipated by prudence and foresight" (1994/1948: 61). In this respect, the impetus for school /community collaboration is clearly encouraged, but the current reality was constrained by child-protection issues, financial/business concerns and, arguably, issues of community status and prestige. A majority of the students attending this school were the children of parents with a high social/professional profile in the community.

### **Aspect 3: Deepening and Spreading Place-Based Learning**

#### **Community Partnerships**

Community participation in Forest School's place-based program involved a wide variety of interest groups and individuals with whom the middle school had built close relationships over several years. Forest School's integrated place-based curriculum was spread over a two-year cycle, so that each of Years 7 and 8 covered new material, developing in sophistication, depth, breadth and research demands.

Individuals who participated included solo-operating businesses and professionals, elders in the community, including those in retirement villages, benefactors, and supporters of the micro-economy enterprise including the farmer, helpers, advisors, customers, other stallholders.

Organisations involved included the community library, chamber of commerce, hospital, community centre, banks, financial planners, recreational organisations for sport and entertainment, transport companies, the local newspaper, volunteer organisations, local shops and the city council, among others.

Some individuals and organisations were involved in mentoring, teaching, and learning, whereas others were more involved in the contribution of time, materials, opportunities, newspaper commentaries, speeches, and funding of projects.

Helen described one of the major place-based studies, based in the local community, in which students investigated, researched, interviewed, and studied the local business organisations, both contemporary and historical. The outcome of these studies prompted questions and discussion about Forest School's students' own business practices in relation to their micro-economy: about moral values, ethics, reliability, legal issues, social justice and philosophy.

Forest School's "Course of Study and Work" document (1995) outlined the results of these studies as a means of realistically tying place, economics, and social order together in order to understand the adult world.

The students come to see that a business cannot be understood from the vantage point of one particular discipline or specialization. They come to appreciate that business is a type of mosaic of problems and possibilities, and one certainly filled with interrelationships on many levels (1995: n.p.).

### **The Micro-Economy**

Forest School did not own sufficient land to establish its own farm at the time of data-collection for this study. Since the inception of the adolescent education program, Forest School had had an arrangement with a local farmer allowing the students to cultivate a couple of acres of unused land for growing and harvesting produce for the micro-economy. In compensation, the students assisted the farmer with labour during high-demand periods. This arrangement, based on mutual respect and help, had continued for five years prior to the data-collection period. In several ways, this arrangement addressed a real community need for the farmer, the students, and the local community, exchanging goods/labour for services/money/local knowledge.

As Helen the learning director described it:

It [micro-economy] seems to be an inordinately wise ingredient in the program, as well as bringing them into adult life in other ways with the customers, the guides, the negotiations with the market organisers, parents, transport issues, buying the ingredients for value-adding, and so on (Interview, 15/1/2010).

Students participated in the growing of crops, prepared them for sale as culinary items, and managed the financial and banking aspects of a small business to create profits. When those profits were returned to the business, used to buy equipment for the school-house, or donated to chosen charities, then the students could be said to be routinely engaged in real work that produced results that were visible in student learning, socialisation, and community support.

In both the arenas of the student farming endeavours and the micro-economy, it was clear that the students' work produced such results, in the growing and harvest of produce, and in the value-added items that were produced through the micro-economy: the produce, cards, calendars, jams, jellies and other items produced as "specialties" by Forest School's adolescent component.

As one of the students explained:

It teaches us integrity and credibility for all the work that we do and all the products that we put out there, and really take responsibility for your actions, because even if you really mess up in the business, then it's your responsibility to fix that (Student Group Interview, 8/3/2010).

Students were acutely aware of the standard they were required to attain, in marketing their products, as one of the students explained:

You have to be prepared to work to make the product saleable, and that means as good as possible, because it's something that people have to be prepared to exchange their money for. They worked to get that money, and so our product has to reflect our work in the exchange (Student Group Interview, 8/3/2010).

Helen, the learning director explained:

There's no way you can run a farm for example, unless everybody's very cooperative and thoughtful and everybody's work is noble, no matter what tasks you do, whether you're doing the books or working with the animals or tilling the soil or marketing the produce or creating value-added products

in the kitchen or the craft-room, or whether you fix the machinery or drive the tractors (Interview, 15/1/2010).

The guide May pointed out the real-life applicability of the students' work in this way:

I think that students need to know how to work and that the work that they do is important, I think that the discipline of farming, having something that they plan, they care for, they harvest and they have a business based on it, is real-world, especially when they do most everything as here, and really truly own it. We guide and help them to make wise choices, but they own what they do. The work ethic is immediately apparent when you see this group of students (Interview, 18/1/2010).

### **Teacher Training**

Teacher training is an area of ongoing concern in many Montessori schools, and Forest School was no exception, with only one guide in the middle school trained in Montessori practice and theory. Of the remaining guides, one had completed part of a five-week summer orientation to Montessori adolescent education, and the others had not commenced the orientation but intended to do so.

The reality of such a situation was that the learning director, Helen, trained and mentored the current guides in the middle school, in addition to leading the team, undertaking a fulltime teaching role, and taking responsibility for the administrative tasks of the middle school. She also assumed a major role in training and mentoring other guides at seminars, conferences and at the summer Montessori adolescent orientation.

Helen described the importance of Montessori teacher training as “practice steeped in the theory” of Montessori education:

The foundation of theory has to be there. There's no formula, so you have to be making judgements on the basis of principles that are inherent in this work. There's no handbook, but you have to be recursive, you have to think and experience. Training is all. The summer orientation is good, but it's not nearly enough. The whole idea of mentorship, even after they've done some kind of training, is essential.

There needs to be an experienced mentor guiding them over the next couple of years, asking them questions about their practice and getting them to understand that it's a practice steeped in theory. You have to have both. It's

not one or the other. Talking with others about it, it enables the life work in reality, as a real endeavour. You have to fall in love with it. You have to have respite from it too, because it's so intense. You need those still-points so that you can deeply absorb as well as rest from the intensity of it all... to refresh, to take stock, to dissociate from it for a while. It's a reflective vocation in every sense of that phrase (Interview, 15/1/2010).

The school Principal, herself a trainer of Montessori guides at the elementary level, echoed Helen's concerns: "One of the immediate challenges is well-trained Montessori teachers..." (Interview, 3/3/2010).

Teaching and learning at Forest School revolved around the place-based nature of the curriculum. Since the middle school was small, teachers were expected to collaborate not only with each other, but also with the students in the conduct and practice of education at this level. Teachers shared ideas, knowledge, and references, combining sections of work to unify and integrate subjects and studies.

The community had become a recognised extension of the classroom, where studies were conducted as readily outside, as within the school boundaries. Learning styles reflected Montessori ideals, in which students were encouraged to learn independently, to peer-teach and -learn, to share information, and to be responsible for ensuring that outcomes were realised. Students and teachers reflected on study units together, discussing what worked well and those aspects that were less successful, and why. Rubrics for self-and peer-assessment were negotiated, and students were encouraged to participate with a sense of ownership.

Helen, the learning director, described Montessori teaching and teachers in this way:

...in your life you need to embody the great characteristics, striving for integrity, serving, to see the child and to see life in a very humble way. Internalising her philosophy which resonated with my own upbringing about reverence for human life, for the child, and about a life of service. It may not always be successful but it's fruitful. It can't just be talk. We must model that we love to serve them, so they long to serve others in the self same way. These are deep spiritual principles. Montessori is the only educator who spoke about the spiritual development of the adult. Why is that? When you are responsible for the greatest treasure on this earth— the next generation... (Interview, 15/1/2010).

Her eloquence and passion were reflected in the response she inspired from teachers, students, parents and community members involved with Forest School. For Helen, a key aspect of deepening and spreading Place-based and Montessori education was rooted in teacher-training as a means to embodying the principles as a means of engaging both students and community members. By this means, educational and social reform might be effected.

### **School Policies and Practices**

The central position of place-based pedagogy in the middle school curriculum, was clearly approved by the Principal and the board of Forest School. In part this was due to Helen's evangelistic role in this regard, but also to her long experience and her conviction of the rightness of place-based education as a curricular model for Montessori adolescent education.

The middle school was, to some extent, a self-governing body independent from the remainder of the school. Housed separately, the middle school program was able to organise itself differently from the daily schedule of the much larger primary/elementary section of the school. In itself, this provided tacit support for the place-based nature of the program. Other indicators, such as the hour-long daily morning meeting for the adolescent guides (while the students studied Spanish with a specialist) provided encouragement for the continuation and elaboration of the program.

According to the PBEPR, Forest School meets the criteria for a maturing level, in which large blocks of time, including whole mornings and afternoons are set aside for community work, and requirements that students perform community work as part of their assessment. In several respects, Forest School also met some of the criteria for this aspect of the advanced level of the PBEPR, including the fact that the middle school budget covered the necessary costs of place-based education; middle school schedules were organised to incorporate pedagogy of place, and student evaluation was contingent upon the practice of place-based pedagogy.

Forest School's place-based curriculum had resulted in little actual structural or organisational change in community policies, for example. However, some local

agencies, such as the retirement village were willing to accommodate the temporary involvement of Forest School in their policy arrangements.

This situation accords with the reality that the relationship between the community and Forest School was still relatively tentative. Forest School was a private school, and the community was essentially conservative and upper middle class in culture. Place-based education is a relatively recent introduction as an educational approach, and until the community has accepted and approved the practice, community policy and structural change as regards school-community involvement will remain largely unchanged.

In the case of Forest School, several local philanthropic individuals and one national organisation had shown their support of the place-based learning projects in the middle school, by donating funds to assist in the sustainability of the program. In-kind resources, such as the use of the land on the farm, transport to the farm provided by a small local bus company, and an abundance of assistance in labour, and physical resources permitted the program to continue despite a small staff.

### **New Resources and Connections**

The learning director, Helen, was one of the most experienced practitioners of place-based pedagogy in Montessori educational circles in the USA. She shared her experience, enthusiasm and know-how several times per year with other Montessori practitioners in seminars, courses, and conferences. She also regularly published papers about the ongoing experience, with guidelines about initiating and continuing the program.

Visitors, from the community and elsewhere, were welcomed and invited to observe in the school. Parents were educated in the process of place-based pedagogy so that they understood how the program stimulated the necessary academic and personal development aspects for this stage of schooling.

Accountability formed a large part of the rationale for documenting the work, attracting financial support, maintaining parental approval and institutional educational favour.

Helen, the learning director at Forest School, reflected on the community as the background for social reform and peace-studies in place-based Montessori education:

Montessori wanted us to give ourselves to this reformation of education and human development in whatever way we could with this great generous spirit. Peace-making, not just talking, but mapping and figuring out the pathway, the education, the modelling. That is the ideal...And how important it is that you are growing, that you have that kind of space, where you are aware of the importance and reverence for life, where you are aware of the importance of respectful engagement with your students and colleagues and the whole of life (Interview, 15/1/2010).

The program she had developed at Forest School for the middle school supported her beliefs about education, by encouraging community involvement, place-based education, the micro-economy and an inclusive approach that engaged and involved the community of the school in the local community, highlighting the similarities between school and community.

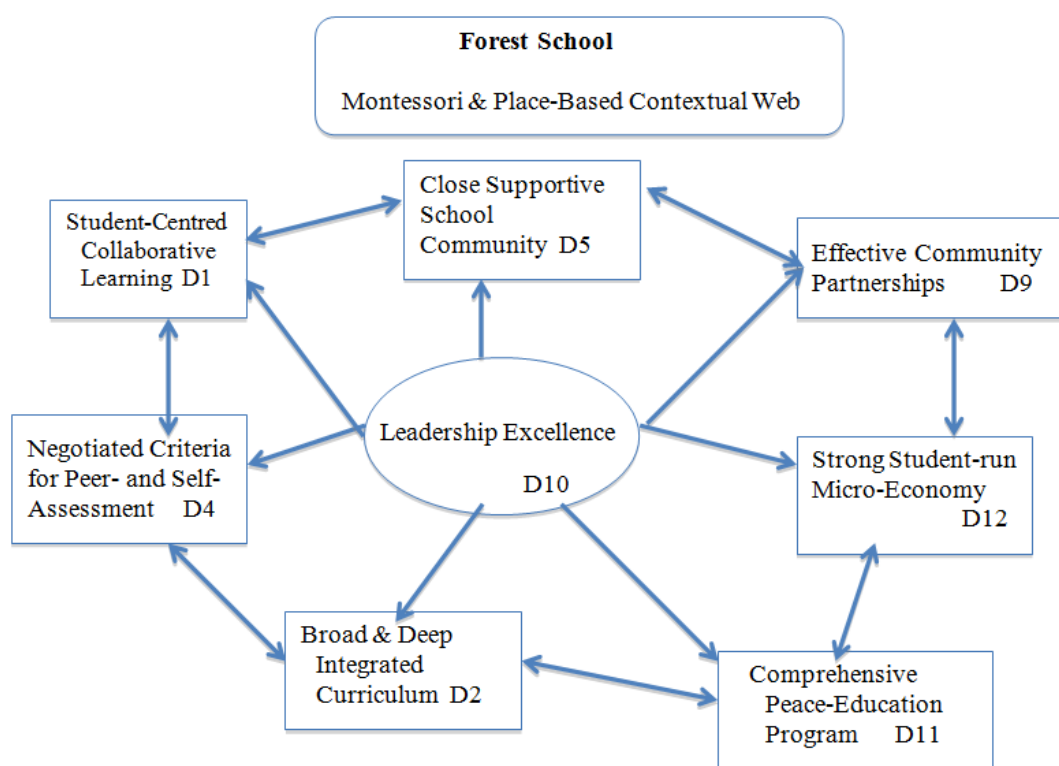
### **Summary of Findings, Themes and Issues at Forest School**

Forest School's approach to Montessori adolescent education practice was closely interwoven with place-based pedagogy principles, producing pronounced ties to the local community as the context for engaged academic learning and social development.

Forest School, a private facility, included the smallest of the middle schools included in the study. The middle school was limited to Years 7 and 8 only. Following Year 8, students transferred to one of several other private high schools catering to Years 9 to 12 in the locality. Despite the fact that Forest School's assessment was based on qualitative non-numerical data, students graduating from Year 8 were reported to have "no difficulty" in gaining admission to any of the high schools in the area (Interview with Helen, learning director: 15.1.2010). Teachers reported that they referenced the State standards as a guide, to ensure that all relevant material was covered, but as a private school there was no such obligation, apart from the fact that Year 8 students would be assumed to have some familiarity with State curricular elements.

The essential approach at Forest School, was to approximate Montessori’s adolescent education principles as closely as possible, making thoughtful adjustments as necessary, while ensuring that students were guided in their development as individuals and as future members of the adult society.

At Forest School the interweaving of Montessori and Place-based learning principles was complex and well established. This was achieved predominantly through the expert leadership of an experienced Montessori adolescent guide and teacher-trainer. This point is clearly illustrated in Figure 5.4, below.



**Figure 4.4 Forest School Configuration**

**Aspect 1, Student Learning and Contributions** of the combined Montessori and PBEPR principles was reflected in the rigorous academic program of integrated studies in which students demonstrated high levels of engagement, independence, and self-motivation. Experiential learning in the community was pivotal to the theoretical aspects of the study curriculum, which was organised according to themes based on

socio-historical studies. Critical thinking and peace studies were integral to the study curriculum. Teachers collaborated on a daily basis to discuss student progress, to individualise students' learning, and to compare notes about curricular areas in which they specialised.

Assessment and evaluation was always negotiated between students and teachers, with qualitative rubrics employed as the means to self- and peer-assessment. This is termed “authentic assessment” among Montessori educators, with Forest School's application of the ideal fostering a strong sense of student ownership of, and engagement with, their studies.

In **Aspect 2** of the combined Montessori and PBEPR principles, namely **Community Learning and Empowerment**, it was concluded that it was difficult to know whether the community saw the school program as reciprocal in terms of meeting its needs and values, since community members were not surveyed. From observations it would be possible to surmise that in some respects the community members were reciprocated for their time and effort in relation to their interactions with Forest School students. For example, students made a point of donating part of the profits of their micro-economy to local charities.

The positive mentoring by adults involved in the program, from teachers to community members, also helped to guide students in their self-management strategies, thoughtfulness, anticipation of outcomes, and integrity. Some of the guidance was explicit, whereas in other areas encouragement was fostered by exemplary behaviour.

In the “Course of Study and Work” document (1995), one of the section headings is titled, “Pedagogy of Place Sets the Stage”. The implication is clearly that the small city was regarded as a staging ground for Forest School's situated learning, but that the larger implications, the “blurred boundaries between school and community” of the PBEPR have yet to be realised in the school's pedagogy of place approach. This is perhaps due to Montessori's view that it is primarily the small community of the school, that is the young adolescents' training ground for later adult life in society.

On the other hand, Montessori also makes it clear that it is within the role of specialists (“technical instructors”) in the community to extend their knowledge and expertise to students in the Montessori school (1948/1994: 80).

**Aspect 3, (Deepening and Spreading Place-Based Learning)** of the Montessori and PBEPR principles, involved the work of the micro-economy in all its practical, theoretical, and morally developmental applications. This area of personal and community development integrated academic studies of commerce and trade, with creative expressions in art, craft, culinary and gardening, in addition to philosophical discussions about assessing and assigning value to effort, time, and affordability. The whole realm of the micro-economy touched on virtually every other area of the integrated curriculum, while encouraging personal development, through collaborative labour, financial management, empathy, and self-discipline.

In Montessori adolescent education, a functioning micro-economy is considered an essential requirement of the integrated curriculum, together with the socialisation dimension, particularly because it is an area in which the students can exercise self-directed learning and motivation with guidance. Montessori considered it an essential in helping adolescents to adulthood.

Montessori teacher-training was an issue of concern at Forest School with only one of four teachers in the middle school holding a Montessori diploma, while none of the others had any Montessori training at all. The significance of this lies in the fact that the Curriculum director, Helen, also adopted the role of teacher trainer to the whole team, in addition to her other responsibilities. With a daily staff meeting and close collaboration between teachers in such a small school, this approach was as practical as possible.

It was also noted that there was a high staff turnover in the middle school. Apart from Helen who remained at the helm, there were three complete changes of staff during the data collection period. This may have been related to the relatively long hours of the school day, or issues that were oblivious to the researcher, such as salary rates, for example.

Parent education was an area that was attended with care. “Notes Home”, a weekly newsletter to parents, regularly included advice for the application of Montessori

education principles at home. It also covered areas of Montessori theory for the benefit of parents. Some Montessori theory was discussed with students. Parent nights were held on a monthly basis and dealing with a different topic of Montessori theory, parenting guidelines, or adolescent development, over a two-year period. Parents could also schedule conferences with teachers during the after-school hours.

### **Conclusion: Case Study of Forest School**

This case study suggested that Montessori adolescent education theory could find an applicable curricular specificity and direction in the principles and practices of place-based education. Montessori's writings on the subject provide guidelines to the education of adolescents with respect to human development theory, but the practicality of developing curriculum to meet those guidelines was found to be possible through the guidelines presented in the PBEPR. The small size of the school may have facilitated the combination of Montessori principles with Pedagogy of Place ideals in a community-based model.

Nevertheless, in this small private school, Montessori and place-based education principles were seamlessly woven together to create a synthesis that accorded closely with the location of school and the small size of the community.

## **Findings from the Four Schools**

The diagrams illustrating the four schools in this chapter help to clarify a picture of each of the cases studied in the course of this research. In each of these summaries, and particularly through the illustrated figures, it becomes evident that particular themes were more influential than others in the interweaving of Montessori and place-based adolescent educational principles with the school circumstances and locality.

Each of the schools manifested the Dimensions of Aspect 1 (Student Learning and Contributions) of the Montessori Place-based hybrid model in distinctive ways according to the school situation and place. Three of the four schools demonstrated that their interpretation and practice of those Dimensions aligned closely to the descriptions of each Dimension in the hybrid model. Mountain School, however, was the exception. Although it was clear that student learning Dimensions practised in the farm section of that school accorded closely to the model, the same cannot be stated when it came to the classroom situations.

With respect to Aspect 2 (Community Learning and Empowerment) of the hybrid model, the applications and practices of the four schools again showed marked diversity in their expression of the relevant Dimensions. Mountain School's farm practice and the close middle school community accorded with all Dimensions of the hybrid model.

In each of the four schools, it was apparent that within Aspect 3 (Deepening and Spreading Montessori Place-Based Learning) critical issues emerged. Dimensions included in this Aspect concerned Community Partnerships, Teacher Training, Peace Studies, and the Micro-Economy.

The diagrammatic representations of the four schools show that Teacher Training and Leadership matters were of core concern to the fundamentals of interpreting and practising Montessori place-based principles in the education of adolescents. This issue originates from Montessori's earliest writings on the matter of adolescent education in which she declared that the farm-school teachers "should have the proper qualifications for teaching in secondary schools...but they must agree to adopt special methods and cooperate in the experiment" (1948/1994: 80). The general Montessori school interpretation of this statement, in today's educational settings seems to be that

that it is not necessary for teachers in Montessori secondary schools to understand the philosophy of Montessori's principles in order to teach and guide adolescents in such schools, as was argued by Grazzin and Krumins-Grazzini (1996). The matter of leadership of Montessori Schools seems to be prone to a similar interpretation. This goes back to Rambusch's (1963) argument with Mario Montessori, mentioned previously in Chapter 2, about updating the Montessori canon to conform to professional American standards of teacher training as a means of establishing Montessori in the realm of progressive education within the American culture. Rambusch's objections seem to have been overlooked in the intervening years.

Dimension 11, Peace Studies, including a focus on social justice, were undertaken in a wide variety of forms in the four participant schools reflecting disparate cultural perceptions of community – within school, in the locality, and in ever-increasing circles of complexity, including ideas of global community and the vast array of online communities. Teachers' and students' conceptualisations of Peace Studies in the four schools also proved to be considerably divergent. For example, some teachers, such as the farm manager at Mountain School, equated social justice to peace, because where there was social equality, compassion, non-competition, and empathy – this was equivalent to a positive culture of peace:

She's [Montessori] talking about the evolution of human consciousness through peace education, giving us to understand that conflict of any kind can be addressed, re-educated, and be manifested as peace in the entire world (Interview, Sarah: 13/9/10)

Bill, an experienced Montessori-trained teacher at Valley School explained his understanding of peace education in terms of critical pedagogy:

People are not educated for peace. People are educated too much for strict efficiency at all costs without adequate questioning and I think that's very dangerous because there are some very efficient people leading us to total destruction, so Montessori's book on education and peace, is so far ahead of its time. A student is a person who is educated well to function in society and part of functioning well in society is knowing how to proceed peacefully (Interview: 17/3/09).

Dimension 12, the Micro-economy also emerged as a matter for further discussion. Montessori originally included such practical studies in her version of the *erdkinder*

plan. She particularly noted that practices of production and exchange were essential in the social and individual development of the adolescent, and that this focus distinguished her ideas about secondary education from those of the European and British farm-schools that originally influenced her theoretical principles of adolescent education. Montessori further specified that the micro-economy was intended to promote an understanding of economic theory, relating in turn to elements of social justice, in addition to personal and community development themes.

## **Chapter Conclusion**

Each of the schools portrayed in this chapter is constructed around the idea of community. In each and every case, ‘school’ was a close-knit community in which students were encouraged to follow their interests, collaborate with each other for information, support, and feedback in learning as well as in social/community situations. In these schools, students were empowered to express themselves creatively, to enter into self-affirming reciprocal learning relationships with adults, to resolve conflicts peacefully, and to learn the skills of shared leadership of the community.

There was also the community that consisted of those outside the school, including parents and families. The interaction of students with the larger community is a preparation, a small step in the developmental pathway to complete independence as an adult, with an ongoing interdependent relationship between the smaller community of the school, and the greater community of the surrounding area. The micro-community of the school is an interim rehearsal, a preview of the dynamics of community and their own roles within that culture as a means to social transformation.

Other themes that emerged include leadership issues and teacher training for the specific purpose of realising Montessori principles in practice. Peace education and the micro-economy also emerged as closely related themes connected to social justice aspects of the curriculum (See Appendix V). In addition, the proposition that Montessori’s original concept and rationalisation for boarding may be substituted with comprehensive parent education, became apparent as an option for 21<sup>st</sup> century

Montessori adolescent implementations. These unambiguous themes will form the basis for discussion in the following chapter.

# **Chapter 5**

## **Drawing the Stories Together**



“Humans are pattern-seeking story-telling animals, and we are quite adept at telling stories about patterns, whether they exist or not.”

(Michael Shermer, Los Angeles Times, Feb. 2000)

In this chapter the themes of Montessori and place-based learning that emerged from the stories of the case studies are explicated in order to more clearly identify the stories these four very different schools could reveal about Montessori adolescent education and place-based principles in the reality of everyday practice. As Stake (2006:83) explains: “The cases studied are a selected group of instances chosen for better understanding of the quintain [phenomenon].”

The stories describing the four schools clearly demonstrate that place-based learning was established to varying degrees, as a focus for academic study and social development in all of the Montessori schools in this study. The widely differing approaches that each of the schools adopted, however, reflected their own place in the surrounding environment, their understanding of Montessori educational philosophy, and their growing facility at problem solving within the spheres of Montessori adolescent and place-based frameworks (the PBEPR).

The Rural School and Community Trust responsible for the development of the PBEPR, proposed this definition of place-based learning:

‘Place-based’ education is learning that is rooted in what is local – the unique history, environment, culture, economy, literature, and art of a particular place. The community provides the context for learning, student work focuses on community needs and interests, and community members serve as resources and partners in teaching and learning...(Rural School and Community Trust, 2003).

It is clear from such a definition that each school’s learning program, as described in Chapter 4, represented a unique response to its own situation, locality, and community. A compelling facet of this study is that although each school claimed to be practising Montessori adolescent education principles to the letter, the impressions and procedures were all completely divergent, reflecting their idiosyncratic responses to their own places and situational demands, as was clearly established by the contextual webs illustrating each school in Chapter 4.

Through an examination of the relationship between the data that emerged from each school case study, and the integrated Montessori and place-based learning principles as shown in the hybrid model, it becomes possible to understand how the shared principles were manifested at each school. In addition, we can also see the extent to which the practices of Montessori adolescent education and place-based principles were affected by the situational conditions at each participant school, the alignment between those two sets of principles, and their impact in terms of social change as a curricular inclusion.

Table 5.1 below illustrates the prime characteristics of the four research cases/schools as a whole.

**Table 5.1 School Profiles Overview**

|  | <b>Valley School</b> | <b>Mountain School</b>  | <b>River School</b>  | <b>Forest School</b>    |
|--|----------------------|-------------------------|----------------------|-------------------------|
| <b>School Category</b>   | Public               | Charter                 | Charter              | Private                 |
| <b>Founding Year</b><br><b>(Middle school only)</b>            | 1994                 | 1998                    | 2004                 | 2005                    |
| <b>Whole School Range</b>                                      | 7-12                 | K-12                    | 7-12                 | K-8                     |
| <b>Middle School Population</b>                                | 258                  | 115                     | 100                  | 19                      |
| <b>Middle School Years Combined</b>                            | 7 and 8              | 7 – 9                   | 7 and 8              | 7 and 8                 |
| <b>Teacher/Student Ratio</b><br><b>(Middle School)</b>         | 1:15                 | 1:16                    | 1:12                 | 1:5                     |
| <b>Montessori- trained teachers by ratio of trained: total</b> | All                  | 2:7                     | 2:8                  | 1:4                     |
| <b>Environment</b>   | Urban                | Semi-Rural/<br>Suburban | Urban/<br>Industrial | Semi-rural/<br>Township |
| <b>Montessori Affiliation</b>                                  | AMS                  | AMI                     | AMI                  | AMI                     |

This table serves as a reminder of the details that defined each school’s particular alignment to Montessori and place-based educational principles. The general alignment of the case-study schools to the newly created Montessori Place-Based hybrid model below, did not appear to have any direct relationship to school size, teacher/student ratios, Montessori affiliation (AMS or AMI), or school category.

The framework of the Montessori Place-Based hybrid model is reproduced in Table 5.2 below for clarification:

**Table 5.2 Montessori Place-Based Aspects and Themes Hybrid Model**

| Aspects    | Aspect 1                                    | Aspect 2   | Aspect 3                                     |
|------------|---|--|--|
|            | Student Learning and Contributions          | Community Learning and Empowerment               | Deepening and Spreading Place-Based Learning |
| Dimensions | 1. Collaborative student – centred learning | 5. Nature-based/ Community Service work          | 9. Community partnerships                    |
|            | 2. Integrated learning                      | 6. Experiential Learning                         | 10. Teacher training                         |
|            | 3. Independent Learning                     | 7. Creative arts emphasis                        | 11. Peace studies                            |
|            | 4. Student Assessment Strategies            | 8. Reciprocal Learning Relationships with Adults | 12. Micro-economy                            |

These Aspects and Dimensions of the Montessori Place-Based Hybrid model will form the nucleus of the ensuing discussion concerning the schools and their reflection of the alignment between place-based learning tenets and the principles of Montessori education. In addition, the discussion will also address the question of social justice learning as a means to education for social change.

### **Cross-Case Analysis of the Four Schools**

At every step of the cross-case analysis I have attempted to maintain “the unique vitality of each case” (Stake, 2006: 39), while at the same time noting the commonalities, and the differences between the cases. The prevailing concept during

cross-case analysis was to discern what each particular case, and the similarities between the cases revealed, in response to the questions and aims of the study (Appendix U). The Aspects and Dimensions of the Montessori Place-Based hybrid model as emergent themes in the cross-case analysis (Appendix V) of the four schools are set out in Table 5.3 below:

**Table 5.3 Cross-Case Propositions (adapted from Stake, 2006)**

| Propositions  | Related to which Dimensions/Aspects?                           | Evidence/ Persuasions  | Reference in which Cases?        |
|---|--|--|----------------------------------|
| 1. Montessori-trained leadership is vital to every aspect of Montessori schooling.  | Aspect 3: Dimensions 9, 10                                     | Leadership underpinned place-responsive programs   | Valley River Forest              |
| 2. Montessori-trained teachers can create integrated context-specific curriculum that meets State Standards through collaboration.  | Aspect 1: Dimensions 1- 4<br>Aspect 3: Dimension 10            | Trained- teacher collaboration was essential in strong integrated Mont. Ed/PBE programs                          | Valley River Mountain (negative) |
| 3. School community promotes intensive interpersonal & leadership skills. Local community fosters understanding of social functioning in wider terms. Both are reciprocally supportive. | Aspect 2: Dimensions 5, 6, 8<br>Aspect 3: Dimensions 9, 11, 12 | Close small communities in every Case; Larger community involvement intensified smaller school community         | Valley Forest                    |
| 4. Montessori/PBE parent-education supports school-and-community based efforts, promotes understanding and endorses home-based practice.  | Aspect 2: Dimension 8<br>Aspect3: Dimension 9                  | Schools practised this ideal either piecemeal or with intent. Less parent-ed. created gap between school & home. | Valley Forest                    |
| 5. Micro-economy creates entry into wider community through ethical values-based experiential business ventures.  | Aspect 2: Dimensions 5, 6, 8;<br>Aspect 3, Dimensions 9, 12    | Students produce and decide <i>value</i> of goods and services by discussion and practice.                       | Valley Mountain River Forest     |
| 6. Montessori's farm and boarding can be substituted by place-based learning with community emphasis as a means to consolidation of Peace studies.                                      | Aspect 2: Dimensions 5, 8<br>Aspect 3: Dimensions 9, 11, 12    | Urban & Industrial school sites replaced farm with site-specific response & community.                           | Valley River Forest              |

Table 5.3 identified six key propositions that are clearly evident as a result of the cross-case analysis of the four schools. Schwandt (2000) noted that the findings of research in the social sciences are a matter of validated evidence and considered scholarly opinion. With respect to this study, these propositions were drawn from the evidence collected as data through extended time in the field, and then carefully collated, examined, and analysed. Again, Stake (2006:84) argued that,

The ideal for most naturalistic, holistic, ethnographic, and phenomenological case studies is to provide description: subjective, potentially disciplined interpretation; a respect and curiosity for culturally different perceptions of phenomena... Avoiding stereotypes is part of the ethic. Direct comparison is somewhat out of place in such a mix.

Thus, the propositions made at this point are designed to facilitate the discussion of pertinent and prominent observations that issued from the data, with a view to consideration of the questions and aims that initiated this study.

These can now be organised further into the following six themes, namely:

- Leadership
- Teacher training
- Community
- Parent Education
- Micro-economy
- Peace Education

While one might argue that all these themes are important for the success of middle schooling education generally, this research clearly demonstrates that they are vital considerations for effective Montessori middle schooling in the 21<sup>st</sup> Century.

These themes are examined in the light of the main question guiding the study, using relevant commentary drawn from the four schools, in order to discuss the findings and the applications of this research study with respect to the hybrid model of Montessori Place-based principles of education.

In order to better frame this discussion, a reminder of the overarching research questions is provided:

How do the shared principles of Montessori adolescent education and place-based learning align?

and

How might we understand the specific criteria and possibilities each contributes to the development of a more enlightened model of adolescent education designed for current social and environmental contexts?

## **Leadership**

“It’s hard to overestimate the impact of leadership on the vitality and purpose of a community” (Robinson, 2015: 186).

Leadership at each of the four schools profoundly influenced the ethos of the whole school. Where there was informed and experienced leadership, teachers were supported and encouraged, the curriculum reflected the fact that teachers were practising according to a shared philosophy of education, and school policies sustained that philosophy in the culture and the community of the school.

Recent studies in school leadership (Garza et al, 2014; Leithwood et al, 2008) argue that the role of school Principal is key:

- to the communication and success of the school’s learning culture;
- to supporting the professional development of teachers;
- to making a difference in teaching and learning; and
- to building community partnerships.

The findings and implications with respect to each of the schools investigated in this study concur with these conclusions. As Robinson (2015: 188) points out,

There is no single style of leadership, because is there is no one type of personality that makes a leader...What unites them is an ability to inspire those they lead with the sense that they are doing the right thing, and that they are capable of doing it too.

The ability to inspire members of the school community with the vision, the necessary direction, and collaborative motivation, is precisely what the findings revealed about the difference between Mountain School and the other three schools. With respect to the latter schools, the leadership was such that the implementation of Montessori

place-based learning was more closely connected to a vision of a close-knit school community driven by motivation and aspiration towards the development and happiness of every individual engaged in that community. In other words, excellence in leadership constructed the whole school culture. Mark, a Valley School teacher, described their school culture in the following way:

...we have a vision and we know where we're going and that holds us to the path. I feel like the theory and the practice, the unity of vision helps keep us grounded in an era of endless new and fancy stuff and all the rhetoric about education. It keeps the kids grounded too, in that they can always trust that when they come to school, it's gonna [sic] be the way they expect it to be (Interview, 1.2.10).

## Teacher Training

...education is not what the teacher gives; education is a natural process spontaneously carried out by the human individual, and is acquired not by listening to words but by experiences upon the environment (Montessori: 1946:3)

In contemplating the words of Montessori above, one might imagine that if learning is prompted by the students' experiences in the prepared environment, then specialised Montessori teacher training is unnecessary. It is clear from the findings of this study, however, that Montessori teacher training was essential in the realisation of the Montessori principles. As Bruno, a teacher at Valley School, where training was ubiquitous among teaching staff, explained:

One of the great benefits of Montessori is that there is an existing philosophy, and if that matches you and your style, or if you grow into that and it's a good match, then all of the teachers in your building and the administration, hopefully everyone, shares that philosophy and that's what normalises<sup>31</sup> the child so that the thing is much larger than the transfer of knowledge, much larger than that – it's about the work of the spirit. So

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<sup>31</sup> Normalisation implies a return to the norm. The child defined by Montessori as normalised is a child who, through purposeful interaction in the prepared environment, is intelligent, prefers a purposeful task to idleness, and who, due to self-discipline, is able to live in sociable peace.

there's a consistency and unity, a consolidation of their experience of learning (Interview, 4.2.10).

A number of papers published in professional Montessori magazines emphasise the necessity for Montessori educated teachers to be employed for the purposes of teaching in the Montessori middle school and high school sections (Sutton, 2007; Loeffler, 2003; Celeste et al, 2003; Coe, 2003). These Montessori professionals further insist that Montessori teachers of adolescents must be trained in specialised Montessori adolescent training, rather than simply holding a Montessori diploma for any level of Montessori education.

According to La Rue (2010) the two complete Montessori adolescent teacher training courses and one adolescent orientation course currently on offer in the USA are not research-based, but originate from other sources, such as practical experience and Montessori's writings, as well as professional literature. La Rue's findings concurred with those of this study, with respect to the disadvantage of laissez-faire attitudes of some administrators regarding the importance of Montessori teacher training with regard to the adolescent level of education.

These ideas with respect to Montessori teacher training have been vigorously debated in the USA since Montessori first arrived in America in 1913 (Povell, 2009). In current times it is less of a contentious issue, since it is more generally recognised that the American 21<sup>st</sup> century context requires conformity to State Education Board standards (particularly with respect to public schools and charter schools; less so in the case of private schools), and integrity in using the Montessori descriptor. However, during my enrolment in the Orientation to Montessori Adolescent Education diploma in 2009, I was surprised to discover that 75 per cent of a class of 60 teachers in Montessori secondary schools had no Montessori training whatsoever.

Given the specialist approaches to learning and pedagogy in Montessori's adolescent principles, it is clear that conventional teaching procedures in the Montessori setting are generally inappropriate. La Rue (2010) for example, suggested that one of the reasons for Montessori high school use of grades in reporting student progress may have been a result of lack of training programs and a reflection of the traditional backgrounds of many teachers in the American schools she investigated.

The Montessori Place-based hybrid model details the representative characteristics of the Montessori and place-based principles of adolescent education in which teachers guide rather than instruct, and students follow their own interests, engaging in experiential work, assessing themselves, and collaborating to complete research projects. With the addition of peace education and the micro-economy specifics, it could hardly be said that Montessori adolescent learning shares a great deal with traditional models of adolescent education as currently practised in 21<sup>st</sup> century America. Indeed, the chasm between them was apparent in the example of Mountain School.

A recent blog (Soulé, 2015) from the P21 organisation, Partnerships for 21<sup>st</sup> Century Learning, proposes that teachers and students must be “co-pilots” in education and learning, which is to say, collaborators and learners together. She further suggests that teachers must apply the same approach to their own work, as well as encouraging their students in the “four Cs”, namely:

- critical thinking;
- creative and innovative approaches and solutions;
- communicative; and
- collaborative (Soulé, 2015).

This implies modelling the goals of lifelong learning within a democratic and supportive learning community. Furthermore, it espouses the ideal of ongoing professional development in which practice is undergirded by the theory of project-based learning promoted by the P21 organisation. Soulé (2015) points out that such an approach involves upgrading professional teaching standards, broadening national education board certification, and ensuring that teachers become mentors for one another.

This echoes the opinion of Denise, from Mountain school:

This is one of the pillars of Montessori program— how a guide observes their students, how guides observe each other, and are observed...this is a huge cultural struggle for Americans ... So, whoever is called to do this work must have a firm grounding and belief that this observation is whence we gain our information— direct observation as well as indirect, so we can best work with our students, and it must be done between adults as well. How

can we expect our students to live authentic lives, to assess themselves authentically, if we are not prepared to do the same as teachers with open honest dialogue and transparency? We're their models. They're so keenly observant...how we interact with one another paints a picture of adult society...(Interview, 13/4/10)

As Montessori expressed it, the idea of education is through experimentation, taking risks, conducting trials by experience, and learning from successes and failures. Soulé suggested that such elements, together with extending ideas to global perspectives and using the latest technologies for learning, imply that active learning is extended as a lifelong endeavour with the aim of personal improvement. An ideal such as this entails creating a learning community that encourages teachers as well as students to collaborate and communicate in mutual support as they work to facilitate learning skills and knowledge.

In fact this is the case in tertiary education, with the creation of collaborative learning opportunities, particularly online, with the use of Massive Open Online Courses (MOOCs), and TED-Ed lessons, in which connections between curricula content and real-world applications support deep learning in contexts beyond the classroom. This turn in educational culture promotes new approaches to teaching and learning skills, inviting observation and collaboration as a means to broader definitions of education.

Will Richardson's blog on the P21 website (2015) reports that teachers must model the activities and dispositions of master learners in order to help their students to enact the literacies necessary to make sense of complex information on their own within any area of learning. This is essentially the thesis of Montessori's approach to learning. Such a concept is supported by Stager (2013: 200) who points out that "It is impossible to teach 21<sup>st</sup> century learners if you have not learned in this century." In other words, teachers must form a collaborative community in which they examine their teaching strategies, the learning contexts, and the means to motivate learners, by applying the ideals of learning mastery in the 21<sup>st</sup> century to their own work.

If, as Stigler and Hiebert (2009) suggested, teaching is a cultural activity, then it is perhaps reasonable to suggest as the authors do, that the culture of teaching and

learning must be consciously changed, since much of what is practised as a culture is largely unconscious. They suggest that:

The context for making improvements is complex and includes the teachers, students, curriculum, grouping, scheduling, and resources. All of these elements, and others that impact the classroom, must be considered when trying to improve teaching methods. One-shot attempts at implementing best practices fail because school-based essentials are not taken into account (2009: 6).

At Forest School, Helen consciously adopted this approach in her teaching of the teachers approach, in which she modelled and initiated discussion about teaching methods that placed the emphasis on providing the means and the context for learners to engage in a participatory community wherein the motivation and means for learning were guided by the students' interest in their own work.

By employing the place-based approach the context becomes the local area, with a focus on understanding the community, both within school and externally, as the subject of interdisciplinary studies supported by experiential learning. This focussed approach is extended, with guidance, to the broader concept of understanding the interdependence of the global community. At Forest School, for example, Helen promoted this mode of learning from the local community, through extrapolations made from the micro-economy to historical communities and to current national and global trade activities.

Stronge, Grant, and Xu (2013) mention that the older paradigm of learning as acquisition has been transformed in the 21<sup>st</sup> century to one of participation, in which learning is a social process dependent not upon subject content, but on effective experiential student-centred activities guided by teachers through scaffolding and real-world problem solving. Citing Schalock and Keith (1993), they point out that:

Effective instruction involves a dynamic interplay among content to be learned, pedagogical methods applied, characteristics of individual learners, and the context in which the learning is to occur.

Teaching and learning according to such means involves invoking the domains of higher-order skills, using cognitive and affective means, as well as personality development to achieve education that rooted in the concept of

lifelong learning for 21<sup>st</sup> century purposes (Stronge et al, 2013). As Montessori claimed, “The purpose of education is to help life: this is the first and fundamental principle (1955/1989: 16).

The dominant message emerging from education reform movements in the 21<sup>st</sup> century is that learning is a participatory community activity based upon experiential means so that students may more effectively understand the social processes of life in current contexts. This implies a radical change from an individualistic competitive approach to a whole-school community that empowers the learning of those within the school, as well as those within the greater community as part of the formation of a culture of lifelong learning.

The suggestion that derives from all of the above, is that Montessori teacher training encompasses much of value to the general teaching community, whether Montessori or otherwise. Indeed, it has become clear in this discussion that exemplary Montessori teaching approaches could be shared with traditional teachers as a means to enhancement of learning contexts and capabilities in school-community partnerships.

## **Community**

In schools, great Principals know that their job is not primarily to improve test results; it is to build community among the students, teachers, parents, and staff, who need to share a common set of purposes. (Ken Robinson, 2015:188).

In the 21<sup>st</sup> century, community-building is generally recognised as a goal as much in rural areas, suburbs and neighbourhoods, as in schools. Commentators in a wide variety of fields address the issue of the breakdown of community and its implications for social wellbeing and democracy (Smith, 1993; Raywid, 1993). As in Montessori’s time, so as now, the social ideal of community remains a force for consideration in education reform. Robinson (2015) considers community both within and outside the school as crucial in the transformation of education to meet 21<sup>st</sup> century needs.

As discussed in the Literature Review boarding schools are culturally unacceptable in the USA. Parents and teachers from every school included in this study were adamant

that it was inappropriate and unacceptable under normal circumstances to separate young teens from the family environment. For this reason primarily, these Montessori secondary schools offered alternatives that might compensate for the community-building implications that Montessori intended. Such alternatives included excursions, camping trips and odysseys,<sup>32</sup> which Grazzini and Krumins-Grazzini (1998) mentioned as unsatisfactory as a means of compensating for the *erdkinder* experience in urban and other non farm-school implementations. These kinds of activities are commonly employed, however, in current place-based learning settings in order to encourage community-building, and experiential learning.

Considering the array of communities with which young adolescents may currently engage, including their extended families, communities of care, church, school, and a vast assortment of online communities that are constituent of social media sites, there is perhaps room for a reassessment of the necessity to confine the younger adolescent years to the school community. This is particularly so in the case of Montessori adolescent schooling in urban areas, in which the mode of experiential learning implies involvement in the greater community in a place-based model. Such evidence also implies a reconsideration of young adolescents as “social embryos” (Montessori, 1936: 177). As Barron (2002) proposes, new strategies and intellectual paradigms are required in the postmodern world, and Montessori practices are no exception.

Twenty-first century commentaries on Montessori adolescent education (Seldin & Epstein 2003) suggest that without wider community learning, students remain confined to the inner circle of class and school community, with no real exchange or ongoing connection with the greater world outside. Since community work inevitably leads to wider parameters of experience and growing independence on the path from adolescence to adulthood, then it has value in a curriculum that lays claim to experiential learning. In other words, Montessori’s ideal for the farm-school does not necessarily mean that in the twenty-first century young teens should be confined to the social life of the school.

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<sup>32</sup> As noted in Chapter 2, an Odyssey is generally a trip away, in the company of classmates and guides, in which physical and psychological challenges help students to discover more about themselves, and help them learn to bond more closely as a community.

Teachers from several of the participating schools who were interviewed in this study explained their views about urban versions of Montessori adolescent schooling as opposed to rural versions. For example:

The farm model could easily be applied to living in any kind of environment. It's just not working as much with the land as navigating a culture or working with other people to understand the society of which you are a part or building up, moulding our culture and society (Interview: Clara, Valley School, 4/10/10).

From this perspective, Montessori's ideal of the farm school community is viewed as a metaphor for understanding one's society through community life, regardless of the place. The excerpt below clarifies and extends that notion further. Sarah, Mountain School's farm manager, references the "tools and technologies" as relationships and people, rather than the tools and the land of farming, to show that the core of education is community, despite the fact that the environment is completely different:

In the city your hands and your work are in relationship, in people, and you then understand that this is what people have done all through time. This is the thing that makes us uniquely human, and these are the tools and technologies that we've developed that can make people's lives better if they were shared, and out of that arises service (Interview: 13/9/10).

Both of these Montessori guides make the point that the priority of Montessori adolescent schooling is actualising community as a means to social change, through service, adaptability, and understanding.

The PBEPR was initially established to provide educators with a means to plan, document, and assess place-based education in practice (Gruenewald, 2005) in order to ensure the survival of rural schools threatened with closure in isolated communities. Because these rural schools and communities were small, the emphasis is focussed on school interaction with the adult community. Other commentaries on place-based learning, however, allocate significance to the learning environment of the *school* community enacted on a daily basis in close proximity.

...schools that cultivate a sense of community are characterized by increased commitment among students and teachers, less alienation, improved motivation, and greater autonomy for teachers (Lehman, 1993: 87)

These various approaches to schools and community describe a concept of education that would see community, in its micro and macro forms, as an opportunity for interdisciplinary learning within the broad social context of humanitarian care and collegiality.

A particular facet of the school-community interdependence that was emphasised in the PBEPR, but not apparent in the schools that participated in this study, was the element of school as a reciprocal resource for community learning and other needs. It appears that the relationships between the schools and their communities have yet to broaden their focus to such an extent that a mutually sustainable relationship is developed to serve the needs of all within the area.

What we learn from the participating schools that might contribute to the continuing relevance and applicability of Montessori and to place-based education principles for adolescent education in the 21<sup>st</sup> century is that community is a key to adolescent learning. As Montessori wrote, “...and this should be the goal of the secondary school, the preparation to find one’s place in the society in which we live.” (1937/2001:195).

## **Parent Education**

Parent education is another arena in which the boarding issue might be addressed. With comprehensive parent-education programs and encouragement of parent involvement, the principles of Montessori place-based adolescent education could be continued in the home environment. As Forest School’s Curriculum leader, Helen, explained:

It’s the discordant nature of what you’re trying to do with them at the school and then sending them home into all sorts of home situations; that’s the reason for the boarding requirement in Montessori– so that the community work can continue uninterrupted through the academic and the extracurricular, from schoolroom to domestic...to farm (Interview, 5/5/10).

Montessori program leaders advise regular parent-education and involvement in Montessori adolescent education programs as part of a holistic approach to family and schooling (Sutton, 2007; McKenzie, 2007). In recommendations concerning middle-

schooling, Hopping (2000) stated that parent involvement was vital, particularly at the junior high school level. In an educational program that purports to be place-based, it is apparent that incorporating families is an empowering step. This was discernible in River School's long-term neighbourhood projects, and the involvement of community in an embryonic form.

The incorporation of parent and family members may also be achieved in an alternative version in which the school helps support students' families where appropriate. At Valley School also, the athletic coach recounted the variety of ways in which the teachers substituted as surrogates for parents and families who, through poverty or social/physical inability, were unable to feed and supervise their children adequately.

Haas (1993) described programs in which schools were transformed into family centres with the result that family needs were supported so that education became an act of community transformation. The Crossway Montessori community school in Maryland provides another example of community and schooling working in tandem to improve the lives of individuals, families and community through compassion, cooperation and learning (Whitescarver, 2012: 21).

As Robinson points out, "Collaboration between schools and families is a powerful source of *school improvement*" (2015: 210). This notion of a partnership between school and family in the child's education is one that encourages greater collaboration between community and schooling as a means to mutual support for schools and families. According to a 2010 University of Chicago report detailing a seven-year study of low-income elementary schools in urban Chicago, "parent-community ties are one of the five essential supports for success in education reform" (cited in Robinson, 2015: 211). The remaining four essentials included strong school leadership, the quality of faculty and staff, a student-centred learning climate, and strong curriculum alignment. The connection to Montessori and PBEPR learning principles is clear.

## Micro-Economy

Montessori considered the young adolescent to be at “a delicate age” (1937/2001: 191), and therefore best limited to the school community to practise as an apprentice for a future social life in the adult world. One of the means she suggested to assist the young teen in developing an understanding of the values and morals of society was through the practice of a micro-economy. In effect this practice would assist the young adolescents in understanding the reality of the ethics of commerce and the value of effort, expertise, time, and money, against the backdrop of community. Montessori further alluded to students’ understanding of laws relating to work and exchange, division of labour, and the delicate balance of responsibilities between members of a just society. This accords with Montessori’s emphasis on the role of virtues in the praxis of education, “The virtues are the *necessary means*, the *methods of existence* by which we attain to truth” (1918/1991: 106).

Lawrence Kohlberg’s (1985) social theory of a just society has a place in this discussion, since he elaborated on Montessori’s principles and ideals with respect to civic and social justice. Kohlberg’s notion of a participatory democracy described the common good as the basis for a social order that included equal rights, group solidarity, civility and justice. These social principles could be realised in practice through the institution of the micro-economy, adhering to Kohlberg’s idea that moral praxis is a superior form of development, as opposed to merely thinking morally, an idea which originates from Montessori’s notion of education (Frierson, 2014).

It is evident that the practice of micro-economy can be a pivotal element in the development of a democratic and respectful community in the middle school. It constitutes an experiential form of socialisation involving the development of morality through the practice of economic processes. As Forest School’s curriculum leader, Helen commented:

One of the things I think is so critical is the micro-economy. I cannot imagine our program having the power that it does and the social cognition that it promotes, and makes real, if we did not have that component (Interview, 5/5/10)

In Figure 5.5 below, the essential experiential areas of functional learning prompted by the institution of a micro-economy are shown in the central area of the diagram.

These represent some of the roles adopted by the students in the practice of their small business. Peripheral to those more direct areas of learning, indirect precepts and qualities of working in the micro-economy are illustrated. Many of these peripheral qualities are related to development of the personality, and thus, to responsible and contributory membership of the just community. The practical roles of the micro-economy foster not only development of practical skills, but indirect, or unconscious learning with respect to the virtues and social justice. For Montessori, the incorporation of pedagogical practices that rely on non-conscious cognitive aspects is an important feature in the learning and development process (Frierson, 2014).



Figure 5.1 Learning Areas fostered by Micro-Economy Practice

Each of the participant schools included some practice that was representative of the micro-economy. Three of these versions appeared as more characteristic of a simple trade or barter system. In these three schools elements of production and exchange were evident, but the practical economic implications of the production-exchange cycle were not included in the learning sequence. In these three cases, the students were not able to determine the use of the money earned, and therefore, a great many of the implications of the micro-economy were obscured. It is difficult to ascertain why the economic cycle was interrupted such that the economic and moral lessons of the micro-economy remained limited. These schools, particularly Valley School, employed Montessori-trained teachers who were aware of the implications of Montessori practice and principles.

At Forest School the micro-economy was an ongoing year-round practical occupation involving not only production and exchange, but also an understanding of seasonal availability, banking practices, and further still to more detailed studies of the World Bank, and the role of the OECD in global economies. In other words, the actuality of running a small business prompted an experiential understanding of economics and social justice that extended from a local level to the ability to question and discuss global practices of social and economic justice. Within their own school community, and at times extending to the larger community, Forest School students referenced the theory and ethics of the just society.

It is clear that the concepts and understandings of membership in a close-knit community based on principles of social justice are firmly linked to those same qualities reflected in the micro-economy and in peace education. In fact, it is evident that the micro-economy and its practical and theoretical implications include all of the Aspects and Dimensions of the Montessori place-based hybrid model, given that it is based on student-centred experiential learning with guidance and advice emanating from the teaching staff and community.

## **Peace Studies**

The question of peace cannot be discussed properly from a merely negative point of view...in the narrow sense of avoiding war...Inherent in the very

meaning of the word *peace* is the positive notion of constructive social reform (Montessori, 1949/ 1972: xi)

In the foregoing discussions of community-building and the practice of micro-economy it became evident that social justice is a common theme in these Dimensions of Montessori adolescent educational principles. Duckworth (2006) points out that the inclusion of critical pedagogy (Giroux, 1988) in Montessori educational principles is inherently an indication of the social justice curriculum,

An education for social justice must equip students to analyse critically for themselves, even when their views are in the minority. Montessori indicated that this is a critical form of resistance against political oppression (2006: 43).

Gruenewald (2005) references the culture of educational accountability as instrumental in the silencing of alternatives that would challenge the standardisation of education through quantitative testing. He further mentions “schooling as a problematic site of normalization, disqualification, coercion, violence and control” (2005: 266). These views of current schooling norms are challenged by Montessori schools in which:

- peer and self-assessment are common strategies;
- the school community values service, respect, and equality;
- collaboration displaces competition; and
- students celebrate their individuality within the community.

The foregoing, though not a descriptive profile of every Montessori school, contains a core of Montessori educational principles that are reflected to varying degrees in a great many of the Montessori schools encountered by the researcher. Among the schools participating in this study, the definition and explanation of peace education varied from individual to individual, sometimes significantly. Even at Valley School, in which most teachers had been inducted through the same training program, the responses to inquiries about peace education were highly individualised.

Many teachers were unable to express their thoughts about peace education, although most referenced the ideal of harmonious relations in community. Some schools, such

as River School, barely mentioned the concept at all, although the community itself was self-governing, open-minded, co-operative, and close.

At Forest School, peace education was not confined to a definition of peace as an absence of conflict, but strategic studies of conflict and resolution that were referenced to community behaviour in state and national politics, in the local council, in student community council, in respect of relationships, disagreements, and at home in the family.

For students at Valley School, peace education was tied to personal and community responsibilities, to making selfless contribution to community, in chores, group work, contribution to class discussion, to kindness to others, to refusal to gossip, to concepts of a just community. In Montessori's own words,

Preventing conflicts is the work of politics; establishing peace is the work of education. We must convince the world of the need for a universal, collective effort to build the foundation for peace (Montessori 1949/1972: 27).

As Reardon (1988: x) explains:

Stated most succinctly, the general purpose of peace education...is to promote the development of an authentic planetary consciousness that will enable us to function as global citizens and to transform the present human condition by changing the social structures and the patterns of thought that have created it. This transformational imperative must, in my view, be at the center of peace education.

This definition aligns emphatically with Montessori's ideal of education as the springboard for social change, wherein the critical pedagogical focus goes to the very heart of questioning institutionalised social values, challenging fundamental value assumptions, and indeed the very bases of the social order. The connection to studies in the micro-economy is readily apparent, and is echoed in the writings of Freire (1973) referencing the link between the political arena of peace education and economic structures. Most certainly the concept of community values and partnerships in education is also a crucial ingredient in this framework that sees social change as its focus.

## **Education for 21<sup>st</sup> Century Contexts**

According to Montessori, the core purpose of education is preparation for life. In current times, the terminology used to refer to educational purposes is “21<sup>st</sup> century skills” development. As Montessori asserts, “...this should be the goal of secondary school– the preparation to find one’s place in the society in which we live” (1937/2001: 195).

What are the special skills required for 21<sup>st</sup> century life? The U.S.-based Partnership for 21<sup>st</sup> Century Learning<sup>33</sup>, composed of representatives from 19 U.S. States and 33 corporations suggested these characteristics as crucial for current social and environmental contexts:

### **Interdisciplinary Themes**

- Global awareness;
- Financial, economic, business, and entrepreneurial literacy;
- Civic literacy;
- Health literacy; and
- Environmental literacy.

### **Learning Skills**

- Creativity and innovation;
- Critical thinking and problem solving;
- Communication; and
- Collaboration.

### **Life and Career Skills**

- Flexibility and adaptability;
- Initiative and self-direction;
- Social and Cross-cultural skills; and
- Leadership and responsibility.

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<sup>33</sup> P21 Partnership for 21<sup>st</sup> Century Learning: <http://www.roadmap21.org/>

As Robinson (2015: 46-7) points out, these capabilities are necessary for life in any community in any era. Although health has not been included in the discussion of the participant schools, all of the remaining themes and skills that form this list are included in the aspects and dimensions of the Montessori place-based hybrid model.

Montessori's particular contributions to education are clearly evident in the holistic nature of a curriculum that is predicated upon the notion of education as social reform. Conspicuous among the principles of Montessori education is the inseparability of experiential learning and cognition, in which meaningful context plays a central role. This identifying feature of Montessori's principles of learning is chiefly responsible for the connection that is so readily achieved with place-based learning tenets.

Montessori education and place-based learning principles also share a further characteristic, which is apparent in the assumption of the interrelatedness of knowledge, as opposed to learning as a collection of discrete disciplines. These features are particularly applicable in the context of adolescent education, since, like Montessori, current adolescent education theory focuses on the twin forces of collaboration (Berndt & Keefe, 1995; McCaslin & Good 1996; Ryan & Patrick, 2001; Freeman et al, 2002) and motivation (Rathunde & Csikszentmihalyi, 2005a, 2005b) as incontestable precursors to student engagement and academic achievement, among other significant qualities in adolescent student learning success.

The potential of the comprehensive framework embodied in the Montessori place-based hybrid model is readily apparent in the practical applications of the Aspects and Dimensions that emerged through the case studies of the four US Montessori schools. Its value as a structural means to developing, broadening, consolidating and evaluating Montessori place-based programs in reality, legitimates and potentiates the relevance of Montessori adolescent education in 21<sup>st</sup> century contexts.

It is timely to now consider the theoretical implications of the model, the conclusions drawn from the study, contributions to knowledge, and recommendations for further research, which will constitute the next and final chapter.

# Chapter 6

## Full Circle



We shall not cease from exploration  
And the end of all our exploring  
Will be to arrive where we started  
And know the place for the first time. (T.S. Eliot, *Little Gidding*, V)

The overall purpose of this research journey was to explore and understand the specific criteria and possibilities that the principles of Montessori adolescent education and place-based learning tenets contribute to the development of a model of adolescent education designed for current social and environmental contexts. In order to achieve this purpose, the aim of this study was to identify the degree of alignment between the shared principles of Montessori adolescent education and the tenets of place-based learning.

This exploratory study began with an understanding of Maria Montessori's farm-school (*erdkinder*) plan, and Mario Montessori Jnr's modification some fifty years later to include place-based pedagogy as a practical addition in late 20<sup>th</sup> century implementations. In the USA from the 1970s onwards, an increasing number of Montessori adolescent schools were established in urban and suburban areas adapting the *erdkinder* plan to a heterogeneous mixture of places and settings.

This study has explored the evidence of Montessori place-based education principles drawn from four U.S. Montessori middle schools and the related literature in order to answer the research questions:

1. How are Maria Montessori's principles of adolescent education actualised within the 21<sup>st</sup> century North American context?
2. How do the tenets of the place-based Education Portfolio Rubric align with Montessori adolescent education principles and practices?
3. What can we learn from the participating schools that might contribute to the continuing relevance and applicability of Montessori education and to place-based education theory for adolescent education in the 21<sup>st</sup> century?
4. How might the participating schools reflect Montessori's intention of education as a catalyst for social change?

In this chapter, the contributions to knowledge, the theoretical implications of the hybrid model, and recommendations for further research, will be elucidated in the

interests of arriving at the conclusions drawn from the study as the research journey comes to its end.

## Contributions to Knowledge

The realisation of the current research objective was undertaken through a multiple case study of four widely differing US Montessori schools with a view to understanding the adaptations necessary in order to implement the Montessori vision in the 21<sup>st</sup> century.

On the basis of what has been learned as a result of the detailed analysis of the rich data collected, it can now be argued that:

- Montessori and place-based education principles are not only relevant to 21st century adolescent education, but they also have a particular contribution to make to current educational theory.
- There is such a high degree of alignment between the two sets of principles that one hybrid model was developed as a valuable improvement in the planning and realisation of Montessori place-based learning implementations.
- The **Montessori place-based hybrid model** was considered to be applicable to Montessori and place-based learning settings for the purpose of implementing and evaluating adolescent educational frameworks. The particulars of the hybrid model reflect the characteristics of The U.S.-based Partnership for 21<sup>st</sup> Century Skills, which publishes as theory, a similar basis for the selection of curricular material and the rationale of learning for current educational purposes<sup>34</sup>.
- Montessori's intention of education as a catalyst for social change is manifested in the construction of **place-based school communities** emphasising democracy and social justice; where the micro-economy is practised with intent to explore the socio-economic implications of production and exchange; and above all, where peace education is realised in social

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<sup>34</sup> P21 Partnership for 21<sup>st</sup> Century Learning: <http://www.roadmap21.org/>

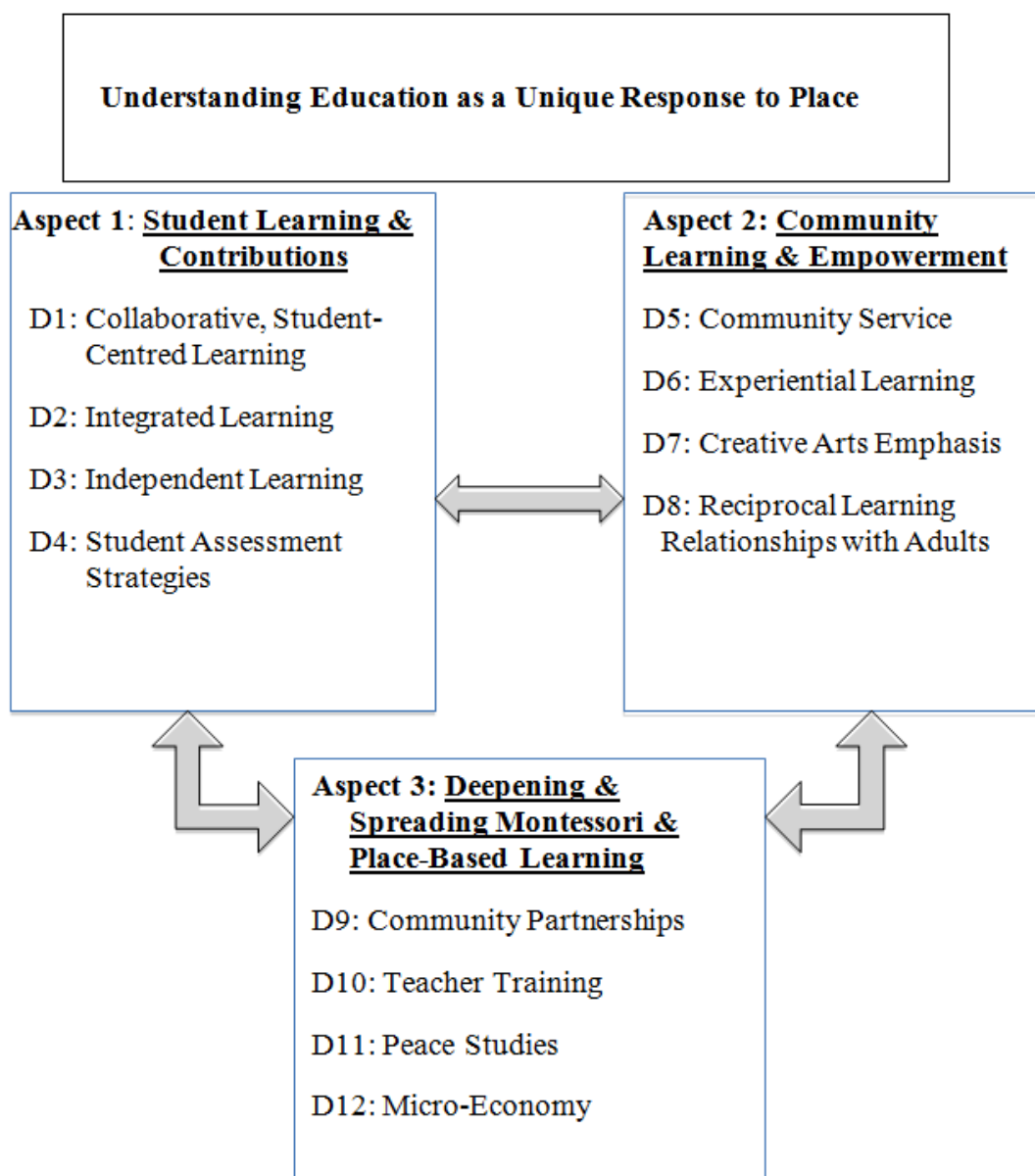
interactions as a positive force in the transformation of a social order that institutionalises assumptions about the inevitability of conflict in the struggle to retain power.

When considering Montessori's ultimate aim of education as the catalyst for social justice, it is clear that the study and practice of living in Montessori place-based communities is empowering and transformational. Indeed, it becomes apparent from the design of the Montessori Place-based hybrid model that in fact the whole of the adolescent Montessori place-based orientation to learning is constructed to highlight the central concern of community. This is evident in the development of independence as a means to construction of the personality, through student collaboration in learning and assessment, involving adults in reciprocal learning relationships, in community service, through to the power of community partnerships. All of this suggests that through the medium of community, the central focus of schooling is changed from a process that promotes individual progress and competitive achievement, to one that is framed by communal concerns, placing emphasis on the common good, shared leadership, and collaboration. Learning that is based on such community concepts is, in effect, a powerful means to social change.

### **A Synergistic Model: The Montessori place-based hybrid model**

The Montessori place-based hybrid model amplifies these contributions most saliently in a synergistic model (Fig. 6.1) showing the interactive nature of the Aspects and Dimensions of this model, and their interdependence. This model evolved originally from the PBEPR juxtaposed with Montessori principles of adolescent education as a means to analysis of the data that emerged from each of the case studies.

The particular qualities of this model of educational practice illuminate the interdependent and interrelated nature of the cycle of learning. It describes the elements of independent and collaborative learning (Aspect 1 Dimensions) as mutually reflexive with the experiential personal and community relationships (Aspect 2 Dimensions) that are preparatory learning for adult life in society. Aspect 3 Dimensions demonstrate the idea of teachers and community members as lifelong learners together with the students, incorporating peace studies and the micro-economy as dynamic practice towards the goal of social reform.



**Figure 6.1 The Synergistic Nature of the Hybrid Model**

Although it has been suggested that this model might prove of value to current implementations of adolescent education, there are several embedded elements that are redolent of Montessori education more specifically. For example, there was some discussion in the previous chapter about the necessity of Montessori teacher training, because without this particularity the style of instruction can hardly be called ‘Montessori’. Further to this, Dimension 12, the Micro-economy is, as illustrated in Figure 6.1 above, an essential element in the framework of the critical Dimensions. Forest School’s curriculum leader, Helen, emphasised the specific Montessori approach to the study of micro-economy:

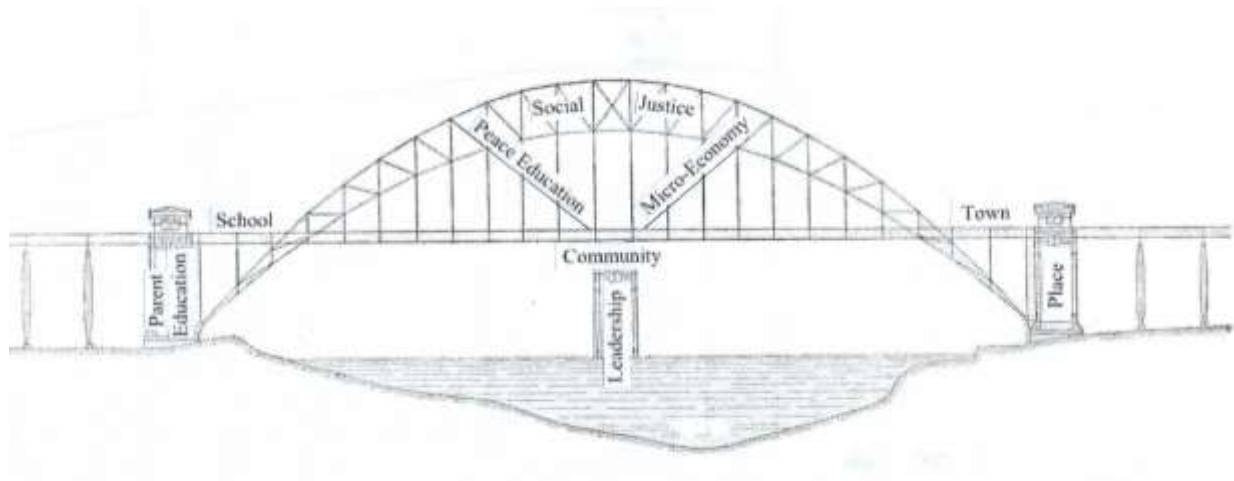
There are programs in progressive schools where they're studying entrepreneurship and business and all that, but here with the hands-on at a micro-economy level, they begin to understand how the greater worldwide economy works and the ethical and moral components in the integration of economic life. That's where we find ourselves on a different path in Montessori, with the morality and the materialised abstraction of values (Interview, 5.5.2010).

Such provisos regarding the nature of the Montessori approach to guidance rather than teaching, and to the integration of micro-economy and peace education as components of the experience of a just community, are vital because they are elemental to Montessori adolescent education principles. These critical elements are not as clearly integral to the PBEPR, nor considered as a definite and interwoven framework in commentaries on place-based learning.

It is important to bear in mind that Montessori's principles for adolescent learning generally accorded closely with the PBEPR criteria for place-based learning. Montessori's policy of limiting the developing social skills of young adolescents to the small community of the school, however, was based on her perception of the adolescent as a "social newborn", a concept that is perhaps less applicable to young adolescents of the 21<sup>st</sup> century. Consequently, the Montessori place-based hybrid model recognises the value of the micro-community of the school as a constructive environment for the purposes of practice in community life, as well as a source of reflection about experiential activity and learning in the larger social community.

### **The Role of Community**

The inference that in the current social order, community involvement implies a much wider interpretation than would have been possible in Montessori's era, did not detract from the value of the small school community as a valuable microcosm for learning about and understanding more complex community dynamics. It was noted that studies and practice of community life integrated seamlessly with micro-economy practice and theory, in addition to the implications of peace education for social reform. These conclusions are represented in the following model (Figure 6.2) showing the symbiotic nature of the relationships between these dimensions.



**Figure 6.2 Social Justice Model**

In Figure 6.2 the concept of community as a bridge between school and the larger community (town in this case), illustrates the concept of the smaller community of the school and the more complex community of the town as mutual reflections. This apparently simple structure is undergirded by the three pillars of Parent Education, Leadership, and Place, as the supporting structures for the construction of community, and ultimately, through the framework of the Micro-Economy and Peace Education, leading to an overarching aim of Social Justice.

These concepts and approaches have been shown in Haas (1993) and Robinson (2015) to be fundamental to 21<sup>st</sup> century models of education, with particular relevance to middle schooling models. In other words, the Montessori and place-based principles that have been evinced in the participant schools are indicative of wider ramifications for current adolescent education theory.

Turning once more to two crucial factors that are inherent to Montessori educational culture, and therefore presumed (and predetermining), are teaching style as guidance and observation, and lack of competition.

### **Teacher Training and Visionary Leadership**

All of the Dimensions illustrated in Figure 6.1 imply a teaching style that is based on guidance rather than direct instruction, which is to say, engaging students, enabling learning, and empowering students through the relationships and expectations that are constructed in democratic school communities (Robinson, 2015). The model describes

Montessori and place-based learning principles in particular, but it could also describe any version of education modelled on these principles. The implications for teaching are evident in the learning dimensions described by Aspect 1, and the Community involvement of Aspect 2.

Leadership expertise and teacher training remain key elements to the efficacy of the model, whether it is implemented in Montessori schools or otherwise. In a model that is dependent on social justice for its power, the implication must be that leadership is shared and that decision-making is democratically resolved.

### **Competition as Disadvantage**

One salient factor that has received little mention in the literature is that of the absence of competition in Montessori education models. This crucial point was regarded by Montessori as necessary in order to construct a community based on peace and justice. Montessori's validation for this point was that competition created compromises in care and empathy for others, and in a tendency to override humanitarian concerns. Whether schools that are not based on Montessori principles are able to enact the model despite engagement in sports, tests, and other suggestions of a competitive disposition, remains to be seen.

### **Implications for Montessori Schools**

The principal theoretical and practical implications of this study relate back to the overall purpose, which was concerned with identifying and understanding the specific criteria and possibilities that the principles of Montessori adolescent education and place-based learning tenets contribute to the development of a model of adolescent education designed for current social and environmental contexts. The implications are initially determined for schools identifying themselves as conforming to Montessori principles of adolescent education, but can be extended to schools that promote reforms based on the principles of progressive education. These principles are generally thought to include:

- Emphasis on experiential learning: hands-on projects, expeditions, and place-based learning;

- Integrated curriculum;
- Integration of practical responsible entrepreneurial endeavours;
- Strong emphasis on problem-based learning and critical skills;
- Group work incorporating development of social skills;
- Action as the impetus to learning and understanding as opposed to rote knowledge;
- Collaborative and cooperative learning projects;
- Education for democratic purposes and social justice;
- Individualised education actualising each individual's personal interests;
- Integration of community service and service learning projects into the daily curriculum;
- Selection of curricular content by anticipating contributory skills for the benefit of future society;
- Reduced reliance on textbooks in favour of varied learning resources;
- Emphasis on lifelong learning and social skills; and
- Assessment by peer- and self-evaluation of students' projects and productions (Dewey, 1938; Freire, 1970/2000; Kohn, 2008; Little, 2013; Barone et al, 2014).

## **Leadership and Training**

The key inferences that emerged from the analysis of the case studies were firstly related to leadership and teacher training issues. Simply stated, leaders, principals, and teachers in Montessori schools are able to ascertain that Montessori principles are the basis of their educational practice when Montessori teacher training constitutes the philosophical basis of the learning community in every respect. The concomitant of this point is that teacher training and professional development must be subsidised by Montessori schools as a means to encourage and support teaching staff to ensure that Montessori philosophy is the guiding platform upon which the learning community is based. In Montessori educational philosophy, skilled observation of students is the key to informed guidance, rather than direct teaching. Furthermore, teachers are advised to model the characteristics of effective lifelong learning, through collaboration, cooperation, and mutual evaluation.

## **Montessori Place-based Principles**

The four case studies of US Montessori schools revealed that despite an oft- expressed desire by Montessori practitioners to recreate the lyrical conditions of Montessori's farm-school, it was not the farm *per se* that was responsible for the enactment of the *erdkinder* principles of adolescent education. Indeed, even where the farm was possible, without the necessary training, understanding, and visionary leadership, the circumstances were not synonymous with learning that was integrated to 21<sup>st</sup> century requirements for State curricular accountability measures.

Three of the participant schools practised some degree of involvement in the natural world of agriculture or gardening practice. Indeed, the remaining school would also have been engaged in horticultural activities, had it been located at its home base. Even without the necessity for a farm, there is compelling evidence for the inclusion of gardening as curriculum support or enrichment, as nature deficit disorder is increasingly referenced in school reform recommendations (Louv, 2005). The adoption of school gardening programs in traditional US schools was reported as influential in shaping curricular reforms that were guided by principles closely analogous to those constituting the Montessori Place-based hybrid model (Williams and Brown, 2011; Kemple and Keifer, 1998).

## **Parent Education**

An important implication for the creation of partnerships between schools and communities is the inclusion of parents and families in the quest to socialise and educate young adolescents, as members of the community, and as learners themselves.

This ideal is an essential but challenging one in school reform because traditionally parents have subscribed to the notion that education is the prerogative of schools and teachers. Community-school partnerships however, imply that parents and families are equal partners influencing and informing the education of future community members. The U.S. Department of Education supports this ideal of family engagement in its report, "Partners in education: A Dual Capacity-Building Framework for Family-

School Partnerships” which encapsulates the goal of parents and families as lifelong learners as they support their children’s growth and learning<sup>35</sup>

By education standards of previous decades, a goal that promotes parental power in educational matters could be interpreted as a challenging objective in terms of current bureaucratic entrenchment in education. This ideal is, however, supported by the National PTA (parent-teacher association) in America, which has issued a set of National Standards for Family-School Partnerships advocating for the rights of students to thrive in educational settings. These standards include:

- Supporting students at home and at school through collaborative means;
- Effective mutual communication between families and schools with respect to student learning;
- Families as advocates for their own and other children for justice and access to learning opportunities;
- Power sharing, in which Families and school combine to inform, influence and create policies, practices and programs to support and enhance learning success; and
- Community-School-Family collaborations supporting expanded learning opportunities, community services, and civic participation<sup>36</sup>

## **Implications for Education Reform**

As indicated earlier, the Montessori place-based hybrid model could readily be adopted by any school that was motivated to educational and social reform. Robinson (2015) exemplifies schools, leadership, and teaching practices based on similar principles, making it clear that the movement for educational reform is imperative for

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<sup>35</sup> U.S. Dept. of Education. Partners in Education: A Dual Capacity-Building Framework for Family-School Partnerships. Retrieved from <http://www2.ed.gov/documents/family-community/partners-education.pdf>

<sup>36</sup> National Standards for Family-School Partnerships. National PTA. Retrieved from <http://www.pta.org/nationalstandards>

21<sup>st</sup> century economic, ecological and social sustainability and advancement. (As we have seen, however, Montessori was insistent on this point almost 100 years ago.)

The Partnership for 21<sup>st</sup> Century Skills promotes similar aims in its mission statement, encompassing lifelong learning, experiential learning, and the incorporation of 21<sup>st</sup> century learning environments and opportunities to ensure students' preparation and success for participation and contributory citizenship in a democratic society.<sup>37</sup>

In Montessori schools, leadership and teacher training with respect to the philosophy and practice of the hybrid model's Aspects and Dimensions would be necessary in order to effect a whole-school adoption of these principles of learning and community engagement for educational and social reform.

## **Recommendations**

### **For Montessori and Place-Based Practice**

The recommendations for practice that emerged from the case studies were closely related to issues raised in the discussion section of the previous chapter. Firstly, it is suggested that training opportunities and professional development events be employed as a means to encourage deeper and more integrated understanding of conspicuous dimensions of Aspect 3. In particular, these would include the Micro Economy and Peace Education, the significance of which are generally less well understood.

Secondly, regardless of the place/environment, gardening activities for curriculum and personal/social development are advocated for practical understanding of the origins of civilisation, as well as of food, trade, culture and sustainability practices. Moreover, Montessori considered activity in nature as a prepared environment that was particularly conducive to learning for young (and older) adolescents. She observed that at every age of human development, nature experiences were particularly apt in focussing the interest of the learner. Since this focussing of interest is a key to

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<sup>37</sup> Partnership for 21<sup>st</sup> Century Skills. P21 Mission Statement. Retrieved from <http://www.p21.org/about-us/our-mission>

effective learning in Montessori's educational philosophy, it is recommended that experiential outdoors learning is incorporated in adolescent education programs.

Thirdly, parent education is a means to incorporating deeper involvement in school, not only for fundraising purposes, but also in order to strengthen community partnerships and inspire further reciprocal interactions for the benefit of school and community.

### **Limitations and Recommendations for Further Research**

Because this study was designed as a multiple case study with an ethnographic focus, the findings were necessarily situated and contextual. Although these findings cannot be employed for direct generalisation to other cases, the broader implications, recommendations and conclusions may extend professional understanding of Montessori adolescent practices in the US, Australian and European implementations.

As a result of insights into Montessori place-based educational principles gained from this study, further questions are raised for future research studies. Teachers in several of the schools participant in this study worked extremely long hours. In two of those schools teacher turnover was reported as high. It would be interesting to pursue research around teaching conditions relative to salary at Montessori middle schools, and compared with comparatively sized charter/private/public schools within the same educational district. I had wondered, what was the motivation of some individual teachers working extended hours but not undertaking Montessori training. What does it take for a teacher already employed securely at a Montessori school to be motivated to undergo training?

Another area of interest is directed towards parent education. The schools participating in this study generally engaged in parent education on an individual basis. Forest School did not offer classes, but information nights and newsletters were two of the methods they employed to mass-inform parents about Montessori educational principles. What alternative and perhaps more efficient means could be employed to raise parent awareness of Montessori principles, and to help parents to apply those principles in the home setting? If parents could be invited into the school, with understanding about school-community reciprocity, schools could be

transformed as lifelong learning centres, learning exchange centres, family support centres.

Further investigation is required to establish the effectiveness of the Montessori Place-based hybrid model in other settings, and countries. Would the model support such schools as a guide to the implementation, development, and review of Montessori and place-based educational environments for adolescents? Would it support schools that are not necessarily designated as “Montessori” schools? Furthermore, research into the longterm effects of Montessori urban experiential programs as opposed to farm programs, would be advantageous in the understanding of optimal prepared environments for adolescent learning. Further research into community-based education endeavours, with particular attention to means of evaluation, and longterm effects on participatory schools and communities would assist in the elucidation of essential elements in adolescent education.

The evidence suggested by such organisations as the Partnership for 21<sup>st</sup> Century Skills, the U.S. Department of Education, and the National PTA, among others, indicate that education reform is perceived as an urgent measure in order to initiate the necessary changes for social and environmental adaptation to 21<sup>st</sup> century contexts. The calibre of reforms the P21 Partnership suggests is closely aligned to the Aspects and Dimensions of the Montessori place-based hybrid model.

## **Conclusions**

Montessori’s vision of adolescent education as a farm-school was a progressive idea for its time. Her means of publicising her ideas, ensuring that her concepts were not diluted or contorted, lecturing, dealing with her students and the press, were often unconventional, even eccentric. Montessori’s adherents today recognise these particularities of character, often excusing them as reflections of her genius. By the same token, there remains some unwillingness among conservative Montessori practitioners to interrogate the more rigidly viewed aspects of her principles, those that are possibly less applicable to 21<sup>st</sup> century US society, such as the perception of the farm school as the only acceptable version of Montessori adolescent education. In many cases this is the result of following the Montessori principles blindly rather than

understanding her educational philosophy profoundly enough to extract the principles and apply them in a variety of circumstances. With the adoption of pedagogy of place principles to the Montessori adolescent education canon, (which has not been accepted by all Montessori practitioners, as reviewed in the literature), the Montessori vision is propelled into the 21<sup>st</sup> century, applicable to a wide variety of settings and places.

Montessori's ideas regarding education were visionary, based on her observation of human developmental principles, and her philosophy of knowledge, learning, and understanding. These principles have since been verified as universal in the fields of psychology, human behaviour, education, and human development. Her educational principles have been developed and adapted by numerous theorists following in her wake. Thus the very principles she evinced for human education and social change one hundred years ago are replicated as imperatives in 21<sup>st</sup> century recommendations for educational reform.

This is one of the first studies to explore and identify the degree of alignment of Montessori and place-based principles in junior secondary adolescent educational implementations. A key strength of the present study was the development of the Montessori place-based hybrid model as a tool for initiating, understanding, exploring, and evaluating Montessori middle school practices. Furthermore, although the degree of alignment observed in this study between the Montessori and place-based principles was marked, critical Dimensions were identified that characterised the Montessori approach, such as the micro-economy and peace education, together with the functioning of a just community within the school. These Dimensions each potentiate the others to produce a synergistic effect in the Montessori setting, towards an experiential educational environment that is conducive to social change.

It has become evident in the gradual unfolding of this study, that it is not the form itself that brings Montessori's *erdkinder* vision to life, nor even the addition of place-based pedagogy as a set of supporting principles. With trained teachers, the critical Dimensions of Aspect 3, in concert with the Dimensions of Aspects 1 and 2 of the Montessori place-based hybrid model, are transformed into a harmonious and mutually potentiating framework that encourages the young adolescents to discover themselves. In doing so, these students begin to perceive their potential to contribute

to a more equitable and sustainable world. Montessori school leaders, teachers and parents who understand the power of place-based learning in the Montessori approach, can guide and support the young students in their learning, growth and development as future members of the greater community.

As Helen, curriculum leader of Forest School pointed out,

Place-based education is integral to Montessori's principles, whether the place is a village or a farm or a parking lot. It's about finding the themes in Montessori and applying them wherever you are. That's the very essence of it (Interview 5/5/10).

Returning to the question posed at the beginning of this study, it is now possible to state that the means to achieving the link between Montessori's farm-school model and schools in current contexts, can be found in the Montessori Place-based hybrid model of educational principles. Thus Montessori's vision can be ushered into the 21<sup>st</sup> century showing us the way to social reform through the children, in any place we find ourselves.

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# Appendices





## Appendix A Timeline of Montessori Education in USA

### Phase 1

- 1907** -Montessori opens the Casa dei Bambini in the slums of San Lorenzo, Rome.
- 1911** -Montessori Education introduced to US readers through McClure's Magazine.
- Harvard's Department of Education begins translation of *The Montessori Method*.
- McClure's editor invites Montessori to visit the US on a lecture tour.
- The first Montessori school (private, elite) opens in the US at Tarrytown.
- 1912** -Alexander Graham Bell and Mabel Bell open a Montessori school in Nova Scotia. They open a second school in Washington DC later the same year.
- 1913** -First International Montessori Training course, Rome. More than 75% of trainees are Americans.
- Montessori embarks on 3-week lecture tour of the USA.
- 1914** -In the previous two years, 187 published English-language articles about Montessori education, most of them published in USA
- 1915** -Montessori completes another speaking tour of the USA.
- Montessori teaches a training course in San Francisco as part of Panama Pacific International Expo.
- 1916** -By this year, 104 Montessori schools exist in 22 states of the USA.
- More than 200 Americans had attended Montessori's training courses in Rome.
- 1917** -American interest in Montessori is extinguished because of:
- Language barrier (Italian/English)
  - Travel restrictions due to WWI
  - Widespread desire to combine other progressive methods with Montessori education
  - William Heard Kilpatrick's denunciation of Montessori (*The Montessori System Examined*)
  - Montessori's method did not match social/education reformers' middle-class objectives
  - Anti-immigrant sentiment

## **Phase 2**


- 1929** -Association Montessori Internationale (AMI) is formed in Amsterdam by Montessori to safeguard Montessori education standards and teacher training
- 1952** -Maria Montessori's death.
- 1953** -Nancy Rambusch meets Mario Montessori at Tenth International Montessori Congress, Paris.
- 1955** -Nancy Rambusch completes Montessori teacher training program.
- 1958** -Nancy Rambusch opens the Whitby School, Greenwich, Connecticut.
- 1960** -American Montessori Society (AMS) as sole representative of AMI in USA, is formed with Mario Montessori's blessing.
- 1963** -AMS severs ties from AMI; Mario Montessori resigns from AMS board of directors.
- 1967** -Trademark dispute over use of "Montessori" name between AMI and AMS affiliates. US Patent Office rules that 'Montessori' is a generic/descriptive term.
- 1970** - 355 established Montessori schools throughout USA.
- 1979** -AMI/USA branch is formed.

## **Phase 3**

- 1994** -Public Montessori schools begin to proliferate.
- 2010** -Approximately 250 public Montessori schools in 32 states. About half of these are charter schools. Most of these schools profess no affiliation with a Montessori professional association (AMI or AMS).
- 2011** -Estimated between 5000 and 8000 Montessori schools in USA.

## Appendix B The Place Based Education Portfolio Rubric

Documenting and Assessing Place-Based Learning: Rubric for Entry 1: Student Learning and Contributions
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### Rubric for Entry 1: Student Learning and Contributions

[Theme 1: Student Intellectual Growth](#)  
[Theme 2: Academic Rigor of the Project](#)  
[Theme 3: Authenticity of the Project](#)  
[Theme 4: Assessment](#)

#### Theme 1: Student Intellectual Growth

| The Place-Based Learning Project...            | Beginning: Glimmer of New Approach  | Progressing  | Maturing   | Advanced: Transforming and Sustainable  |
|--|---|--|--|---|
| Promotes deep learning about important content | <p>The project emphasizes procedural or factual learning.</p> <p>Student work demonstrates little growth or progress over time.</p> <p>Student work samples look very similar to one another, suggesting one size fits all teaching and learning.</p> | <p>The project is related to understanding the "why" behind some concepts and processes. Still, most learning involves factual information.</p> <p>Student work reveals inconsistent patterns of growth or progress. For example, some students reveal growth, while others do not.</p> <p>Students show an ability to compare and contrast data and concepts, with some degree of creativity and originality.</p> | <p>The project requires students to build on previous learning and work with relationships among concepts, data, and place.</p> <p>Student work demonstrates consistent growth over time.</p> <p>Student work samples reveal that students are thoughtful and flexible with their thinking about concepts.</p> | <p>The project consistently engages students with complex, important content that connects one or more academic disciplines to learning about place.</p> <p>Student work reveals significant, deep learning that is sustained over time.</p> <p>Student work samples display their ability to analyze, synthesize, organize, or apply knowledge in novel situations, resulting in unique responses in which they draw reasoned inferences or make well-supported predictions.</p> |
| Promotes student ownership and control         | <p>Students show a willingness to participate in the project, but may lack an understanding of its importance or purpose.</p> <p>Adults direct all the processes for managing information, time, resources, and people involved in the project.</p>   | <p>Students play a small role in the planning or design of the project.</p> <p>Students are beginning to learn a few skills to help them take on minor aspects of project management.</p>  | <p>Students have an important role in the creation and design of the project.</p> <p>Students are starting to assume decision-making roles in getting the work done, and are learning more skills to assist in this.</p>   | <p>Students demonstrate ownership, passion, and commitment to the project by initiating, designing, and sustaining an aspect of the project on their own.</p> <p>Students have a substantive role in all aspects of decision making for the project, and the skills to manage the work effectively.</p>   |

[http://portfolio.ruraledu.org/main\\_index\\_rubric\\_themes.htm#toc1](http://portfolio.ruraledu.org/main_index_rubric_themes.htm#toc1)
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## Theme 2: Academic Rigor of the Project

| The Place-Based Learning Project...                                 | Beginning: Glimmer of New Approach   | Progressing   | Maturing   | Advanced: Transforming and Sustainable   |
|---|--|---|--|--|
| Engages students in investigation, inquiry, and problem solving     | The project provides one or two opportunities for students to engage in inquiry or investigation.  | The project provides several opportunities for students to engage in inquiry or investigation.  | The project provides numerous learning opportunities that engage students in problem solving, direct investigation, inquiry and analysis of data.  | Problem-posing and problem-solving, direct investigation, inquiry, and data analysis are seamlessly interwoven into the project's activities.  |
| Establishes clear and challenging learning goals                    | The project establishes moderately challenging learning goals for some students and not so challenging goals for others.<br>Learning goals for students may be inconsistent or unclear.<br>Learning goals do not relate to state or local standards in significant ways.   | The project establishes learning goals that are moderately challenging to most students.<br>Learning goals are generally clear and understood by most participants.<br>Learning goals are loosely related to state or local standards, where appropriate.   | The project establishes academically appropriate learning goals that are challenging to most students.<br>Learning goals are clearly articulated and understood by most participants.<br>Learning goals meet state or local standards, where appropriate.  | The project establishes academically appropriate learning goals that are challenging and interesting to all students.<br>Learning goals are clearly articulated, understood by all participants, and are revised as needed.<br>Learning goals meet and exceed state or local standards, where appropriate.   |
| Enhances student learning through materials, resources, and support | Some aspects of the instructional materials address students' interests and engage some students in meaningful learning.<br>Materials seldom relate to the learning goals of the project.<br>Most students require ample direction from teachers or community members to determine where and how to get basic information for the project. | Instructional materials address students' interests and developmental needs, and engage many students in meaningful learning.<br>Materials are partially related to the project's learning goals.<br>The project holds out some expectations for students to become independent thinkers, under close guidance from adults. | Instructional materials are designed to reflect individual students' interests and developmental needs, and engage most students in meaningful learning.<br>Materials relate well to the learning goals of the project.<br>The project supports students to become independent problem-solvers and thinkers, with guidance from adults, as needed. | Instructional materials are differentiated to reflect individual students' interest and developmental needs, and engage all students in meaningful learning.<br>Materials directly relate to the learning goals of the project.<br>The project expects and supports students to become independent thinkers who define problems of interest and actively pursue their own solutions. |

*Individualized education*

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## Theme 3: Authenticity of the Project

| The Place-Based Learning Project...         | Beginning: Glimmer of New Approach   | Progressing   | Maturing   | Advanced: Transforming and Sustainable   |
|---|--|---|--|--|
| Addresses a real community need or interest | The project does not make clear the particular community issue that it's addressing.<br>The work has had little or no impact on the community. | The project addresses an aspect of community life or culture.<br>The impact of the work is primarily on students' learning; community impacts are less obvious. | The project addresses a real community need or interest in a meaningful way.<br>The work has had a positive impact on both students and community. | The project addresses a real community need or interest in a sustained and meaningful way.<br>The work has had a measurable, positive impact and adds to the well-being of the entire community. |
| The Place-Based                             | Beginning:   |   |  | Advanced:  |

| Learning Project...   | Glimmer or New Approach  | Progressing  | Maturing   | Transforming and Sustainable   |
|---|--|--|--|--|
| <i>Helps students take on community roles</i>                     | Students are starting to acquire skills and experiences to prepare them to take on community roles, though they have not assumed these roles yet.<br><br>Students are not seen as having a role in community affairs except for that of student. | Students' work in the project shows that they are beginning to try out roles that are more typically held by adults.<br><br>Adults and students are beginning to think that students can play a role in community affairs.   | Students' work in the project shows that they are taking on meaningful roles in the community.<br><br>Both students and adults see students as having an important role to play in community affairs.                                | Students' work in the project demonstrates that they assume meaningful, essential roles in the community over sustained periods.<br><br>Both students and adults see students as having authority and responsibility in the community. |
| The Place-Based Learning Project...                               | Beginning: Glimmer of New Approach   | Progressing  | Maturing   | Advanced: Transforming and Sustainable   |
| <i>Engages students in real work that produces results</i>        | Student work results in products that illustrate what they have learned, but these results would not be of interest outside of the school setting.   | Student work results in products that are meaningful to students beyond a record of their learning, but these results have limited value in the wider community.   | Student work results in a product, service, or creation that has personal and social value outside the school setting.   | Student results and products are routinely used in the community and are published, patented, or distributed to a wide audience within the community and possibly beyond.  |
| The Place-Based Learning Project...                               | Beginning: Glimmer of New Approach   | Progressing  | Maturing   | Advanced: Transforming and Sustainable   |
| <i>Develops students' appreciation and understanding of place</i> | The project provides students with information about their community.<br><br>The project encourages students to appreciate where they live, though its actual effect on students' appreciation is not clear.                                     | The project generally encourages students to learn more about their place, with minor attention to issues and problems in the community.<br><br>Through the project, many of the participating students have developed a greater appreciation for where they live. | The project provides multiple opportunities for students to develop understanding of their place, including issues and problems faced by their community.<br><br>The project extends most students' appreciation of where they live. | Students can clearly articulate meaningful connections between local and global issues and discuss implications for their community.<br><br>The project extends and deepens students' appreciation of where they live.                 |



## Theme 4: Assessment

| The Place-Based Learning Project...                    | Beginning: Glimmer of New Approach  | Progressing   | Maturing  | Advanced: Transforming and Sustainable  |
|--|---|---|---|---|
| <i>Involves all participants in assessing learning</i> | Students and community members are beginning to discuss the project's learning criteria.<br><br>Assessment criteria inconsistently relate to the learning goals of the project.<br><br>Teachers are beginning to encourage students to reflect on their work. | Teachers or community members explicitly engage students in designing the project and defining some of the project's learning criteria.<br><br>Assessment criteria relate to the learning goals of the project.<br><br>Student reflection is strongly encouraged and guided by teachers or community members. | Students, along with teachers and community members, define the assessment criteria and use the criteria to assess student learning.<br><br>Assessment criteria relate to the learning goals of the project and promote continued student growth.<br><br>Student, teacher, and community member reflections are integrated into the learning process. | Students, teachers, and community members are involved in every step of defining the project's learning criteria and use the criteria to regularly assess student learning.<br><br>Challenging... assessment criteria 'difficultly' relate to the learning goals of the project and promote continued student growth.<br><br>Ongoing student, teacher, and community member reflections are integrated into the learning process, and these reflections serve as the basis for changes and planning, both at the individual |

|   |  |  |  | level and at the project level.  |
|---|--|--|--|--|
| The Place-Based Learning Project...                                 | Beginning: Glimmer of New Approach   | Progressing  | Maturing   | Advanced: Transforming and Sustainable   |
| <i>Relies on multiple sources of information to assess learning</i> | For the most part, student learning is assessed using short answer or multiple choice quizzes and tests made by teachers or provided by the district or state. | Teachers are beginning to try out a greater variety of assessment tools, both informal and formal, in evaluating student learning. | A range of assessment strategies is used to evaluate student learning, both formal (e.g., tests, presentations, and portfolios) and informal (conversation with students, observation, student reflections). | Performance-based efforts, such as exhibitions or portfolios, are routinely integrated into a wide range of formal and informal assessment strategies, selected according to learning goals and instructional needs. |
| The Place-Based Learning Project...                                 | Beginning: Glimmer of New Approach   | Progressing  | Maturing   | Advanced: Transforming and Sustainable   |
| <i>Uses the results of assessment to facilitate learning</i>        | Information from assessment data is primarily used for the purpose of grading.   | To some extent, information from assessments is used to plan learning activities and appropriately modify instruction.             | Information from a variety of assessments is used to plan and modify learning activities, discern student needs, and support achievement.  | Regular, deep analysis of ongoing assessment and evaluation data is used to plan and modify learning activities, discern class and individual student needs, and extend student achievement.                         |

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3 - these areas of assessment could be combined



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## Rubric for Entry 2: Community Learning and Empowerment

[Theme 1: Connections Between School and Community](#)
[Theme 2: Process and Power](#)
[Theme 3: Roles and Relationships](#)
[Theme 4: Community Learning](#)

### Theme 1: Connections Between School and Community

| The Place-Based Learning Project...                      | Beginning: Glimmer of New Approach  | Progressing   | Maturing   | Advanced: Transforming and Sustainable   |
|--|---|---|--|--|
| <i>Builds school-community connections</i>               | A couple of teachers or community people are exploring one or two school-community connections in order to accomplish the featured project.   | A small, dedicated group is pursuing prior or new school-community connections to accomplish the featured project. For the most part, the energy and commitment is "one-way," primarily located in either the school or the community. Community involvement is generally clustered around the school, limited mostly to parents or staff. At this stage, the removal of one person might mean the end of the connection. | A growing group of school and community folks are actively pursuing connections in support of the work. Several connections are long-standing, while others may still be tentative. Community involvement extends well beyond parents and school staff. The connections are sturdy enough that the featured project enjoys significant support and resources from both the school and the community. | The school-community connection is a true partnership, in which boundaries have become blurred and new connections snowball. A cyclical give-and-take nurtures an ongoing, sustainable connection. The community thinks of the school as its resource and the school routinely draws on community resources to meet its needs. |
| <i>Addresses a community problem, issue, or interest</i> | A few people are beginning to wonder if the school could be a resource to the wider community, or thinking about ways that student learning could be enhanced by work in the community. There may be no particular problem or issue in mind, just a general urge toward working in the community. | School folks define an issue, interest, or problem and initiate place-based activities without significant community input. The effect of the work is primarily on student learning; effects on the life of the community are minimal.  | A small group of community and school folks identifies a need, interest, or issue that is important to the community and develops or re-shapes a project to address it. The impact of the work can be felt in the school and in the community, but not far beyond direct participants.   | A broad group of school and community people have identified an authentic community need or interest, and developed a comprehensive plan to address it. The need or interest has been the focus of sustained, meaningful work, which has had a measurable, positive effect that extends well beyond direct participants.       |

Same as 3.1?

| The Place-Based Learning Project... | Beginning: Glimmer of New Approach  | Progressing   | Maturing  | Advanced: Transforming and Sustainable  |
|-------------------------------------|---|---|---|---|
| <i>Honors the local culture</i>     | One or two elements of local culture have been introduced into the classroom. At this point, the tendency is to examine local culture in one-shot ways, such as study of a local historical figure, without connecting to other parts of the history or culture of the place. | Students and teachers are in the community doing work that exposes them to the local culture. However, cultural learning is secondary to other forms of learning, so it is still somewhat haphazard, even as people appreciate it when it occurs. School culture and schedules continue to dominate the work. | The work connects with at least one aspect of the local culture in a sustained and significant way. School culture has begun to adapt to local community culture (e.g., the school schedule accommodates a local festival or agricultural timetable). | The work honors and carries forward local culture; the school is immersed in and thus responsive to the culture of the local community. Multiple, diverse local cultural elements - such as language, history, rituals, traditions, celebrations, and holidays - are attended to in sustained, meaningful ways. |

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## Theme 2: Process

| The Place-Based Learning Project...                                      | Beginning: Glimmer of New Approach   | Progressing  | Maturing  | Advanced: Transforming and Sustainable  |
|--|--|--|---|---|
| <i>Welcomes the questions and complications that arise from the work</i> | The project introduces out-of-classroom work in the form of highly structured learning activities where little deviation is possible. The roles of community members are similarly proscribed.       | The project includes some open-ended activities. When the project reaches its conclusion, it may be repeated with a different group of students connecting with pretty much the same community people or institutions, with positive, yet predictable results. If problems or questions arise along the way, they are not given much attention or they are treated as diversions from the "real" work.   | The work and its processes are open to new ideas, questions, and problems, showing a good degree of flexibility. However, participants have not yet figured out how to work through the most contentious issues in an effective way.  | The work has led to the development or enhancement of a process that welcomes and encourages questions, multiple solutions, and increasing complexity. It may generate uncertainty, "mess," conflict, or chaos, but as the work unfolds, passion and shared vision eventually guide the group to "aha" experiences and positive results. New problems ultimately become resources.                              |
| The Place-Based Learning Project...                                      | Beginning: Glimmer of New Approach   | Progressing  | Maturing  | Advanced: Transforming and Sustainable  |
| <i>Builds access, communication, and trust</i>                           | A few adults who already know each other are talking about drawing other people into the project.<br><br>Communication is limited to a small number of adults who are beginning to trust each other. | The project has expanded slightly beyond its original participants, though the group is still pretty much limited to the usual players. There is no significant access for youth. One person may have considerably more responsibility and control than the rest. The process has built in one or two ways for participants to talk about the work and whether they are meeting their goals. Communication is opening up, but there are still trust issues to be worked out. | The work provides more than one way for people (including youth) to enter. New groups have gotten involved, but not all groups with a stake in the work are engaged yet. Responsibility for the project is spread out over several people. Communication is generally open, but certain groups are not yet comfortable with each other. There is enough trust and common vision that the work doesn't blow up when conflict arises, but some of the tougher issues can't be resolved yet. | The work provides many ways for people from all sorts of groups, ages, and institutions to enter. Every group with a legitimate stake in the work is represented, and responsibility and control of the work rests with a broad group of people. Communication is open, honest, and ultimately respectful. Special attention is paid so that those who are often not heard are included. Trust levels are high. |

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## Theme 3: Roles, Relationships, and Power

Theme 3: Roles, Relationships & Power

| The Place-Based Learning Project...                      | Beginning: Glimmer of New Approach   | Progressing   | Maturing   | Advanced: Transforming and Sustainable   |
|--|--|---|--|--|
| <i>Supports adults to take on new roles</i>              | A few people recognize the need for more flexible roles, usually starting with student roles. However, with a few exceptions, roles are static, defined, and familiar. (For example: Teachers teach. Students learn. Parents provide snacks. Community members pay taxes.)   | The project allows for adults to take on new roles like learner or teacher, secondarily to students taking on new roles. A few adults are taking advantage of these opportunities, but there is no concrete assistance available to them as they struggle with new identities.                        | The project deliberately creates opportunities for increasing numbers of adults to take on new roles, such as learner, teacher, or leader. There are efforts to provide support to adults who are taking on new roles.   | The project involves frequent and deliberate exchanging of roles between teachers, community resource people, students, and "just regular folks" in the community. New "experts" are identified, reclaiming lost community knowledge. There is substantial built-in support for adults to take on and become skilled in new roles.   |
| The Place-Based Learning Project...                      | Beginning: Glimmer of New Approach   | Progressing   | Maturing   | Advanced: Transforming and Sustainable   |
| <i>Cultivates new leadership</i>                         | The "usual suspects" provide leadership to the project.  | As the project unfolds, one or two individuals who had not previously been part of the leadership are taking on minor leadership responsibilities. However, control of the project remains in the hands of the originators.   | New leadership has emerged as a result of the work. There is significant movement toward shared leadership of the project. The relationships of established and new leaders are still being worked out, with new leaders still finding their way and established leaders trying to make room for them.   | The work has resulted in the emergence of new leadership, which has established itself with a fair degree of confidence. Leadership operates on a shared, flexible model, and there are ongoing efforts to identify and cultivate new leaders. Established leaders routinely create space for new leaders to take on responsibility and real power.  |
| The Place-Based Learning Project...                      | Beginning: Glimmer of New Approach   | Progressing   | Maturing   | Advanced: Transforming and Sustainable   |
| <i>Nurtures new relationships</i>                        | The project builds on already existing relationships to achieve its purposes.  | In addition to strengthening established relationships, the project has brought together individuals who previously did not know each other well; tentative new relationships are forming.  | As a result of the work, new relationships have formed between individuals and groups of people who previously didn't have much of a relationship. The relationships sustain the immediate project; it is not yet clear whether these relationships will extend past the boundaries of the specific project.   | As a result of the work, new relationships that are strong and sustainable have developed between individuals, groups, and institutions. The relationships transcend the specific project that initially brought them together.  |
| The Place-Based Learning Project...                      | Beginning: Glimmer of New Approach   | Progressing   | Maturing   | Advanced: Transforming and Sustainable   |
| <i>Promotes shared responsibility and accountability</i> | A few school folks are exploring new ways of thinking about assessment, perhaps for the purposes of documenting student work on the project. However, the main school concern is with grades, tests and meeting district or state standards. Community members have only a distant role in framing or supporting what is taught in school. | Different types of student assessments that reflect the project's value have become an established part of the project. Student learning is the sole focus of accountability talk. Community folks do not yet feel empowered or qualified to play a role in establishing standards or assessing them. | A range of methods are being used to evaluate both student learning and the impact of the project in the community. And school folks, including youth, have roles in setting and assessing standards. Some training is in place to support community people in taking on evaluator roles. There may be occasional problems arising from insufficient respect | Community folks have the training, tools, and power to make meaningful assessments; they do so from a position of respect for school folks. School and community develop a shared, living model that is used to evaluate the work and learning. The community takes on increased responsibility for the education of young people. To a similar degree, the school has become accountable to the |

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|  |  |  | for the roles and expertise of different groups. | community, which has an important role in setting educational standards. |
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## Theme 4: Community Learning

| The Place-Based Learning Project...          | Beginning: Glimmer of New Approach   | Progressing   | Maturing   | Advanced: Transforming and Sustainable  |
|--|--|---|--|---|
| <i>Leads to new community understandings</i> | The project is designed and implemented to address student learning only, though adults who are connected to the work learn how to implement the project. The project is not intended to change or affect established ways of thinking within the community. | As a result of the project, a small number of adults come to a new understanding about some aspect of community life. The learning occurs at the individual level, enriching that person's life. However, the learning has not translated into any kind of community change. A few people involved in the project may have realized its potential to affect changes in how resources are allocated, how community decisions are made, or what decisions are made. However, they are unsure of whether or how to push on this front. | More and more adults come to a new understanding about something that is important to the community, and they move toward a change in policy or practice. Community play and celebration may be a part of this change. However, the learning and changes have not been sustained for enough time to show a significant impact on community life. | The work moves the community to new understandings about something important. This in turn leads to a significant and sustained shift in a policy or practice, so that the community is a better place to live, work, learn, celebrate, and play. Wise and innovative use of existing resources or creation of new resources may be an important result of the learning. The work has led to a shift in power, as seen in access to decision-making positions and control of resources. |
| <i>Engages adults in learning</i>            | Adult project participants see themselves as facilitators of student learning. Some of these adults are pleasantly surprised to notice that they have learned a thing or two in the course of working on the project.  | Adults who are working directly on the project learn quite a bit. The learning of people who are not directly involved in the project is not yet affected.  | The project results in learning for a significant number of adults, including many who do not have direct involvement with the project.  | As a result of the work, many adults from many different groups learn. In addition, there is institutional learning, meaning that institutions change in response to the new information and resources developed in the project.  |
| <i>Fosters a culture for learning</i>        | Learning is primarily seen as something for children, that takes place mostly in school. A few adults are thinking about the wider community and world as a learning resource for students.  | A few teachers and adults who are connected to the project begin to see themselves as learners, and occasionally present themselves that way to students and other adults.  | More and more adults - extending beyond the initial group leading the project - come to see themselves as learners. Adult learning is consciously discussed with students and other adults, but deliberate opportunities for adult learning have not yet been structured into the project.   | As a result of the work, significant numbers of adults have come to see themselves as learners; this idea permeates the project and beyond. There are deliberately structured learning opportunities for adults, as well as recognition that life is a learning experience for people of all ages. Adults reflect on and evaluate their learning.   |



Helping Rural Schools and Communities Grow Better Together



## Documenting and Assessing Place-Based Learning: Example Portfolios

[Portfolio home](#)
[Entry 1 Rubric](#)
[Entry 2 Rubric](#)
[Entry 3 Rubric](#)

### Rubric for Entry 3: Deepening and Spreading Place-Based Learning

[Theme 1: Instructional Spread](#)  
[Theme 2: Community Engagement](#)  
[Theme 3: Supporting Structures](#)  
[Theme 4: New Resources and Connections](#)

#### Theme 1: Instructional Spread

| The Place-Based Learning Project...  | Beginning: Glimmer of New Approach  | Progressing   | Maturing   | Advanced: Transforming and Sustainable  |
|--------------------------------------|---|---|--|---|
| <i>impacts curriculum</i>            | Place-based learning efforts can be seen in one or two subjects (e.g., 9th grade U.S. History, 5th grade science) or a school club (e.g., Future Business Leaders of America). Place-based projects involve one or two segments of the student population (e.g., advanced classes, designated student leaders). | Place-based learning efforts include several subjects, and several grade/age levels (e.g., students in grades 6-8 contribute to an oral history project). Place-based projects involve, separately or together, several segments of the student body (e.g., advanced students, English language learners).  | Place-based learning efforts include many classes, subjects, and grade/age levels. There are an increasing number of projects that cross subject areas, bring together students of different ages, and allow older students to mentor younger ones. The work is close to engaging most of the student body, with students of diverse abilities and interests fully included. | Place-based learning has become an integral part of the curriculum; this shows through several structures, e.g., place-based learning is explicitly linked to state standards. Students are able to participate in at least one community-connected project each year. Some projects have become an institutionalized part of the curriculum. Student projects that draw upon or contribute to the community are now required for graduation. |
| <i>impacts teaching and teachers</i> | Among the handful of teachers involved, there are modest changes in how they teach, their expectations for what students should know and be able to do, and the opportunities they provide students.  | A small but dedicated core of teachers has taken place-based work to heart, leading to substantial changes in how they approach teaching and learning, and in the opportunities they provide students.<br><br>Another group of teachers is showing more interest in trying out such "community-connected" learning, aware of its likely impact on their teaching. | The majority of teachers are familiar with place-based work and appreciate its impact on teaching and expectations for students. Most welcome the challenges of connecting classroom and community, as well as pushing and supporting students in new ways. They talk of how their teaching style is changing and of their enlarged sense of what students can do.           | A professional community has developed that actively supports teachers in this work. Among involved teachers, informal sharing—of ideas and resources—is commonplace. Willingness and capacity to engage in project-based learning now enters into evaluation of teachers. The sustainability of the work no longer depends on a handful of committed faculty.  |

| The Place-Based Learning Project...  | Beginning: Glimmer of New Approach   | Progressing  | Maturing   | Advanced: Transforming and Sustainable   |
|--|--|--|--|--|
| <i>Helps students stretch themselves as learners, problem solvers, and leaders</i> | To date, the work mostly involves small doses of local content within traditional classes (e.g., students write about a series of field trips to local "sites") or projects of modest scope (e.g., once a week, students collect water samples in assigned teams and put the results on a chart in the classroom). | The opportunities and demands for students are increasing. In small but real ways, students are being asked to raise and apply new knowledge and to develop and practice new skills. Their ideas and input are being solicited more, and the responsibilities they are taking on are gaining weight. | There are an ever growing number of examples of students raising and applying new knowledge in their project work; acting as researchers, historians, advocates, resource persons; contributing to the design and conduct of projects. Their potential as leaders on community issues is being tapped. Students who never thought of themselves as leaders are stepping forward. | Systems are in place to ensure students have the opportunities and supports for sustained project work—including the time, adult mentoring, and resources required. There are formal and informal mechanisms for students to define problems of interest and then pursue them with others. Assessments of student learning honor and reflect their growth as problem solvers, citizens, and leaders. |

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## Theme 2: Community Engagement

| The Place-Based Learning Project...                             | Beginning: Glimmer of New Approach  | Progressing   | Maturing  | Advanced: Transforming and Sustainable  |
|---|---|---|---|---|
| <i>Involves a wide variety of individuals and organizations</i> | Community participation in the work involves a few organizations and individuals, representing a small subset of community perspectives and interests. Community members' roles are largely "traditional" (e.g., guest speaker, classroom volunteer).                     | Community participation is beginning to spread, with several new groups and individuals joining and new interests appearing. Some community partners are starting to see themselves as real collaborators. A few have stepped forward to serve as teachers and mentors, partners in shaping projects, critical sources of time and expertise. | Community participation has grown to the point that you cannot quickly list all the community partners. The list is increasingly diverse and also includes unexpected partners (e.g., the local grain co-op). More and more community colleagues are emerging as active collaborators, assuming diverse roles from making resources available, to mentoring and teaching, to being learners themselves. | Community partners in the work reflect the full diversity of the community. The depth and breadth of their commitment is palpable, showing up in the work itself, but also in written reflections, newspaper commentaries, speeches at public forums, compelling support letters to funders. It is not unusual to hear a community member talk about how much they themselves are learning from the work and their personal stake in the outcome. |
| The Place-Based Learning Project...                             | Beginning: Glimmer of New Approach  | Progressing   | Maturing  | Advanced: Transforming and Sustainable  |
| <i>Leads to increasing impact in the community</i>              | The main priorities are getting students out of the classroom (e.g., visits to a nursing home) and drawing the community in (e.g., through a heritage fair). Providing a learning experience for students, while not divorced from community benefits, is the major goal. | One or two projects are now underway with potential to address a community issue of shared importance or to add to the community's sense of itself. Both the school and community are prepared to give the time, resources, and sustained effort required to impact the issue(s) of concern.  | There are now several strong examples of students' work having a real impact on the community (e.g., a wellness center used by the community has been established by students). If asked, community members or agencies would describe themselves as beneficiaries of significant service or deeds.   | It has become standard operating procedure to design projects with community needs and interests in the forefront. There are formal and informal mechanisms for gathering and prioritizing community concerns, paired with discussions on how students can play a large role in addressing these concerns. Community partners, students, and teachers periodically celebrate what they have accomplished together.                                |

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## Theme 3: Supporting Structures

| The Place-Based Learning Project...                     | Beginning: Glimmer of New Approach  | Progressing  | Maturing  | Advanced: Transforming and Sustainable  |
|---|---|--|---|---|
| <i>Is supported by teacher development and planning</i> | Opportunities for teachers to develop skills in connecting student learning with the community are few, infrequent, and of short duration. Teacher schedules provide little or no time for planning by themselves or with others during the school day.           | Opportunities for teachers to gain skills in place-based work are growing in number, although so far they are reaching only a small core of teachers. Time for on-the-job planning has increased but remains insufficient.   | Both the quantity and the quality of relevant professional development opportunities have increased. Roughly half the faculty have benefited from such training. Giving teachers time to plan, individually and in teams, has become a priority.  | Relevant professional development is available to all faculty, backed up by institutional incentives to participate. Teachers often partner in developing these trainings, which include skill building, informal coaching, and intensive institutes. The school schedule includes time for teachers to plan regularly as individuals, in school-based teams, and with community members. |
| <i>Is advanced by school policies and practices</i>     | School policies and practices regarding course requirements, scheduling, budgeting, and personnel, among others, present ongoing obstacles to the work. No adjustments to teaching schedules or personnel have been made to support community-connected learning. | Some of the barriers to the work are beginning to recede: e.g., a teacher won release time during the day to organize place-based work; the school is moving to alternative scheduling. Still, the institutional obstacles outnumber the supports, and the institutional commitment is cautious. | New policies and practices are emerging that actively support the work: e.g., a school schedule that designates an afternoon per week for community projects; a half-time program coordinator; a requirement that students perform community work.  | School policies and practices consistently promote the work. Institutional commitment is reflected in matters big—mission statements, budgets, schedules, course requirements, recruitment and hiring, evaluation—and matters small—the greetings community members receive when they enter the school.   |
| <i>Influences community policies and structures</i>     | While local community organizations and agencies are becoming more aware of how they can participate in the work, none has taken formal steps to orient their activities to include the school and students.  | There are now several instances of community groups or agencies accommodating students into their work or structure: e.g., the highway department has agreed to allow students access to accident data for a project on highway safety.  | There are many examples of community agencies adopting policies and structures to better include the school and students: e.g., the town's strategic planning commission has set aside two seats for students; the local facility for the elderly has created a special course to help students deal with dementia. | Including young people in the work of adults has become part of the community consciousness. It is not unusual for community organizations and agencies to adjust their policies or develop new structures to include the school and students in their work. There are a dozen good examples of this.   |
| <i>Broadens school's role within the community</i>      | The school does not yet see itself playing a role in the wider community beyond the education of young people—nor does the community expect it: e.g., there are few mechanisms in place for the school to contribute to continued learning by adult citizens.     | The school is beginning to see itself as a resource to the wider community—and to be looked upon as such: e.g., the school's computer lab is open at night so that local residents can use it and get help from tech-savvy student volunteers; community groups are invited to call the          | The school's role as a resource in the community is gathering steam: e.g., there are several continuing education opportunities now available. Instances of community groups turning to the school for help (e.g., with a specific project or event) are increasing.  | The school has assumed a valued position in the community as a resource for adult learning and practical assistance: e.g., the school not only offers a number of evening computer courses, but also lends out its tech-savviest students as a community service. There is a formal   |

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|  |  | school when they need an extra (student) hand and occasionally do. | program whereby community groups can request and receive student help. A few community programs now work out of the school. |
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[▲ TOP](#)**Theme 4: New Resources and Connections**

| The Place-Based Learning Project...       | Beginning: Glimmer of New Approach   | Progressing  | Maturing  | Advanced: Transforming and Sustainable  |
|---|--|--|---|---|
| <i>Attracts and creates new resources</i> | The work has neither prompted the reallocation of existing local or district resources nor attracted new outside revenue. Sustainability is a serious and unaddressed question.                  | The work has prompted a small reallocation of existing local resources and/or attracted small sums of outside revenue. The need to develop resources to sustain the work is gaining attention.                                 | The work is netting increased support from existing local resources, as well as attracting outside funds. In-kind resources are growing, too. At least some of the funding is renewable.  | Local and outside resources are sufficient to sustain and grow the work. In some instances, place-based learning projects have become a budget line item. In-kind resources are ample.  |
| <i>Spreads to new places</i>              | Students, teachers, or community members have few mechanisms or opportunities to share their efforts with others from different places. The work has not yet gained serious attention elsewhere. | Mechanisms for sharing the work are starting to emerge: e.g. teachers have presented their work at regional meetings for teachers and principals; students have attended local and regional conferences to present their work. | The number of presentations about the work by faculty, community members, and students—at local, regional, and national meetings—is growing (e.g., half a dozen in the past year). Folks elsewhere are starting to inquire about the work, and efforts to share the work on the web and/or in print are underway. | There is a serious effort—and supporting resources—to spread the work. Students, teachers, and community members regularly share their experiences at regional or national meetings. There are print and online presentations of the work broadly available. Site visits from interested parties are welcomed. Evidence that the work is having an impact beyond local borders is accumulating. |

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## Appendix C Human Ethics Approval



RENEWAL APPROVAL LETTER Ethics Reference:

HE09/296

15 July 2015

Ms Stephanie Gambrill 115 Osborne Rd BOWRAL NSW 2576

Dear Ms Gambrill

I am pleased to advise that renewal of the following Human Research Ethics application has been approved. This certificate relates to the research protocol submitted in your original application and all approved amendments to date.

Ethics Number: HE09/296

Project Title: How has Pedagogy of Place theory influenced the theory and practice of Montessori adolescent education in North America?

Name of Researchers: Ms Stephanie Gambrill, Dr Julie Kiggins, Dr Pauline Lysaght, Dr Jan Turbill Renewed From: 1 August 2015 Expiry Date: 31 July 2016

Please note that approvals are granted for a twelve month period. **Further extension will be considered on receipt of a progress report prior to expiry date.**

This certificate relates to the research protocol submitted in your original application and all approved amendments to date. Please remember that in addition to completing an annual report the Human Research Ethics Committee also requires that researchers immediately report:

- proposed changes to the protocol including changes to investigators involved
  - serious or unexpected adverse effects on participants
  - unforeseen events that might affect continued ethical acceptability of the project.
- A condition of approval by the HREC is the submission of a progress report annually and a final report on completion of your project. The progress report template is available at <http://www.uow.edu.au/research/rso/ethics/UOW009385.html>. This report must be completed, signed by the appropriate Head of School and returned to the Research Services Office **prior to the expiry date**. The University of Wollongong/ Illawarra and Shoalhaven Local Health Network District (ISLHD) Social Science HREC is constituted and functions in accordance with the NHMRC National Statement on Ethical Conduct in Human Research. If you have any queries regarding the HREC review process, please contact the Ethics Unit on phone 4221 3386 or email rso-

ethics@uow.edu.au. Ethics Unit, Research Services Office University of  
Wollongong NSW 2522 Australia Telephone (02) 4221 3386 Facsimile (02) 4221  
4338 Email: rso-ethics@uow.edu.au Web: www.uow.edu.au

Yours sincerely

Associate Professor Melanie Randle Chair, Social Sciences Human Research Ethics  
Committee

A handwritten signature in blue ink, appearing to read 'Randle', with a stylized flourish at the end.

Ethics Unit, Research Services Office University of Wollongong NSW 2522 Australia  
Telephone (02) 4221 3386 Facsimile (02) 4221 4338 Email: rso-ethics@uow.edu.au  
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## **Appendix D Information Package Describing the Research for Principals**

*How has Pedagogy of Place theory influenced the theory and practice of Montessori adolescent education in North America?*

**Stephanie Gambrill**

**University of Wollongong, NSW, Australia**

**Supervisors: Dr Gordon Brown and Dr Pauline Lysaght**

## ABSTRACT

The study of Montessori adolescent education implementation has been the subject of minimal research, due, in part, to the fact that most Montessori middle schools have only been in existence for the past ten to twenty years. The great majority of studies of Montessori education focus on the preschool period, with a handful addressing primary schooling.

With around four hundred Montessori schools developing adolescent programs in the US, and several in Australia, and Europe also, this study seeks to examine the theory and practice of Montessori adolescent education.

This study is designed around a qualitative multiple-case study of four Montessori adolescent schools in the United States. The study explores a dynamic interplay between theory and practice in these schools, as the school population responds reflexively to the challenges of the theory-practice relationship. Maria Montessori was a product of her own temporal, socio-cultural and educational context, and it cannot be assumed that her notions of the education and socialisation of adolescents are applicable to current adolescent educational and socio-cultural contexts. Montessori's theory of adolescent education and human development forms the framework for examining the socio-cultural development of Montessori-educated adolescents, in the context of independence and social adaptation. Pedagogy of place theory, which has been adopted by some proponents of *Erdkinder* (the Montessorian concept of Land-Children), is used to address the contextual issues of farm-schooling, Montessori curriculum and pedagogical approaches. Recent adolescent sociological and educational theory will be referenced in order to examine the contemporary relevance of *Erdkinder*.

Data will be collected through semi-structured interviews with teachers, students, and administrative personnel, in addition to field observations and document reviews. The findings will be compared with the original adolescent educational theories of Montessori, with a view to examination of the tensions and the possibilities inherent in the implementation of Montessori's theories of adolescent education in a contemporary context. This study will contribute to future research in Montessori adolescent education practice, and inform current trends in middle-schooling initiatives.

## PURPOSE OF THE STUDY

The purpose of this study is to explore the evolving theory and practice of Montessori adolescent education with a particular focus on the influence of place-based education theory and its contextual role in four Montessori adolescent schools in the United States. The four schools will be chosen for their distinctive differences in locality and

their approaches to implementing Montessori adolescent education. Accordingly, Montessori's theory of socialisation of the emergent adult, its congruence with recent theory, and the adaptations that have been developed as appropriate to particular environments and settings will form the foundations of this study. The intention is to explain and exemplify appropriate solutions to emergent complexities in Montessori adolescent middle-schooling models.

## BACKGROUND TO THE STUDY

### Montessori Adolescent Educational Theory

In 1939, Montessori wrote disparagingly of the schooling of adolescents as “adapted neither to the needs of adolescents nor to the times in which we live” (1948/1994: 59). Her proposal was for young adolescents to be educated in farm-based boarding schools, which she termed *Erdkinder*. *Erdkinder* essentially describes a farm school, in which the adolescents do the work of growing food and raising animals, caring for the land and the buildings, developing themselves as individuals in the context of a small community, and learning the economics of production and exchange. The practicalities of, and theorising about the demands of farm-life in all its perspectives, create the departure points for all academic pursuits (which adhere to State curricular demands), in addition to the development of creative self-expression through language, drama, art and music. All of this is preparation for life in adult society, both as individuals, and as members of an international community based on social interaction and economic exchange.

The pamphlet containing these ideas is only 31 pages in length (Appendices A and B, 1948/1994: 59 -80). However, it represents the most readily available of Montessori's specific writings about adolescent education. A few short published lectures that she delivered between 1937 and 1938 constitute the remaining works. For such a prolific and readily published writer, it is curious that her writings on adolescent education are so sparse. Montessori regarded adolescent education as part of the continuing educational development of the child from infancy to adulthood. Many of Montessori's ideas about adolescent education therefore, are based on her well-substantiated theories of pre-primary, primary and elementary education. Montessori wrote and developed her ideas about adolescent education further throughout her life, particularly in the years between her first address on the topic, in Amsterdam in 1920 (Barker, 2001: 286), and her *Erdkinder* addresses in 1936 at Oxford (2001:175) and 1937 in Utrecht (2001:189) and in Amsterdam in 1938 (2001: 199). In all there are eighteen years of development in her ideas about adolescent education as she observed and further theorised through all the planes of education. My interest in the evolving theory-practice relationship lies in the quandary of the interpretation and implementation of Montessori's theory of adolescent education into viable *Erdkinder*

that are responsive to the current educational and socio-cultural needs of young adolescents. The assumption that underlies this is that current educational policy, curriculum, and legal contexts, exist for similar reasons: the current educational and socio-cultural needs of young adolescents.

## **SIGNIFICANCE OF THE STUDY**

This study will make a contribution to the understanding of particular examples of the implementation of Montessori's adolescent theories of education and development, especially for Montessori practitioners. This study will acknowledge the evolving nature of theory and practice in response to temporal, situational, political, social and other influences, and the dynamic nature of the co-dependent relationship of theory and practice, rather than rigid adherence to received interpretations of Montessori theory. In addition, the study may assist in augmenting the efficacy of implementations of Montessori adolescent schools, by revealing innovative ways of thinking about and responding to Montessori theory in the reality of twenty-first century praxis. Finally, the study may contribute to an understanding of the shared values of current approaches to contemporary middle school education and Montessori early adolescent education.

## **RESEARCH QUESTIONS**

This study will be guided by one main question:

- 1) *How has Pedagogy of Place theory influenced the theory and practice of Montessori adolescent education in the North American context?*

This question refers to the implementation of four adolescent Montessori schools, representing a variety of locales, contexts, and solutions to practical and theoretical implementation of the Erdkinder model. The area of inquiry will explore the actual aims and practices of these schools, with reference to Montessori's adolescent education theory, having regard to the evolving nature of practice and theory in response to temporal, situational and social influences. Curriculum issues will be of significant interest, because in the US, curriculum is State mandated, whereas in Montessori adolescent education, curricular content is informed by the manual work and practical concerns of farm-life or of local environment in tandem with the perceived needs of the adolescents, that is, the curriculum of pedagogy of place.

## Subquestions

### *I. How is Montessori's theory of adolescent social development manifested in the Montessori school communities under investigation?*

This question concerns Montessori's theory of the social development of the adolescent, since much of her educational theory is reliant on the notion of the development of personality through social interaction. Montessori was much influenced by the thinkers and educators of her time, such as Dewey, Piaget, Vygotsky and Freud. She envisaged social reform and peace, as the optimal outcome of her educational theory, with a radical redefinition of the role of the adolescent in society and the fundamental purposes of schooling for the adolescent.

### *II. How do Montessori adolescent learning theories compare to other current theories of learning?*

Since Montessori adolescent education theory dates from almost a century ago, it is necessary to explore the relevance of Montessori educational theory and its outcomes, to those that currently inform adolescent education in the US (and Australia). This question will reference the opinions and reflections of the Montessori teachers of adolescents, with regard to their work as an expression of Montessori's ideas, and their evidence for this. Montessori school administrators will also be interviewed to discuss the history, processes of implementation of the adolescent program, their perspectives and hopes, and their views of the outcomes of the program. The literature of current adolescent education theory will be referenced for contemporary relevance.

## METHODOLOGY

### Research Strategy

A multiple case study appears to be the most effective choice for the research proposed, because of the search for similarities and differences found in varying school contexts.

This multiple case study of Montessori *Erdkinder* will be conducted according to a qualitative design in which I will draw data from multiple interrelated sources in order to understand a complex system. For this reason, there is a need to focus on a small number of cases (schools).

## **Sampling Method**

Sample members will be chosen from students, teachers and parents, initially by employing a simple survey for basic demographic data such as gender, location, boarding or day-student, class teacher or specialist-teacher. The semi-structured interviews that follow will comprise several open-ended questions covering the perceived relevance of *Erdkinder* with reference to twenty-first century life and society. Surveys of parents are expected to deliver answers that together with interviews yield “thick description” pertaining to each case.

## **ETHICAL ISSUES**

A number of ethical issues are involved in this study because of the fact that it will involve U.S. school-based research, interviewing and observing adolescents under 21 years of age, interviewing school personnel, and surveying parents.

Informed consent for interviews will be required for both adult and adolescent observations, and avenues for complaint will be made clear and accessible. Semi-structured interviews will be the interviewing mode of choice, with interviewer awareness of power imbalances, particularly in the case of interviewing adolescents.

Access to records and documents will require clearly defined strategies for the protection of anonymity and confidentiality. To this end, codes and pseudonyms will be employed.

As reciprocity for school and participant access, time, generosity and inconvenience caused, I intend to share the research findings with the participating schools in the form of a summary paper outlining the findings and conclusions.

## Appendix E Cover Letter to Principals

### Faculty of Education

August 25, 2009

Dear \_\_\_\_\_,

I am conducting research under the auspices of the University of Wollongong, NSW Australia, in order to complete the requirements for the award of a PhD in Education.

My field of study is Montessori adolescent education, specifically at the middle school level.

I am a trained Montessori teacher, having completed teaching diplomas for the Early Childhood and Elementary stages. I have also completed the NAMTA Orientation to Adolescent Education course.

I have been a teacher of adolescents in traditional, and in progressive, educational systems for fifteen years.

This field-based study would afford me the opportunity to study Montessori adolescent education at the nexus of practice and theory, at the point where theory *becomes* educational practice, and the actual practice is grounded in theory. The ultimate purpose is to examine the varieties of responses in different localities, to Montessori's theories, for the purpose of assisting other educators of adolescents.

If you are willing to allow me to conduct part of my research in your school, please read the accompanying materials which describe the research project in more detail. There is a consent form for Administrators which I would request you to sign and post by the close of this month if possible please, to:

Stephanie Gambrill  
C/- Mrs C. Schue  
11640 Madison Rd.,  
Huntsburg, OH 44046 USA

I expect to visit and research in three schools in the US, with Stage One of the research beginning in October/November of this year, 2009.

Please feel free to contact me by email if you have any questions or comments.

Thank you for your time and consideration.

Sincerely,  
Stephanie Gambrill

stephaniegambrill@bigpond.com

## Appendix F Parent Surveys: Cover Letter, Questions, Sample Response

University of Wollongong



**Faculty of Education**

May 15, 2010

Dear Parents

I am conducting research under the auspices of the University of Wollongong, NSW Australia, in order to complete the requirements for the award of a PhD in Education.

My field of study is Montessori adolescent education, specifically at the middle school level.

I am a trained Montessori teacher, having completed teaching diplomas for the Early Childhood and Elementary stages. I have also completed the NAMTA Orientation to Adolescent Education course.

I have been a teacher of adolescents in traditional, and in progressive, educational systems for fifteen years.

This field-based study would afford me the opportunity to study Montessori adolescent education at the nexus of practice and theory, at the point where theory *becomes* educational practice, and the actual practice is grounded in theory. The ultimate purpose is to examine the varieties of responses in different localities, to Montessori's theories, for the purpose of assisting other educators of adolescents.

I would request that as many parents return the parent survey as possible. This can be completed online and returned to me, by requesting the survey through email, or it may be completed in hard copy and returned to the school office. If you can help me to achieve this, it would constitute a service to Montessori education, since the collection of information and the development of understanding about Montessori adolescent schools will be promoted through the publication of this study,

I expect to visit and research in four schools in the US, with as many other schools as possible included in the background research

Please feel free to contact me by email if you have any questions or comments.

Thank you for your time and consideration.

Sincerely,  
Stephanie Gambrill

[sjg917@uow.edu.au](mailto:sjg917@uow.edu.au),

Tel: 646-288-4965

**Research Title:** *How has Pedagogy of Place theory influenced the theory and practice of Montessori adolescent education in North America?*

**Stephanie Gambrill, B.A., Dip. Ed. Mont. (3-6; 6-9yrs), M.Ed.**

**Reflections on Montessori Education – for Parents**

- 1) Why did you choose to send your child to a Montessori school?
- 2) How do you think your child benefits from Montessori education?
- 3) What do you particularly like about this school?
- 4) Do you think that your child's future education will be enhanced by a Montessori education at adolescent level? Why?
- 5) Without overt competition as part of their education, how do you think the Montessori student adjusts to a society in which competition is important?
- 6) In what ways do you support your adolescent's Montessori education in your home life?
- 7) What are the advantages and disadvantages of sending your son/daughter to a Montessori **high** school?
- 8) What are your thoughts about school boarding programs for adolescents?
- 9) What changes would you implement in the Montessori adolescent program, if you could?

*You are welcome to contact me at my email address if you'd prefer to complete this survey online.*

*I would be pleased to discuss these questions, or any aspect of this study with you, should you wish to do so. My contact details are:*

[sjg917@uow.edu.au](mailto:sjg917@uow.edu.au)

US Cell# 646-288-4965

**Research Title:** How has pedagogy of place theory influenced the theory and practice of Montessori adolescent education in North America?

Stephanie Gambrell, B.A., Dip. Ed. Mont. (3-6; 6-9yrs), M.Ed.

**Reflections on Montessori Education - for Parents**

1) Why did you choose to send your child to a Montessori school?

We were impressed at the preschool age by the emphasis placed on independence and the establishment of community at such a young age. This has proven to be a factor to remain as well.

2) How do you think your child benefits from Montessori education?

Our daughter has developed a love of learning that is deeply rooted in her and appreciated by all who meet her. She is a civically, community minded person who trusts in her abilities to make a difference in the world.

3) What do you particularly like about this school?

Great River Montessori continues the tradition of fostering community independence and an emphasis on real world experiences to support the learning process.

4) Do you think that your child's future education will be enhanced by a Montessori education at adolescent level? Why?

We view Montessori education at the adolescent level and all others as shifting from a burden of learning to a joy/interest in learning. While I don't feel that she will have accumulated as many facts as other children, I believe she will be effectively prepared to engage in real problem solving skills and the confidence to apply them to issues.

5) Without overt competition as part of their education, how do you think the Montessori student adjusts to a society in which competition is important?

Competition is important if you allow it to be a priority. My daughter's job is to ask these questions to help reshape our culture's norms. She understands that competition exists, but doesn't need to receive the external validation in order to pursue her goals. Her desire to push her own mind to learn is all the mechanism needed to adapt and respond to a competitive world.

6) In what ways do you support your adolescent's Montessori education in your home life?

We allow her to experience natural consequences whenever possible, experience the world's possibilities, manage her own decisions and priorities, follow her interests ~~not~~ rather than our own, always use peaceful conflict resolution, respect her at all times and just generally see her as a person who is always gaining more experience and requires only guidance and nurturing.

## Appendix G Teacher Interview Questions

- 1) What experience of teaching did you have prior to your employment at this school?
- 2) Have you ever taught in the traditional system of education?
- 3) Do you think that all aspects of Montessori education are relevant to the demands of living in the 21<sup>st</sup> century?
- 4) Since the Montessori curriculum is informed by the demands of the farm and the surrounding environment, how do you ensure that the curricular requirements of the State are met simultaneously?
- 5) What do you think are the fundamental purposes of education of the adolescent?
- 6) Maria Montessori suggested that the development of the personality of the adolescent, through social interaction, is central to the reform of society. How do you see this in your day-to-day work at the school?
- 7) How do you see your work as a reflection of Montessori's ideals? What evidence do you have for this?
- 8) What particular personal qualities do you think are essential in the development and adjustment of the young adolescent?
- 9) Montessori referred to the necessity for the young adolescent to "rest" between the ages of twelve and fifteen years, but she sketched out a most concise and demanding academic curriculum for the *Erdkinder*. How do you interpret these apparently conflicting requirements?
- 10) A Montessori education for *every* child...how do you think this could be achieved in the context of adolescent education?

## Appendix H Interview Field Notes

Interview Bruno 11-2-10 (3-45pm)

Bruno comes in, takes a seat in the comfy chair. Stretches, looks a little uneasy. "Mind if I turn off the overhead light?" I affirm it's okay. Desk lamp is on. He returns to chair, stretches out.

"Can we turn the lamp to low?" Fiddle around till the lamp is dim. Wonder if I'll be able to see to write notes. He stretches out once more, sub. his eyes, yawns. "No need - it's been a long day." I murmur my thanks for his effort and time. "Don't get me wrong - I'm happy to explain what I do, and why I love teaching adolescents in a Montessori setting. I'm just worn out today."

I ask him if he'd like to change the day of interview. "No. I'm here, and happy. Really."

He stretches away out, as if sitting in a counselling session. The room is very dim. "Just tell me when you're ready," I say. His eyes are closed. He seems to be meditating...

Some 5 mins later, he murmurs, "Okay. Let's talk." **TURN ON RECORDER**

- I explain about anonymity, his rights to pass on any question. The semi-structured nature of the interview - questions can go anywhere, and are just a guide.

(2)

He agrees, and I ask permission to start the questions.

He leans back in the chair, stretched out, eyes closed and we begin. He is surprisingly forthcoming despite his obvious fatigue.

When we get to Question 6, there's a long pause. Very long. He's been thoughtful so far, but this silence is much longer. He starts to explain his reaction to the daily work of being with adolescents. Another silence. He starts again, but stops, overcome by tears. So emotionally overwhelmed by the spiritual nature of the exchange with students - what they perceive, how they react, how they feed back to him, fill him with the spiritual exchange.

After this, the interview becomes much more personal, all heart and spirit. He's thought deeply about Mont. Ed and every interaction seems to move him to deeper sensitivity.

Q7, and he stops again. Low voice, very slow, as if meditating, he articulates his feelings and reactions to Mont. Ed philosophy + practice in

## Appendix I Student Group Interview Questions

### Questions for Adolescents

- 1) Have you ever been educated at a traditional school?
- 2) If so, what differences have you noticed between traditional and Montessori school?
- 3) What do you like about *this* school?
- 4) What opportunities do you have for self-expression in your school experiences here?
- 5) How would you describe your part in community life in this school?
- 6) Do you have experiences in trading goods and services, and earning money? (Were these in the school environment?)
- 7) If so, what do you think you learn from these experiences?
- 8) Do you play team sports in association with your school? If not, would you like to? Why or why not?
- 9) How would you describe your level of independence?
- 10) What aspects of your experience at this school are most important to you?

## Appendix J Example of Teacher Interview Transcript

My experience in traditional school was that I went to catholic school for high school. The reason I went there was because they had a very specific and definite mission, they had something to kinda rally around, and it was very community oriented. These were parallels with the Montessori schooling I knew. The philosophy and methodology in terms of teaching were different of course, the Catholic delivery is more conventional...

As an adult I went to college to train as a teacher and that's where I really came into contact with more traditional means of education, and the interesting part was looking at all I was discovering through my own eyes as a Montessori educated child, so I was seeing things very differently. Then I went out and taught in a middle school of 1000 students.

The essential differences between traditional and Montessori education is...well...first and foremost it has a belief system, a methodology, a purpose of being, it has a mission and I think that is a huge difference. When I tour different schools in the country, many different schools and I ask, "What is your educational philosophy?" I get strange looks. Their philosophy is to have the students in the seats, and you know...deliver education. So there's nothing unified, no unification of a specific educational philosophy – I think that is the biggest difference. I think that's why certain charter schools, and other private schools that have that, I think do well because you're not going from one class to the next, and you don't have all these different educational philosophies that the student, you know, has to try to deal with, and havta understand how to function in the room, so some student classrooms are gonna be more open, more group-oriented, some are gonna be more lecture-driven, some are gonna be worksheet-oriented, you know...there's nothing unified, and I think that from the top, the Principal all the way down to part-time assistant in any school if they have a unified belief, a unified mission, a unified teaching philosophy, an educational philosophy, then it's a benefit cos it's truly a mission driven school and organisation. I think with respect to what's going on in the classroom, it's more teacher oriented, it's more about information, about meeting standards, it's about test scores and that's where the focus is. It's not necessarily about learning. The heart of Montessori is that it's about looking very carefully and working to understand what's happening developmentally with a human being at a certain age, um, and really taking that into account, and trying to work with that person and those needs, and I think that's where conventional education is totally off-track, they're you know, constantly working against... they're cutting against the grain, they're constantly working in opposition to our times to what's natural, what's the natural development, and the natural needs of a person who's five, who's ten, who's fifteen... There's no overall role in the decisions and the design of conventional schools and it's really about efficiencies and standards and test-scores. There's no way that anyone who ever really understood twelve, thirteen and fourteen year olds could ever design a school for a thousand of them to be in one place so therefore the focus on conventional education is on the buzz-phrase, it's about classroom management, it's not about inciting people to learn. Older adolescents can handle, they need, in fact, a larger community, so you can meet their needs a little bit better in some regards. It's all about "Follow the child". Many teachers coming into our school without training fall into the trap of thinking that the students get to do whatever they want to do, and it turns into chaos.

### Relevance to the demands of the 21<sup>st</sup> century:

The fact of Montessori children being flexible and adaptable, and developing what people are calling ‘executive functioning’ so being able to plan your day, organise your materials, follow cycle activity, working in small groups, all of these pieces are very much a part of the working world, and I also think that no matter what century, because I think it’s a human need of being able to be a productive person. The whole point of life, one’s cosmic task, finding what is one’s purpose in life. That doesn’t always 100 percent centre around employment, finding something that plays a role, finding a part to play within society is critical for every person. There are many, many people who never take that into account or who never think about that or who haven’t been challenged to think about that or had the opportunity to think that it’s something they could consider, “What role do I play?” and having the chance to explore that. Most folk are vocationally focused on finding a job to get a paycheck, or that’s how it is in the States, and it’s spreading.

A young woman in the Montessori training group asked, “What does folding a napkin have to do with world peace?” In other words, what is the point of this? It’s essential to understand that it’s all of these hidden purposes, there’s a direct aim and an indirect aim, so there’s all these things that we, as Montessorians do, that from another person’s eyes, ot’slike, ‘What’s the point of this?’, you know, how is this advancing the outcome, you know, for the person, the class, or whatever. I think that so much of it has to do with meeting the person’s inner development, to realise that there’s not a direct output all the time, how is it sowing seeds – something that will come to pass, or even how is it in that moment meaningful for that child to do something purposeful, to do something meditative, to centre themselves in their activity.

### How do you ensure that the demands of the state are met simultaneously with the farm-driven curriculum?

Without a land-based program, it’s a little easier for us to conform, to meet state-standards. For the most part, we look at the state standards, we see what we need to cover, and we work on covering those state standards. The standards don’t tell us how to cover the material, they also don’t say is how to do history – say research. On of the things we spend more time on than anything is local history, even like looking at our neighbourhood history, and we’re trying to find things here that are more place-oriented. And then in terms of the actual land piece, one of the things that we continue to struggle with here is how to incorporate that in a meaningful way and I think that without trained teachers, and without much real land around us, I think it’s hard to have that as a centerpiece of our program, so I think it will continue to be a you know, side piece, really, an attached piece rather than a central piece. As an urban school I’d love to see us have an urban garden. It’s not gonna cover the same scope, not gonna meet the same needs, as being out in the open air in the country – that’s not something we can do, but in terms of hands-on meaningful work and in terms of work that relates to micro-economies ...I think all of that can take place indoors, or in green strips, or in greenhouses or something like that, but we’re just not gonna get the same experience of being ...you know in boarding school, because they’re not out there all the time, so I think each one of those steps is a step that’s different to the ideal...I don’t know whether it’s the ideal or if it’s another way...In Europe they say the farm is a metaphor, it’s not an ideal or an absolute.

### What are the fundamental purposes of the education of the adolescent?

Mostly it's socialisation, just helping them to understand, guiding them through the process of becoming an adult, how they work, how they interact, how they play, with other people. How they develop relationships, how do they maintain friendships, how do they end a friendship, how do they start a romantic relationship – these are things that we don't always address head-on, but these are pieces that we are constantly guiding them in through little pushes and pulls and conversations and ...there's guidance in those areas all the time. More formal things about students doing group-work and...I think helping them develop their voice is another really important piece, helping them be vocal so they can learn that skill of advocating for themselves, speaking out, becoming engaged, and some of them belong to that group where they're more apathetic and sit back and don't engage...

I think it's socialisation to the adult world. That's one of the primary goals, especially for the young adolescent – there's the whole social newborn piece, and like toddlers they're constantly looking for guidance. Not for the names of things, but for guidance in social situations. They don't ask directly, but they ask by their behaviour and their actions. I think the other piece, the other fundamental purposes is that introduction to the adult world, and their socialisation – the micro-social and the macro-social intro to how does the adult world function. What can I do in the adult world – that question they're trying to answer. So it's about taking that cosmic education and putting it into reality of, 'this is what I think I can do, this is what I'm good at this is what I like, this is what I'm passionate about – so they need to continually have the opportunity to trial a lot of activities, a lot of different topics, a lot of different tweaks on their own personality, and all of that requires a stable caring environment in order for them to be able to do that. As you move into the upper adolescent there's a lot of ...those questions move from the micro-level you know, friendships, groups, to the macro-social level of society, and how does the whole thing, the city, how does government work, how do organisations work, and how do I do work in the world?

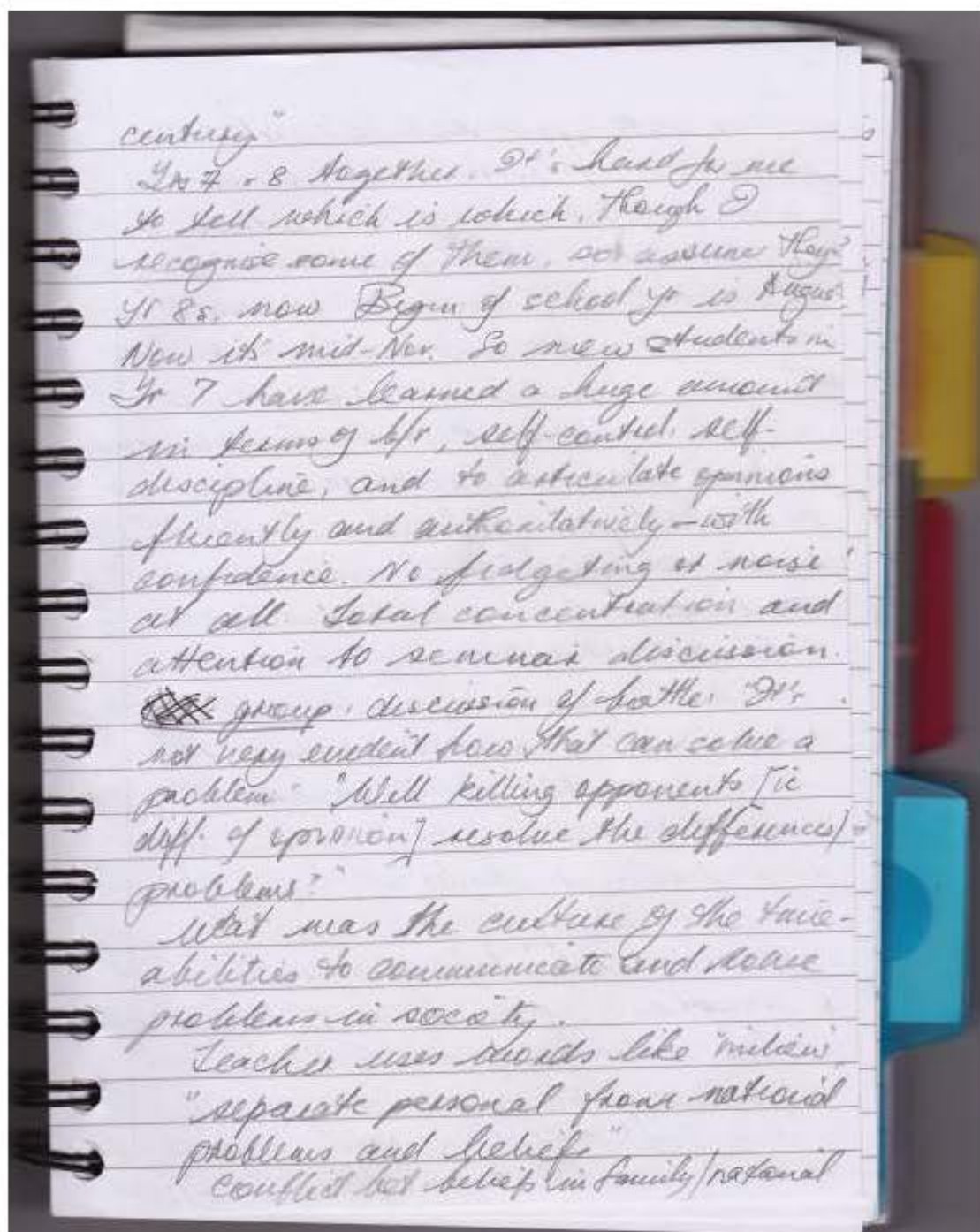
### Why do you think that Montessori put adolescents on a farm?

I think that's about young adolescents. Not every Montessorian thinks that way, it seems to be more and more the people that I've encountered, think that is for young adolescents and they need to come off the farm for the older adolescence. I know Montessori's writing implies that the older adolescents stay on the farm and run the show, while the younger adolescents are learning the ropes, so to speak. I think that the farm is a great microcosm – it's one of these things like, what's the appropriate environment for a toddler, for a primary, an elementary and yeah, there's all these different classes, and as the human develops the environment changes, so for early adolescents that's a manageable environment, that's something that they can actually control. It's not out of their control, it's tangible, that's why I think it's a great prepared environment for them – it's a great case-study, a great place for it. I don't think it always has to be a farm, it's whatever they're ready for. For the young adolescent it's social things, for them it's what they can touch and feel – what's present. So it's the farm – you can touch it, feel it, work on it. They can have a few acres and they can do the work and it's real. It doesn't have to be done for them. So for the urban schools you have to ask, what else is there for them? Is there another environment that can serve those same purposes, that is REAL. There must be consequences, benefits, money, you know all the working part has work that needs to

## Appendix K Administrator Interview Questions

- 1) What experience of teaching/administration did you have prior to your employment at this school?
- 2) What would you say are the differences between traditional adolescent education and the Montessori education available to adolescents in this facility?
- 3) Legal issues of education have changed in the past 100 years. How do you think this impacts upon the education of young adolescents according to the principles of Montessori education?
- 4) What do you think about the relevance of State assessments of achievement and proficiency, with regard to the education of young adolescents?
- 5) What do you think about the relevance of State curricular requirements in the development and education of young adolescents?
- 6) Without competition as part of their education, how do you think the Montessori student adjusts to a socio-cultural arena in which competition is important?
- 7) How do you see your work as a reflection of Montessori's ideals? What evidence do you have for this?
- 8) Montessori's *Erdkinder* principles strongly incorporate the notion of a particular place as the crux of all learning. How would you say that is reflected in this facility?
- 9) In the current socio-cultural and political environment, how could a Montessori education be said to be applicable?
- 10) A Montessori education for *every* child...how do you think this could be achieved in the context of adolescent education?

## Appendix L Example of Observational Field Notes



Again and again teachers valourises  
students for understanding,  
interpretation and discussion of  
seminar q's. Students evaluate  
themselves at end, according to  
rubric previously discussed and handed  
out for self-evaluation purposes  
After that a quick quiz on paper requires  
a short phrase characterising each of  
30 characters from Volpescus' Students  
mark on sheet with total consolidated  
inducted in last by a visitor  
as by my enquiries of Pat.

Students submit Unit 3 interpretative  
q's, self-evaluation of performance  
in seminar and their answers to  
character sheet

Next period of study students lay  
out all ~~sorts of~~ materials themselves  
including <sup>that</sup> ~~the~~ <sup>peer</sup> ~~the~~ line of Alexander and  
a model of the island and small  
manipulables to that end. Student  
in charge of this

Here teacher leads & guides this session  
of reflective nature. Students, <sup>enthusiastic</sup> ~~clearly~~ <sup>clearly</sup> ~~the~~ <sup>at this</sup> ~~the~~ <sup>point</sup>

## **Appendix M Field Notes Transcribed to Digital Journal (Example)**

Wednesday Feb 3<sup>rd</sup>: *Forest Montessori School*

Meeting in the civic community library with elder partners for Intergenerational Interviews. One hour duration. Students were so engaged that they did not gather at the meeting point at the designated time to meet the bus back to school. Students spoke excitedly volunteering their experiences to me, even though they'd not seen me in 3 months. One young man told me about his elder who was recalling his time in the war in a POW camp. Another told me that her elder had met Elvis when he was called up to serve.

Returned to school where we gathered in a class group to share experiences and to talk of common experiences and problems of interviews. "She kept asking me whether I was nearly finished". "She couldn't remember that she'd already told me that" and "When he couldn't remember, she'd recall the memory; and vice-versa". High spirits and very positive feedback. Students who had been unable to do interviews that morning were very committed to recreating the opportunity in the afternoon, or in their own time.

Lunch followed and a student offered to get something for my lunch. After lunch, students went outside to play for half an hour before resuming lessons for the afternoon. Mathematics with Jill and writing workshop with Pat, in which she explained the mechanics of writing up interviews and writing biography in interesting engaging ways to capture the reader's attention. Scaffolding for effective writing (Helen).

May continues to teach in conventional educative ways.

Thursday Feb 4<sup>th</sup>: *Forest Montessori*

Community meeting at 8am after tech checks and turning in papers due on that day. Attendance roll and business attended to by designated student. Discussion of grace & courtesy, of lunch-time manners, of self-discipline with regard to quiet consideration of others.

No Spanish today, since teacher is at conference. Students worked on advertising project. Making pastiche posters of advertisements depicting qualities such as machismo, sexy, family, nature etc. Common the media uses to sell brands and services to consumers. The students reported their experiences in finding sufficient pictures, and their observations. Some were more superficial than others.

Then May showed them films of adverts, speaking about what the advert was designed to show, rather than allowing the students to discern and elicit the info. Still the lesson itself was good. Talked with one student about his desire to exercise marketing skills, but to be honest. Discussed the idea of marketing as appearance, and as persuasion – not always bad! He was excited by the ideas he began to discover during that discussion.

After recess, students gathered to talk about the ageing brain with John. They discussed their reactions to an article they'd read. Did so competently and thoughtfully. Watched a documentary excerpt about the brain looking at the contrast between the adolescent brain and the aged brain. Talked about the necessity to ensure healthy brain through nutrition, adequate sleep and exercise but didn't discuss drug use, alcohol or smoking. Students appeared to be engaged, offering many of their own examples.

Students worked on their history research after lunch, and exercise in the snow. Really exuberant and energetic on a wintry day with weak sun shining. Half the students did math with May whilst the other half concentrated on their historical research . At 2:30 pm I left with John for the afternoon because of the snow.

## Appendix N Example of Administrator Interview Transcript

**(Jan) 7.5.10 10:30am** A Montessori teacher, previously, trained in elementary, taught in public system in 6-9 and then 9-12 level. Also a teacher trainer.

### Differences between traditional ed and Mont. ed available to adolescents:

Fundamental to working with the adolescent is this deep value and respect for the devt and needs of the adolescent. The assumption that the adol. is in his formative years and our job it to support and nurture that, and give them the tools they need to feel good about themselves, and to help them find their own role in society. So I find that the adults who are drawn to this work are deeply rooted in the whole mission and approach to the adolescent, as opposed to being these empty vessels upon which you hurl stuff on and you demand certain behaviours and expectations and you make assumptions about the adol. Here there is a profound respect and from there everything else builds. So you provide an environment that supports the adolescent's development, you create a curriculum that meets the needs of the adol. and you couple that with the respect aspect, and you get this beautiful nurturing environment and the outcome is...when we talk about maximising a child's potential...I think that's what these environments do.

Needs of the adolescent: I think it's a very tender age, a very vulnerable...I think there needs to be a good balance of high expectations together with a tremendous support system in terms of guiding the adolescent, helping them along those bumps on the road, the practitioners need to be very understanding – they need to understand the psychology of the adol. their developmental needs, what's happening in terms of those milestones, rather than just abandoning them and making judgements about it.

Legal issues and changes: impact on Mont Ed: Those issues have impacted all education for all ages in general. 25 years ago our pond was available for children to swim in summer and to ice-skate in the winter. Now our pond is surrounded by a fence because of liability issues. That's a good analogy for how we have to design programs in educational settings. I think they impact all ages in schools. Every single thing we do now has an intentionality looking at the safety issues. And in some ways it probably does restrict the natural development of the child. For the adolescent of course, the whole issue of technology...and social sites like Facebook...as to how that impacts the development...well, that's a great question...because I don't know what these children would do if they were in an environment that was so contrary to their home environment...What does the environment that would maximise a child's potential look like in 2010? Trying to put Montessori into practice in a place: Every place has its limitations. Even the place with total freedom has limitations and it's matter of, how do you measure how that impacts development? I would take it back to – the most powerful piece in these environments is relational, it's the relationships between the adults and the adolescents, and whether that's played out in an environment that's devoid of restrictions, or whether it's an environment that has restrictions due to safety issues, it all comes back to the relationships between the guides and the adolescents. That's the fundamental piece to me. That's why it's so critical to have the right practitioners in these environments. The legal issues will always be there, but our goal is still to stay true to our goals in the program, and the curriculum we know these students need, keeping in mind that the litigious issues

remain, but they shouldn't drive what we do. {But of course they do}. It might mean that we have to modify slightly, but we're still going to hold onto the essence.

State assessments of achievement and proficiency: Montessori believed that education was preparation for life and so in that respect we know our students are moving into a society esp. in high school here, that is driven by assessment. But that doesn't really speak to whether or not that's a valid approach. We know our students are moving into some very competitive environments and that seems to be a measurement that speaks a language that society understands right now, so given that preparation for life, we do have an obligation to prepare the students for what is to come, and at the same time, we know that assessment is much broader than a test score, that authentic assessment has to be day-to-day living and work in the environment, and that's what we use as our measure...but we have to speak a language that someone else understands when they attend a high school, so it's a very fine balance... We're interested in making sure that our students leave here, reflecting about their work, having a good understanding of who they are, and what they need to do to either improve or better understand learning and who they are as a learner. But it's a language, esp. in the US, it's all about the number and the test score, and it's a reality of this society, and how can we stay true to who we are, while preparing these adolescents for later life.

The thing is, Montessorians are required to think outside the box – and the strongest practitioners are those who can do that, meeting the state requirements while remaining true to the philosophy. That's one of the strengths of Mont. Ed – and one of its weaknesses too. Depending on who's doing it and how it's being done, the real challenges for the Montessori community.

The relevance of curricular requirements in the development and education of young adol.? The state requirements are one size fits all, versus in the Mont. environment...it's what are we looking at in terms of outcomes, where do we want to help these adol. go, and how can we honour and respect their own interests and development individually and collectively, without having to mandate every student has to do this exact same thing at the same time. And we have that flexibility and ability to do that whereas in a large traditional type of school that presents a whole other different set of challenges.

No competition in a world that values competitive results: I found that Mont. students tend to be very competitive within themselves because they want to do the best they can. And that's the difference...It's an internal drive, versus that external, "Oh I got 96. Nobody else got that." The need to beat others versus the desire to better one's own achievements. I find that many of the Montessori students are competitive in the sense that they really want to excel, they want to be the best [they can be] as opposed to, "I want to be Number 1". This originates from the consistent message in the Mont. environment about "Doing the best you can – Be the best you can be."

Your work as a reflection of Montessori's ideals: For a leader of a school I think it comes down to leadership and who you are, and what you model. Supporting children's development and helping them maximise their potential...We have to make sure that as an individual we live that philosophy, we deeply believe in the potential of children and that comes through in all of our interactions with children...As head of school it starts with my work with the teachers...What I model for the adults here, is

## Appendix O Place-Based Education Portfolio Rubric Simplified

### *Place-Based Education Portfolio Rubric: Aspects and Themes*

#### *Aspect 1: Student Learning and Contributions*

##### *Theme 1: Student Intellectual Growth*

- Promotes deep learning about important content
- Promotes student ownership and control

##### *Theme 2: Academic Rigour of the Project*

- Engages students in investigation, inquiry and problem solving
- Establishes clear and challenging learning goals
- Enhances student learning through materials, resources and support

##### *Theme 3: Authenticity of the Project*

- Addresses a real community need or interest
- Helps students take on community roles
- Engages students in real work that produces results
- Develops students' appreciation and understanding of place

##### *Theme 4: Assessment*

- Involves all participants in assessing learning
- Relies on multiple sources of information to assess learning
- Uses the results of assessment to facilitate learning

#### *Aspect 2: Community Learning and Empowerment*

##### *Theme 5: Connections Between School and Community*

- Builds school/community connections
- Addresses a community problem, issue, or interest
- Honours the local culture

##### *Theme 6: Process*

- Welcomes the questions and complications that arise from the work
- Builds access, communication and trust

***Theme 7: Roles, Relationships and Power***

- *Supports adults to take on new roles*
- *Cultivates new leadership*
- *Nurtures new relationships*
- *Promotes shared responsibility and accountability*

***Theme 8: Community Learning***

- *Leads to new community understandings*
- *Engages adults in learning*
- *Fosters a culture for learning*

*(/...cont)*

***Aspect 3: Deepening and Spreading Place-Based Learning***

***Theme 9: Instructional Spread***

- *Impacts curriculum*
- *Impacts teaching and teachers*
- *Helps students stretch themselves as learners, problem solvers and leaders*

***Theme 10: Community Engagement***

- *Involves a wide variety of individuals and organizations*
- *Leads to increasing impact in the community*

***Theme 11: Supporting Structures***

- *Is supported by teacher development and learning*
- *Is advanced by school policies and practices*
- *Influences community policies and structures*
- *Broadens school's role within the community*

***Theme 12: New Resources and Connections***

- *Attracts and creates new resources*
- *Spreads to new places*

## Appendix P PBEPR and Montessori Themes Aligned

### Aspect 1: Student Learning and Contributions

#### *Theme 1: Student Intellectual Growth*

| Place-based Education                          | Montessori Adolescent Education |
|--|---------------------------------|
| Promotes deep learning about important content | Developing the intellect        |
| Promotes student ownership and control         | Student-directed learning       |

#### *Theme 2: Academic Rigor of the Project*

| Place-based Education  | Montessori Adolescent Education              |
|--|--|
| Engages students in investigation, inquiry & problem solving       | Adaptability, Independence, Lateral thinking |
| Establishes clear and challenging learning goals                   | Integrated Learning                          |
| Enhances student learning through materials, resources and support | Experiential education                       |

#### *Theme 3: Authenticity of the Project*

| Place-based Education                                     | Montessori Adolescent Education            |
|---|--|
| Addresses a real community need or interest               | Micro-economy                              |
| Helps students take on community roles                    | Community Service Activities               |
| Engages students in real work that produces results       | Farming/Micro-economy                      |
| Develops students appreciation and understanding of place | Pedagogy of place studies<br>Peace Studies |

#### *Theme 4: Assessment*

| Place-based Education  | Montessori Adolescent Education |
|--|---------------------------------|
| Involves all participants in assessing learning              | Self-assessment                 |
| Relies on multiple sources of information to assess learning | Authentic assessment            |
| Uses the results of assessment to facilitate learning        | Three-way conferences           |

## Aspect 2: Community Learning and Empowerment

### *Theme 5: Connections Between School and Community*

| Place-Based Education                            | Montessori Adolescent Education            |
|--|--|
| Builds school/community connections              | Place-based Pedagogy in local community    |
| Addresses a community problem, issue or interest | Farming/Micro-economy<br>Community Service |
| Honors the local culture                         | Community Service,<br>Micro-economy        |

### *Theme 6: Process*

| Place-Based Education                                      | Montessori Adolescent Education            |
|--|--|
| Welcomes the questions/complications arising from the work | Lateral thinking<br>Collaborative learning |
| Builds access, communication and trust                     | Community service                          |

### *Theme 7: Roles, Relationships and Power*

| Place-Based Education                             | Montessori Adolescent Education              |
|---|--|
| Supports adults to take on new roles              | Place-based pedagogy projects                |
| Cultivates new leadership                         | Micro-economy<br>Place-based pedagogy        |
| Nurtures new relationships                        | Local history projects<br>Service Activities |
| Promotes shared responsibility and accountability | Community service<br>Activities              |

### *Theme 8: Community Learning*

| Place-Based Education                 | Montessori Adolescent Education |
|---------------------------------------|---------------------------------|
| Leads to new community understandings | Community Service               |
| Engages adults in learning            | Micro-economy                   |
| Fosters a culture for learning        | Place-based Pedagogy            |

### Aspect 3: Deepening and Spreading Place-Based Learning

#### *Theme 9: Instructional Spread*

| Place-Based Education   | Montessori Adolescent Education                |
|---|--|
| Impacts curriculum  | Place-based Pedagogy/<br>Integrated curriculum |
| Impacts teaching and teachers   | Integrated curriculum                          |
| Helps students to stretch themselves as learners, problem solvers and leaders | Place-based Pedagogy/<br>Integrated Curriculum |

#### *Theme 10: Community Engagement*

| Place-Based Education                                    | Montessori Adolescent Education             |
|--|---|
| Involves a wide variety of individuals and organisations | Place-based pedagogy, Micro-economy,        |
| Leads to increasing impact in the community              | Micro-economy, Farming<br>Community Service |

#### *Theme 11: Supporting Structures*

| Place-Based Education                            | Montessori Adolescent Education                      |
|--|--|
| Is supported by teacher development and learning | Micro-economy, Community life, Integrated Curriculum |
| Is advanced by school policies and practices     | Farming, Micro-economy, Integrated Curriculum        |
| Influences community policies and structures     | Place-based Pedagogy curriculum                      |
| Broadens school's role within the community      | Place-based Pedagogy, Micro-economy                  |

#### *Theme 12: New Resources and Connections*

| Place-Based Education              | Montessori Adolescent Education                                   |
|------------------------------------|---|
| Attracts and creates new resources | Support from local businesses and associations                    |
| Spreads to new places              | Director lectures, writes and presents about Place-based Pedagogy |

## Appendix Q Montessori Schools in relation to PBEPR Rubric

| <b>Aspect 1: Student Learning &amp; Contributions</b>           | <b>Valley</b> | <b>Mountain</b> | <b>River</b> | <b>Forest</b> |
|---|---------------|-----------------|--------------|---------------|
| 1. Student Intellectual Growth                                  | M             | P/M             | M            | A             |
| 2. Academic Rigour of the Project                               | A             | A/B             | A            | A             |
| 3. Authenticity of the Project                                  | A             | M               | A            | A             |
| 4. Assessment   | A             | P               | A            | A             |
| <b>Aspect 2: Community Learning &amp; Empowerment</b>           |               |                 |              |               |
| 1. School & Community Connections                               | A             | B               | P            | M             |
| 2. Process  | A             | P               | M            | A             |
| 3. Roles, Relationships & Power                                 | A             | B/ P            | P/M          | A             |
| 4. Community Learning   | A             | B/P             | B/P          | M/A           |
| <b>Aspect 3: Deepening &amp; Spreading Place-Based Learning</b> |               |                 |              |               |
| 1. Instructional Spread   | A             | P               | A            | A             |
| 2. Community Engagement   | A             | B               | B            | B/A           |
| 3. Supporting Structures  | A             | B               | B            | M/A           |
| 4. New Resources & Connections                                  | A             | B               | M            | A             |

**Key: B= Beginning**

**P= Progressing**

**M = Maturing**

**A= Advanced**

## Appendix U Cross Case Analysis

The evidence of each school's practice in Chapter Four was completed by a summary of Findings, Themes, and Issues drawn from the Aspects and Themes of the Montessori and place-based hybrid model.

By incorporating the number of descriptors found in each theme as a means for evaluation, we could say that the presence of three descriptors would result in a high level of correspondence (H) between school practices and the theme principles, the presence of two descriptors would correlate to a medium level of accord (M), and the presence of one or zero descriptors would indicate a low level of compatibility (L) between descriptors and actual practice.

The summary of Aspects and Themes as evaluated in the four school case studies is shown below.

### Summary of Aspects and Themes as evidenced in Case Study Schools

|            | Aspect 1 |     |     |     | Aspect 2 |     |   |     | Aspect 3 |    |    |    |
|------------|----------|-----|-----|-----|----------|-----|---|-----|----------|----|----|----|
| Schools    | Themes   |     |     |     |          |     |   |     |          |    |    |    |
|            | 1        | 2   | 3   | 4   | 5        | 6   | 7 | 8   | 9        | 10 | 11 | 12 |
| Valley     | H        | H   | H   | M   | H        | H   | H | H   | H        | H  | H  | H  |
| Mountain * | L/H      | L/H | L/H | L/H | L/H      | L/H | H | L/H | L        | L  | M  | M  |
| River      | H        | H   | H   | H   | H        | H   | H | H   | L        | L  | M  | M  |
| Forest     | H        | H   | H   | H   | H        | H   | H | H   | M        | L  | M  | H  |

## Appendix V Generating Theme Based Assertions

### Matrix for Generating Theme-Based Assertions from Case Findings Rated Important (adapted from Stake, 2006)

|  | Themes   |          |          |          |          |          |          |          |          |           |           |           |
|--|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|-----------|
| <b>Valley School</b>   | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>7</b> | <b>8</b> | <b>9</b> | <b>10</b> | <b>11</b> | <b>12</b> |
| Montessori teacher training as core for curriculum-building                                  |          |          |          |          |          |          |          |          |          | H         |           |           |
| Connections between school and community support PBE   |          |          |          |          |          |          |          |          | H        |           | H         |           |
| Experiential learning in real social justice concerns of local urban community adds empathy. |          |          |          |          | H        | H        |          |          |          |           |           |           |
| Music & blood donor program revitalised community and student self-esteem.                   |          |          |          |          |          |          | H        | H        |          |           |           | H         |
| <b>Mountain School</b>   | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>7</b> | <b>8</b> | <b>9</b> | <b>10</b> | <b>11</b> | <b>12</b> |
| Occupations & school community life were bedrock of Mont Ed/PBE program                      |          |          |          |          | L/H      | L/H      | H        | L/H      |          |           |           |           |
| Without trained leadership, support for essentials of Mont Ed/PBE are missing                |          |          |          |          |          |          |          |          | L        |           |           |           |
| It's not the farm itself, but training that furnishes value to prepared environment.         |          |          |          |          |          |          |          |          |          | L         |           |           |
| Exemplified lack of training as impediment to PBE  | L        | L        | L        | L        |          |          |          |          |          |           |           |           |
| <b>River School</b>  | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>7</b> | <b>8</b> | <b>9</b> | <b>10</b> | <b>11</b> | <b>12</b> |
| Innovative approach to PBE is effective with staff training and collaboration                | H        | H        | H        | H        |          |          |          |          |          |           |           |           |
| Community & family support PBE opportunities   |          |          |          |          |          | H        | H        | H        |          |           |           |           |
| Micro-economy a dynamic addition to PBE  |          |          |          |          |          |          |          |          |          |           |           | H         |
| <b>Forest School</b>   | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>7</b> | <b>8</b> | <b>9</b> | <b>10</b> | <b>11</b> | <b>12</b> |
| Private school – parents more influential in decisions about social justice work             |          |          |          |          |          |          |          |          |          |           | H         |           |
| Smaller size of school effective for Mont/PBE  |          |          |          |          |          |          |          | H        |          |           |           | H         |
| Highly trained leadership overcame staff training lack                                       |          |          |          |          |          |          |          |          | H        | H         |           |           |
| Exemplary student centred learning & self-assessment due to leadership excellence            | H        | H        | H        | H        |          |          |          |          |          |           |           |           |

The table above, illustrates the emergence of tentative assertions that emerged from the data on a case-by-case basis. These tentative assertions were duplicated among some of the cases, and needed clarification, categorising, and evidence for further discussion across the cases.