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Early Childhood Education:  
A Model for 21st Century Secondary Education

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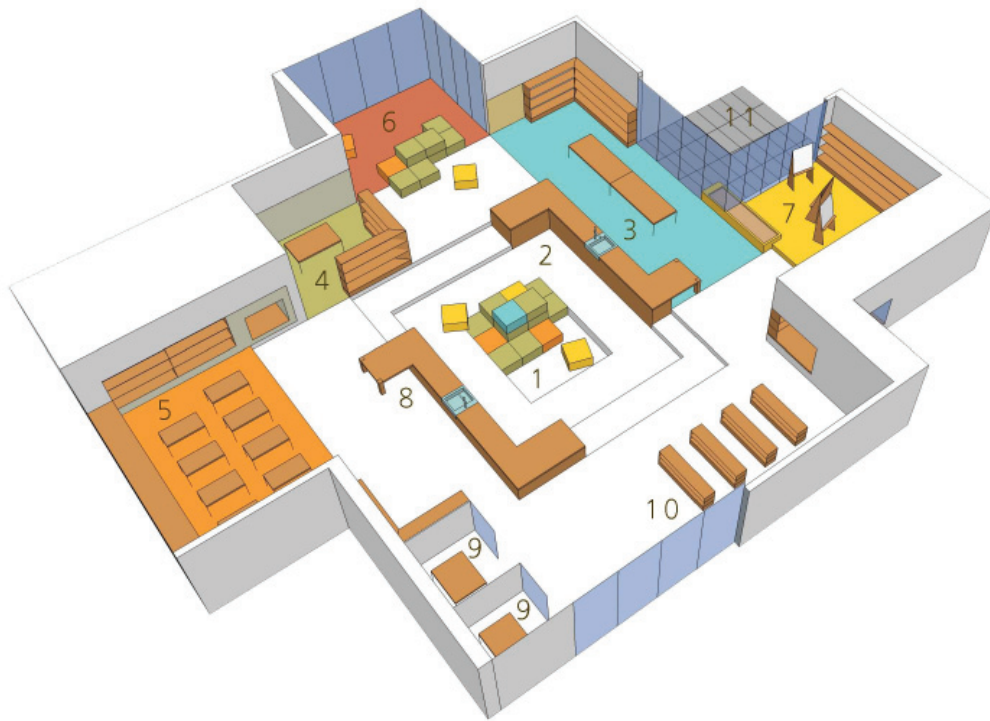


As the designer of primary and secondary educational facilities, I have become familiar with educational thinkers such as Sir Kenneth Robinson, Peter Senge, Ewan McIntosh, Daniel Pink, Howard Gardner – each promoting an approach based on system-thinking, self-directed exploration and multidimensional, interactive learning. In 2009, I had the opportunity to design the Headstart-operated Mount Hood Community College Early Childhood Center in Gresham, Oregon (pictured above).

Being new to the subject, I began with extensive research and it was not long before I recognized many of these strategies in the early childcare education pedagogy of Montessori, Waldorf and Reggio Emilia.

All three approaches were born out of a utopian desire for a better world. Each approach also understood early education of children to be the first step in creating the building blocks for a society which affords all citizens a chance to live a healthy, peaceful

and fulfilled life, free from war and poverty. Each of these philosophies promote a balanced approach addressing all intelligences of the child, a baseline which Howard Gardner confirmed again in 1983. However, there are several distinct elements in each strategy which could provide an interesting practical application in primary and secondary education today. The illustrations represent my interpretation of the essential spatial expression characteristic of each early learning pedagogy.



MONTESSORI  
THE CHILDREN'S HOME

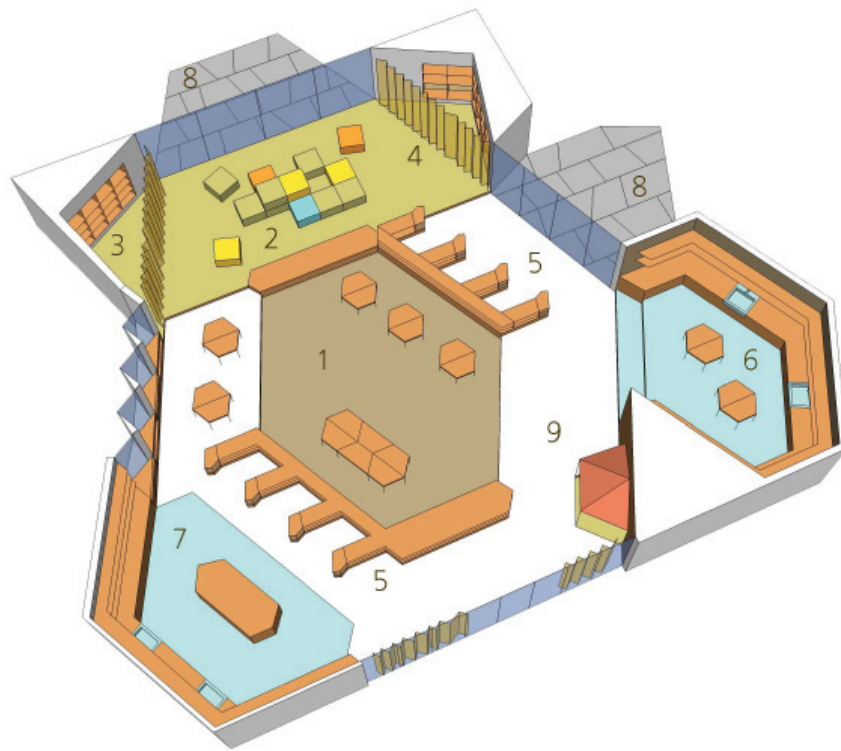
- 1 FLEXIBLE ALL TOGETHER AREA
- 2 DOMESTIC MATERIALS
- 3 EATING, PREPARING FOOD
- 4 SMALL GROUP
- 5 LONG TERM PROJECTS
- 6 STORY TELLING, SHARING
- 7 ART WORK
- 8 SUPPLIES
- 9 SPECIAL PROJECTS
- 10 LEARNING MATERIALS
- 11 PATIO / GARDEN

**MARIA MONTESSORI (1870-1952)**

Maria Montessori, Italy's first woman physician, opened the "Casa di Bambini" in the slums of Rome in 1907 after ten years of developing a method for working with disabled children<sup>1</sup>. Montessori based her theories on the critical analysis of essays about early childcare dating back two hundred years and continued to develop her approach, which she termed "scientific pedagogy"<sup>2</sup>, on observation and experimentation of how children interact with their environment. Convinced of the inherent inquisitive nature of children,

Montessori built her approach on the principle that children should have the opportunity to follow their interest for long, uninterrupted periods<sup>3</sup>. Learning seems to happen effortlessly when children are engaged in a topic of interest. Providing exposure to subjects, observing which approach to a topic seems most interesting and "preparing" the environment to allow for deeper investigation of what intrigues a child became a cornerstone of Montessori education<sup>4</sup>. Learning occurs as a fluid process reflective of respect for the individuality of the child.

Stanford's "d.school", a scientific playground for educators to test and experiment with new educational strategies, is a 21st century expression of investigating the concept of the "prepared environment." The school is organized around a central open space that can be programmed by anybody. Teachers and students create their own environment, define boundaries, rules of conduct and range of tools. Montessori education strengthens student's awareness of how to read the environment, detect behavioral clues and predict reactions.



WALDORF  
IMAGINATION LAB

- 1 FLEXIBLE SUNKEN AREA FOR EURYTHMY & FAIRS
- 2 RAISED 'STAGE' FOR FAIRY TALES, CHOIR, MUSIC, DRAMA
- 3 COSTUMES, FABRICS
- 4 INSTRUMENTS
- 5 WORK BENCHES / DISPLAY SHELVING
- 6 STUDENT WORK DOCUMENTATION
- 7 LONG-TERM PROJECT AREA
- 8 PATIO / GARDEN
- 9 CAVE SPACE

**RUDOLF STEINER (1861-1925)**

Rudolf Steiner, an Austrian scientist, philosopher and founder of Anthroposophy, was asked in 1919, after the cultural vacuum created by World War I, to found an independent school for the employees of the Waldorf-Astoria cigarette factory in Stuttgart, Germany<sup>5</sup>. Again, the hope was a new kind of school would create human beings able to form a just and peaceful society. This approach is deeply grounded in a philosophical framework and each educational strategy can be seen in context of Rudolf Steiner's view of the world. One may disagree with his philosophy from a religious standpoint but it is quite intriguing from an educator's point of view. In Steiner's view, western civilization has lost contact with natural and spiritual realities and relies excessively on abstraction, resulting in loss of intuitive and clairvoyant experiences. He believed that a truly scientific investigation requires a combination of the clarity of intellectual thought with the imagination, consciously achieved inspiration and intuitive insights<sup>6</sup>. Waldorf education emphasizes the importance of imagination through the incorporation of drama, dance, music and art into all subject matter throughout the K-12 curriculum. Of specific interest in an

application into 21st Century education is Steiner's introduction of *Eurythmy*<sup>7</sup>, which relates movement to the tones and rhythms of language and music, expressing inner experiences, such as joy and sorrow, outwardly. It helps children develop expressive capacities and stimulates the use of creativity and imagination to manifest these inner experiences in a form of visual speech<sup>8</sup>.

At a recent conference Sir Kenneth Robinson stated that during his travels he noticed that every educational system on earth has the same hierarchy of subjects: at the top are mathematics and languages, then the humanities and arts at the bottom. Within the arts, art and music are given a higher status than drama and dance. There is not an educational system on the planet that teaches every student drama and dance daily. He asks, "Why?" Rudolf Steiner was already aware of this tendency and was convinced that reestablishing contact with natural and spiritual realities was essential in saving humanity.

**THE REGGIO EMILIA APPROACH**

Just after World War II, the parents in a small village in northern Italy started to rebuild their lives, and after reflecting upon the devastation left by the war and the task of creating a new society from the ground up, they came to the conclusion that a new kind of education was needed. Under the leadership of the local educator Loris Malaguzzi (1920-1994), they started what became a global movement, the Reggio Emilia approach<sup>9</sup>.

Since there never was any desire to create a formal curriculum for this approach which is deeply grounded in the local culture, the only schools referred to as Reggio Emilia, are the 22 schools for three- to six-year-olds and 13 infant toddler centers within the city limits<sup>10</sup>. However, the town has started to organize tours, sell pictorial and written documentation about the curriculum, and organize educational conferences and international exhibitions in order to allow organizations around the world to establish what is known as Reggio Emilia "inspired" early education centers. This is the only approach focusing solely on early education through six years old, with no primary or secondary curriculum.



REGGIO EMILIA  
DISCOVERY CENTER

- 1 KITCHEN, COOKING & EATING
- 2 STORY TELLING / READING
- 3 FOUND OBJECTS ARCHIVE
- 4 ATELIER
- 5 SHADOW WALL
- 6 PROJECTION WALL
- 7 PROJECT AREA WITH SUPPLIES
- 8 PATIO / GARDEN
- 9 DOCUMENTATION / DIARIES

In Reggio Emilia, parents are seen as the child’s first teacher and are fully integrated into curriculum as volunteers and decision makers about educational goal setting<sup>11</sup>. The families are expected to implement the educational philosophies into all aspects of raising the child and to provide a seamless transition from life at home to life at the childcare center. Reggio Emilia established the understanding of the “learning environment as the child’s third teacher”<sup>12</sup>, which has become a prevalent philosophy for the programming of 21st century school design.

Children are encouraged to symbolically represent ideas and feelings through their “100 languages” including words, movement, drawing, music, building, sculpture, shadow play, collage, and dramatic play<sup>13</sup>. Each child’s education is based on relationships with other children, family, teachers, society and their environment<sup>14</sup>. A strong emphasis is placed on collecting natural materials and organizing them by sensory categories such as color, shape, texture or smell, which strengthens the child’s ability to recognize patterns and create meaning<sup>15</sup>. Daniel Pink proclaimed in *A Whole New Mind* that we have

started to move from the information age, which provided economic security for the knowledge worker, to the conceptual age which requires a different kinds of workers: creators, empathizers, pattern recognizers, and meaning makers. Reggio Emilia teaches exactly that: Pattern recognition and meaning making.

Recent promises of increased federal and state funding for early childhood education<sup>16, 17</sup> are representative of the renewed awareness of how important the first years in the development of children are<sup>18, 19</sup>. Parallel to that, more school districts throughout the world are starting not only to rethink the current educational and energy performance of their facilities, but also the very structure of educational delivery<sup>20, 21, 22</sup>. The Montessori, Waldorf and Reggio Emilia approaches, which were developed in a spirit of re-building society as a response to social inequity and two world wars during the 20th century, may prove to be relevant models to address the educational needs of the evolving 21st century. The continued success of these approaches<sup>23</sup> also emphasizes the importance of addressing the “whole child”<sup>24</sup>. It is unfortunate that many school

districts in the US have had to cut funding for music, drama, dance and the arts<sup>25</sup> while the federal government is promoting standards that focus on the development of the left brain through the introduction of STEM (Science, Technology, Engineering and Math) programs. Montessori, Waldorf and Reggio Emilia are exemplifying the importance of fully integrating right brain development in order to make learning more effective and to create well rounded citizens who will be better equipped to face the challenges of the 21st century.

#### SOURCE REFERENCE

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<sup>2</sup> “A Biography of Dr. Maria Montessori,” Montessori Australia Foundation, [www.montessori.org.au](http://www.montessori.org.au)

<sup>3, 4</sup> “American Montessori Society,” Maria Montessori, [www.amshq.org](http://www.amshq.org)

<sup>5, 6</sup> “Waldorf Education and Antropophy,” #1 Public Lectures 1921-22, Rudolf Steiner, Antroposophic Press 1995

<sup>7, 8</sup> Rudolf Steiner on the Web “Eurythmy” by Daniel, 2005–2011, [www.rudolfsteinerweb.com](http://www.rudolfsteinerweb.com)

<sup>9, 13, 14, 24</sup> “The Hundred Languages of Children,” The Reggio Emilia Approach, Advanced Reflections, Second Edition, Ablex Publishing Corporation, London, England.

<sup>10</sup> “Three Approaches from Europe: Waldorf, Montessori, and Reggio Emilia” By Carolyn Pope Edwards, 2002, University of Nebraska at Lincoln

<sup>11, 15</sup> “Reactions to Visiting the Infant-Toddler and Preschool Centers in Reggio Emilia, Italy” by Tess Bennett, 2001, University of Illinois, Urbana-Champaign

<sup>12</sup> Fondazione Reggio Children, Centro Loris Malaguzzi, <http://www.reggiochildren.it>

<sup>16</sup> Oregon, Department of Education, Oregon’s Early Learning Initiative, [www.ode.state.or.us](http://www.ode.state.or.us)

<sup>17</sup> US Department of Education, Early Learning Initiative, [www.ed.gov/early-learning](http://www.ed.gov/early-learning).

<sup>18</sup> United Way, Success by Six

<sup>19</sup> The Children’s Institute

<sup>20</sup> “The Systems Thinker in Every Student,”: An Interview with Mary Scheetz by Kali Saposnick from Leverage Points Issue 46, © 2004 Pegasus Communications, Inc. [www.pegasuscom.com](http://www.pegasuscom.com)

<sup>21</sup> Portland Public Schools, Long Range Facilities Plan 2012

<sup>22</sup> Independent Perspectives, The Finish Model, Patrick F. Bassett, Fall 2008, <http://www.nais.org/publications/ismagazinearticle.cfm?ItemNumber=151216>

<sup>23</sup> Research Starters, The Montessori Method, Great Neck Publishing, EBSCO Publishing, 2008, [http://www.williamsburgmontessori.org/wp-content/uploads/2010/08/The\\_Montessori\\_Method.pdf](http://www.williamsburgmontessori.org/wp-content/uploads/2010/08/The_Montessori_Method.pdf)

<sup>25</sup> National Endowment for the Arts, “What the Declines Mean for Arts Participation” Research Report #52 2011 by Nick Rabkin and E.C. Hedberg, NORC at the University of Chicago.