Reinventing Life Through Edutheraplay:
Developing Therapeutic Spaces through Education for Abused Children in a Latin American Christian Children’s Home

Garry B. Abbott
5th Year Landscape Architecture
Comprehensive Project
Department of Landscape Architecture
College of Architecture and Planning
Ball State University
Muncie, IN 47306
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Garry B. Abbott
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Department of Landscape Architecture
College of Architecture and Planning
Ball State University
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Advisor: Les Smith
Instructors: Ron Spangler, Darren Reno
To my Lord and Savior, Jesus Christ, for pouring his grace upon me and blessing my life beyond anything I deserve,

To my family, friends, mentors, coaches, and professors who have guided and nurtured my growth,

To the Directors of La Senda Children’s Home, Steve and Pam English, who have facilitated this process with excitement and enthusiasm from the beginning,

And Finally to the wonderful angel God has blessed my life with, my wife, Abbie, for her consultation on this project but more importantly for her kindness and love that has allowed me to see the beautiful in life and unlock compassion I didn’t know I had,

From the bottom of my heart, thank you for all that you have done to make this project possible.
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Can you imagine wrapping yourself in old newspapers to keep warm at night, with no home or family to protect you? Can you imagine never being given the opportunity to attend school because you cannot afford books or paper? Can you imagine having no one to turn to in times of trouble? Can you imagine having no honesty, or trust in your life? According to the UN, there are 150 million homeless street children in the world, 40 percent in Latin America alone. In September of 1997, Steve and Pam English established The World Our Parish and La Senda (The Way) Children’s Home to serve the needs of the homeless and abused children of Guatemala. When the new facility opened in May of 2001, the co-directors of La Senda created a safe-haven and place for growth and maturity for children who have been abused, neglected, and abandoned by their families and the Guatemalan society as a whole. The need of this facility was to develop a landscape that exhibited the care and love that children receive in this family oriented environment. Through the educational needs of the children of the home the facility needed to be a therapeutic space that created the much-needed feelings of comfort, compassion, and caring.

The field of therapeutic design is both an ancient and modern practice, which has only recently delved into the potential of therapeutic landscapes for children. The field of specialized landscapes designed for children has been evolving for more than fifty years, which has contributed heavily to advancing the healing role of children’s gardens (Cooper-Marcus 324). Specifically, the field of education as the basis for therapeutic design for children has been explored in only limited manor to this point and thus is an ever expanding and developing design specialty. This study merged the fields of therapeutic and educational landscape architecture through the latest trends in children’s landscape design. These design trends will be directly applied to the La Senda site in Sumpango, Guatemala to create a multi-functional, and increasingly beneficial socio-developmental environment for the children who need it most. To better understand the emerging trends in the interconnected fields of therapeutic and educational design from a variety of scales and historical time periods four case studies were chosen. Howard A. Rusk Institute of Rehabilitation Medicine, New York, New York (1951); Therapeutic Garden at the Institute for Child and Adolescent Development, Wellesley, Massachusetts (1996); Meadowbrook Pond Seattle, Washington (1996); Notting Hill Adventure Playground, London (1965); all show revolutionary and undoubtedly timeless theoretical principles that were applied to the design of the edutheraclip play environment for La Senda that metamorphosed the existing semi-natural, amenity-lacking site into a living, changing, natural, educational, developmental, and therapeutic space.
To Provide La Senda Children’s Home with a visionary master plan establishing a series of spaces and activity nodes that will connect the site to its cultural surroundings, and will allow the fundamental principles of family, growth, and development through Christian life to be exhibited in the landscape by providing a therapeutic and rehabilitative experience facilitated by education, social and physical development.
PART I: INTRODUCTION

A. Purpose of the Study

This study was derived from two fundamental sources. First, the country of Guatemala contains literally millions of children who are both physically and emotionally deprived. Thousands of babies are sold every year to pay simply the cost of living. Everyday in the streets of major cities, children under the age of ten can be seen begging for money to pay for a small amount of food for their entire family. Thousands of abandoned children can be found living in garbage dumps with no guidance and no knowledge of what a school is. The luckiest of these children are provided with a second chance at life. This second chance comes in the form of a home provided by Steve and Pam English at La Senda Children’s Home. Second, Latin America has been developed in an imperialistic and structured way that allows for little personal growth or individuality. Since the implementation of Law of the Indies of 1573, Latin America has developed an overbearing urban structure. Fortunately, La Senda was created not in traditional Latin fashion, but in a way that takes advantage of the best qualities of the site. Taking advantage of assets rather than forcing a traditional structure on the site can be analogous to a design in which the assets of an individual are brought out and fostered by the environment. This study provides La Senda with a master plan that takes advantage of the beautiful surroundings of the site, and allows the fundamental principles of family, growth, and development through Christian life to come through in the landscape. This study provides the basis to create an informed therapeutic master plan through educational and physical development that children of can experience both guided by an educator and through personal exploration.

Guatemala Country Profile

Guatemala comprises a land area slightly smaller than Tennessee. Its climate is tropical with hot, and humid lowlands, and cooler mountainous highlands, which contain numerous active volcanoes. Forty percent of the total land area is comprised of forest and woodlands, while only twelve percent accounts for arable land. Surprisingly, although only twelve percent of the land is arable, thirty percent of the total land area is agricultural due to the lack of educational accessibility for the population (Guatemala 3).

Of the 11,819,000 people inhabiting Guatemala only fifty percent are literate. Only sixteen percent of females over the age of fifteen obtain gainful employment. Further, forty percent of the population is unemployed or underemployed. Employment and literacy programs by the Guatemalan government have been largely lacking, and have been made increasingly difficult given the diversity of the country. Although Spanish is the official language, over forty percent of the population speaks a native Indian dialect as their primary language. As a means of limiting the monetary responsibility the country of Guatemala contributes to the primary school system, students are denied access to education if they cannot afford the mandatory supplies the school requires. This policy excludes sixty percent, or three million, of children from obtaining an education. Finally, the need for family members to aid in the earning of income for struggling families leads to a median education level of approximately fifth grade for the entire population.

Although the educational needs are of extreme importance, a seemingly more fundamental need in Guatemala is the health of the people. Only fifty-nine percent of the population has access to proper health care, and only fifty-eight percent have access to safe water. These health care needs do not escape the children of Guatemala. Twenty-four
percent of children from birth to age five are malnourished. This translates into 3,312,831 under fed, under educated, and under cared children in a country the size of Tennessee (Guatemala 3,4).

In May of 2001, La Senda Children’s home was established to show not the dominance of Christian faith, but the loving family, which God can provide. The goal of this study was to provide this facility with a master plan, which reflected this theological underpinning through a landscape that answers the needs of the children while allowing them to advance both educationally and emotionally. Steve and Pam English, for a small number of the luckiest of these children at La Senda Children’s Home, meet these needs as directly as possible through Christian love. These children come from abusive and negligent backgrounds that make their needs greater than even the typical child in Guatemala. Through developing a master plan that facilitates therapy through focusing on the educational needs of the children of La Senda, these children, who have large deficits in development are immersed into a loving and nurturing environment that directly addresses the physical and educational needs of the children who experience it.

A. Guiding Questions
The following is a list of questions that has guided the research in the development of the therapeutic master plan for La Senda Children’s Home:

- What are the possible methods of learning that a child may use in experiencing a space?
- What are the most accepted theories on the development of children and how could those theories be applied to the creation of spaces for the therapeutic and educational benefit of children?
- In what way can outdoor spaces provide therapy for children and more specifically, how can spaces be designed to foster education through therapy for children?
- How can outdoor spaces be designed that allow for and excel the process of recovery from emotional and physical abuse while not drawing attention to and singling out the children of these needs?
- What types of outdoor spaces appeal to developing children, and more importantly, children with developmental deficits?
- In what way should outdoor spaces designed for children with special developmental needs differ from children with no special needs?
- In what way should outdoor spaces designed in a Christian environment differ from traditional secular spaces?
- How can outdoor spaces foster rehabilitation of emotional deficits though educational needs?
- How can cultural references be made in which the children understand their surrounding environment in a facility that is walled on all sides?
- Can spaces be designed that are interesting and engaging to multiple age groups without excluding children of lesser or greater intellectual or physical development?
A. Delimitations

- Typically, in the design of a master plan for a facility of this type, the landscape architect would be part of a team of consultant and designers. This consultant team would include soil experts, hydrologists, civil engineers, child development and child psychology specialists, Guatemalan cultural specialists, among others. For the purposes of this study and master plan development, I acted as a team of one. My burden was lightened greatly with the aid of professors in the design field, the help of the directors of La Senda Children's Homes, and most importantly due to my lack of base knowledge, my wife and “child development consultant,” Abbie Lynn Abbott, who has provided priceless aid in the understanding of child development and developmental needs. Although the aid is great, it should be clearly stated that I am by no means an expert in any of the fields which I am attempting to utilize as part of this design, but my attempt is to use my consultation team and the knowledge I have obtained to make the best design decisions which I have the ability to execute.

- Due to the great distance to the project site, site visits personally or with design consultants to better inform the design process is virtually impossible, but greatly needed. As a result, the design process was driven by my personal recollections of the site from my two visits (June 2000, and March 2002), interaction via mail and phone with the client, and “photographic site visits” with my consultation team, in which I informed the “visitor” of the elements of the site through my photographic library.

- The remoteness of the site near the small city of Sumpango, in the developing country of Guatemala, makes the process of obtaining quality base material pertaining to my specific site impossible. To acquire base material, using site photos I developed both a base map and topographic map to facilitate the master plan development. Although this is not the preferred method of obtaining base material, this process will be used, as it is the only conceivable way of providing a base for design.

- Given the limitations of time to complete this master plan, the result was conceptual. Following this conceptualization, and following the completion of this thesis project, with the aid of the directors of La Senda, the master plan may be developed into a set of construction documents for the implementation of this therapeutic environment.

A. Definition of Key Terms

- **Animism** – the content being investigated by the child is alive in the sense that people are alive (knowing).
- **Arable Land** – land suitable for agricultural cultivation
- **Artificialism** – the content being investigated by the child is a result of an outside agent (sometimes God).
- **Concrete Operational Stage** – child becomes able to reverse a process
- **Decentration** – stage of development in which the infant advances from undifferentiated state to one of greater separation of self and environment.
- **Deferred Circular Reaction** – occurs when a circular reaction is interrupted and resumed spontaneously by the infant at a later time
- **Edutheraplay** – an environment that provides children with educational, physical and emotional benefits in a seamless and symbiotic composition
Interrupted Prehension – if an infant has already set in motion certain movements of the hand or fingers with the purpose of grasping an object and then loses it or does not succeed in grasping it, he or she will search for the object by continuing the movements.

Participation – child perceives some continuing connection between individuals and persons, objects, and symbols in their immediate environment.

Preoperational Stage – child can represent in thought processes that which was first developed in the sensorimotor stage, language develops rapidly, and becomes interrelated with thought.

Primary Circular Reaction – An organized scheme in the development of a child that involves an action on the part of the infant, which leads to an event that has value for him which is centered around his body. The infant then learns to repeat the behavior in order to reinstate the event.

Restorative Garden – term coined by Nancy Gerlach-Spring to refer in a broad sense to a landscape which offers rehabilitative and therapeutic benefits for visitors.

Secondary Circular Reaction – equivalent to Primary Circular Reaction except that it involves events or objects in the external environment.

Sensorimotor Stage – infant acquires notions of object, space, time, and causality.

Symbolic Function – Child begins to develop the ability to make something (a mental symbol, a word, or an object) symbolize something which is not present.

Tertiary Circular Reaction – Primary + Secondary Circular Reaction + child initiating behavioral changes in the event.

Therapy (Therapeutic) – refers to treatment intended to remedy an undesirable condition or develop physical or emotional needs.

Assumptions

It was assumed that the children of this facility will come to La Senda with varied life experiences that will lead the children to experience the created spaces differently, and possibly not in the way the designer intended.

It was assumed that the designer could control only the physical environment in which the design is implemented.

It was assumed that each visitor would interact differently with the designed environment so the designer cannot directly control the experience of the child.

It was assumed that a consistent and uniform experience by each visitor could not be expected by any designed space.

It was assumed that providing outdoor spaces for educational and physical development would be beneficial to children of all levels of need.

B. Significance of Study

Fundamentally, this study provided a unique layer of knowledge to the existing base pertaining to therapeutic design, and more specifically therapeutic design through education. It was the intent of this study to stimulate possible future interest and study in this field, which is only beginning to gain professional attention in the form of children’s therapeutic design. Above all, however, the significance of this study was providing a professionally prepared master plan for a facility, which had previously had no trained design attention.

Assumptions
PART II: REVIEW OF RELATED LITERATURE

A. Historical Perspective

I. The History of Therapeutic Garden Design

The design of therapeutic gardens is both an ancient and modern design field. Nancy Gerlach-Spriggs writes that

The restorative garden is one among the many varieties of gardens that humans have planted since taking up agriculture ten thousand years ago. From that faraway time until at least the nineteenth century, gardens were everywhere – behind houses, inside and outside city walls, and interspersed with buildings throughout the cities and towns. Only with the buildings of the nineteenth century European and American cities did human settlements become so densely crowded with buildings that structures overran most green spaces and gardens disappeared (Gerlach-Spriggs 7).

Some of the most dominant features in gardens of this type throughout time have always been natural features such as sun, moon, plants and water. These features, though, have been modified by current culture or the personal feelings of the owner. Gardens have been personal contemplative spaces, theaters for social display, or possibly most popular throughout time, a religious link between the visitor and the deity. Gerlach-Spriggs states,

During times when intense feelings and the religious experiences of nature receive cultural acknowledgment, gardens are employed as a means of therapy: as a place for the relief of pain, places to assist the patient’s struggle for orientation and equilibrium. Under these conditions, gardens may properly be labeled restorative (7).

The origin of the restorative as a reflective space can be found at the beginnings of recorded history in Persia, Egypt and throughout the Orient. Gardens of this type first appeared

in Europe during the Middle Ages around the eighteenth century. Gardens adjoining institutions for the care of the poor, and sick may have been commonplace in the thousands of Christian charitable foundations of the tenth through the fourteenth centuries. These Christian institutions owed their creation to the Christian obligation to charity and to give mercy to the poor. Jesus Christ himself stated, “In so far as you did this to none of the least of these brothers of mine, you did it to me.” Most of these “hospitals” were located in towns near churches and catered to orphans, pilgrims, vagrants, the disabled, the aged, the sick, and the insane. Luckily, in modern time the restorative garden has received a rebirth of cultural validation in the forms of rehabilitation programs, cancer and AIDS treatment facilities, nursing homes, adventure playgrounds, mental hospitals, hospices, and many other health care facilities throughout the United States and the world (Gerlach-Spriggs 7).

During the Middle Ages, walls were erected at the perimeters of churches, monasteries, towns and even manors. Whatever the form of these enclosures, all offered shelter, sun, and shade, while many offered courtyard lawns and plantings as a restorative setting. Saint Bernard (1090-1153) wrote a detailed description of the courtyard garden of the hospice at his monastery in Clairvaux, France:

Within this enclosure, many and various trees, prolific with every sort of fruit, make a veritable grove, which lying next to the cells of those who are ill, lightens with no little solace the infirmities of the brethren, while it offers to those who are strolling about a spacious walk, and to those overcome with the heat, a sweet place for repose. The sick man sits upon the green lawn, and while inclement Sirius burns the earth and dries the rivers he is secure, hidden, and shaded from the heat of the day, the leaves of a tree tempering the heat of that fiery star; for the comfort of is pain, all kinds of grass are fragrant in his nostrils. The lovely green of herb and tree nourishes his eyes and, their immense delights hand in hand growing before him

Historical Perspective
The choir of painted birds caresses his ears with sweet modulation, and for the care of a single illness the divine tenderness provides many consolations, while the air smells with bright serenity, the earth breathes with fruitfulness, and the invalid himself with eyes, ears, and nostrils, drinks in the delights of colors, songs, and perfumes.

The central cloister was the monastery’s core open space and garden. The garden was generally divided into four sections in both the Persian tradition and according to the Garden of Eden legend. The intersection of this space usually contained a juniper to symbolize the Tree of Life of the Genesis story. These cloisters were designed to present the visitor with a highly ordered view of nature and restrictive quality was intended to encourage a reflective mood. Genesis tells the story of the Garden of Eden twice. In the second telling, a river flowed from the Garden whence is subdivided into four streams (Genesis 2:10-15). From this imagery came the medieval cloister’s crossed pathways arranged in a mandala pattern. The garden itself found meanings in the erotic language of the Song of Songs, which has been read by the Church Fathers as symbolizing the soul’s union with God. This garden in the Song is not large and open like the forest Eden, but similar to the cloister garden, is an enclosed space. The monastic hospice served three different clients: people traveling on pilgrimages, many of whom were sick and exhausted, the local poor and helpless, and visitors who came to the church to see its relics and to pray at its shrine (Gerlach-Spriggs 10).

These medieval gardens of thriving therapy became little more than abandoned spaces during the Renaissance and Reformation as they came under the control of the private wealthy. Although the Renaissance humanists stressed the influence of environment on human development, their enlightened ideas did little to alleviate the plight of the poor and ill. Although little help was delivered at the time, these same centuries contained the seeds that would later bloom into the modern restorative garden. Gerlach-Spriggs writes that “the proliferation of the nursing orders, improvements in the care of the insane, progress in science and the spread of scientific approach to medicine, the introduction of statistics and political economy into statecraft, and the better ordering of military medical facilities all prepared the way for the later re-establishment of restorative gardens.” (12)

The therapeutic connection between the nursing and medicine within the hospitals and the gardens without did not take root again until the eighteenth century Romantic Movement’s revival of pastoralism. With the spread of this attitude throughout popular society, nature and gardens came to be thought of again as places of bodily and spiritual restoration. The informal, and natural gardens of this period carefully provided a place of contemplation and emotional transportation through its imitation of elements found in unintended nature. In places such as a forest or top of a hill, a sensitive soul could experience an emotional connection with spiritual forces. These Romantic attitudes toward nature once again endowed gardened spaces with heightened emotional forces and religious power. This rejuvenation of thought remarried the garden with therapy (Gerlach-Spriggs 17-18).

Christian Cay Lorenz Herschfeld (1741-1792), a German theorist, gives the greatest testimony to the cultural union between horticulture and medicine of the time in his vision for hospital gardens and siting:

Hospitals are to be situated outside and away from cities, to allow for garden space. Hospitals should be located away from busy urban areas in a healthy and positive and inspiring location, not in valleys...but on sunny, warm, hilltops protected from the wind or on southern slopes on dry soils.

Historical Perspective
Hospitals should lie open, not encased by high walls, not fenced in by looming trees. The garden should be directly connected to the hospital, or even better, surround it. Because a view from the window onto blooming and happy scenes will invigorate the patient, a nearby garden also invites patients to take a walk.

The plantings, therefore, should wind along dry paths that offer benches and chairs. Clusters of trees are preferred to alleys of trees, which through the years will mature and meet at the top so that air will not circulate... Sad conifers should not be used but trees with light and colored leaves and flowering and fragrant shrubs and flowers. A hospital garden should have everything to encourage the enjoyment of nature and to promote a healthy life. It should help forget weakness and worries and encourage a positive outlook; everything should be serene and happy. No scene of melancholy, no memorial of mortality should be permitted to intrude. The spaces between the three groups could have beautiful lawns and colorful flowerbeds.

The roots of the Romantic movement laid firm, the legitimacy of the restorative garden in health care facilities has been established for the modern era. By the 1960s the garden options available to any health care facility included a rich traditional array of outside walking, sitting, sunning, and airing, sunlit inside rooms, and greenhouse-like corridors. Also, innovations in active gardening for the disabled, in the form of horticultural therapy in patients’ rooms, hospital corridors, greenhouses, and gardens on the hospital grounds give the ill the opportunity to convalesce in nature. Unfortunately, as these innovations have gained repose and medical value in the United States, the architectural fashion of the enclosed air-conditioned “cure, not care” focus of American medicine has resulted in neglect of these innovations (Gerlach-Spriggs 18-19, 24-25). Fortunately, exceptions are present and are gaining esteem in the medical world based on their positive results. One such example, the Howard A. Rusk Institute of Rehabilitation Medicine in New York, New York will be discussed later in the “Case Studies” section of this study.

The most obvious present day example of the therapeutic value of nature comes in the form of horticultural therapy. Gerlach-Spriggs states that horticultural therapy is “the active involvement with plant materials and gardening within an integrated clinical program (30).” Mental hospitals and post-World War II rehabilitation hospitals are the two places in which origins can be seen. In 1951, the Veterans Administration in Los Angeles created a program in which staff members were given three and a half acres of undeveloped property, where with patient volunteers they made a vegetable garden, a fishpond, a lath house, and chicken and rabbit houses.

Professionalized horticultural therapy took place in many stages within the Howard A. Rusk Institute being a pioneer, and by the 1970’s in the United States, the development of horticultural therapy offered new ways of integrating gardens into many different clinical settings, from hospitals offering acute care and rehabilitation to those specializing in long-term care. Also, the age-old tradition of providing gardens for patients, staff, and visitors to look at or in which they could sit and walk continues in a growing number of hospital settings. The opportunities and potential benefits are great for the creators and users of therapeutic spaces, but the battle to establish such spaces as therapeutically valuable is ongoing in the health care world.

II. The History of Children’s Healing Gardens

The field of specialized landscapes designed for children has been evolving for more than fifty years, which has contributed heavily to advancing the healing role of children’s gardens (Cooper-Marcus 324). One of the firsts thrusts to the development of children’s landscapes came in the mid-1940s from Danish landscape architect C. Th.

Historical Perspective
Sorenson. His design for the Emdrup Adventure Playground in Copenhagen sparked the imagination of designers across the world. These adventure playgrounds expressed a revolutionary concept that children could create their own community through hands-on manipulation of the physical environment (Cooper-Marcus 324). British landscape architect Lady Allen of Hurtwood, upon visiting this adventure playground was so impressed by the potential of this field of design that she returned to London to lead a movement to establish similar facilities in English neighborhoods to aid in the reduction of the trauma associated with the bombings of World War II (Cooper-Marcus 324).

The movement quickly extended to include play spaces for children with special needs. In the 1970s, Lady Allen founded the Handicapped Adventure Playground Association, HAPA, which works to "promote the health of children with special needs," whose developments include children's farms. Most children's farms tend to have strong commitments to the inclusion of children of all abilities, with therapeutic activities such as horseback riding (Cooper-Marcus 324).

Clare Cooper-Marcus states that healing gardens for children are a very recent development in the medical field (325). In 1970s, design guidelines for children's hospitals emphasized the importance of children's play, the outdoor environment, and experiences of nature. Similar studies and physical developments of spaces for children did not grow in popularity or perceived therapeutic value until very recently.

In the realm of professional landscape architecture practice, the topic of healing gardens has only recently received visibility. Specifically in 1995, the January cover issue of Landscape Architecture (Volume 85, Number 1, pp. 56-79) focused on the growing reputation of healing gardens. One of the six gardens presented in this article was specifically designed for children. The courtyards of the Children's Hospital and Health Center, in San Diego, CA will be discussed in greater length in the section titled "Case Studies".

B. Relevant Theory

I. Learning and Development

Piaget's Theory of Intellectual Development and Learning

Jean Piaget, although working mainly during the first half of the twentieth century, is considered to this day to be the foremost scholar on the intellectual development of children. His theory fundamentally asserts that children develop specific characteristics and learning patterns during specific times periods of time. Piaget felt that learning could occur on two levels. "Learning in the narrow sense" the acquisition of new information or responses to a specific situation. Conversely, "learning in the broad sense", or "development" involves the acquisition of general thought structures which apply to many situations (Ginsburg Opper 209). Piaget proposes that development (learning in the broad sense) is the more fundamental.

Piaget outlines four factors that influences development: (a) maturation, (b) experience or contact with objects, (c) social transmission, and (d) equilibration. Maturation refers to the specific time which it takes "to reach the highest level of development" physically, mentally and emotionally (Ginsburg Opper 213). It is obvious that a new born baby has neither the mental capacity nor the physical ability of sixteen year old, and thus it can be said that immature physical systems often contribute to deficits in cognitive functioning. Experience refers to "contact with the environment" (Ginsburg Opper 214). Encountering one's environment, in the sense of experiencing the characteristics of a specific object, is key in development, and applies directly to the
design of spaces for children. Social transmission is used “in a very broad sense to refer to the influence of the culture of the child’s thought” (Ginsburg Opper 218). This too is a key factor when designing spaces for children who have had little social transmission, or worse who have had only negative social transmission. Finally, equilibration “refers to the child’s self-regulatory processes, by which he progressively attains higher levels of equilibrium throughout development” (Ginsburg Opper 221).

“Piaget’s theory divides intellectual development into four major periods: sensorimotor (birth to 2 years); preoperational (2 years to 7 years); concrete operational (7 to 11 years); and formal operational (11 years and above)” (Ginsburg Opper 26). These stages, and the characteristics contained within them can are represented in the chart below.

<table>
<thead>
<tr>
<th>AGE</th>
<th>DEVELOPMENT CHARACTERISTICS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sensorimotor Stage (birth to 2 years)</strong></td>
<td>The origins of intelligence are to be found. The infant acquires notions of objects, space, time, and causality.</td>
</tr>
<tr>
<td><strong>Birth to 1 month</strong></td>
<td>Sucking reflex is actively initiated by newborn.</td>
</tr>
<tr>
<td><strong>1 to 4 months</strong></td>
<td>The notion of Primary Circular Reaction is learned. Action is centered around the infant’s own body.</td>
</tr>
<tr>
<td>4 to 10 months</td>
<td>4 to 10 months</td>
</tr>
<tr>
<td>10 to 12 months</td>
<td>Infant’s horizons expand; begins to crawl and manipulate things.</td>
</tr>
<tr>
<td>12 to 18 months</td>
<td>12 to 18 months</td>
</tr>
<tr>
<td>18 months to 2 years</td>
<td>18 months to 2 years</td>
</tr>
<tr>
<td><strong>Tertiary Circular Reaction.</strong></td>
<td>Tertiary Circular Reaction. Child initiates behavior changes; which produce variations in the event. Child searches for novelties.</td>
</tr>
<tr>
<td><strong>Decentration</strong></td>
<td>Beginning of Thought. Forms the transition to the next period of development in which the infant is able to use mental symbols and words to refer to absent objects. Decentration begins.</td>
</tr>
</tbody>
</table>

**Relevant Theory**
Preoperational Stage (2 to 7 years)

Actions become internalized; child can represent in thought processes that which was first developed in the sensorimotor system. Language is developing at rapid pace. Thought and language are becoming interrelated. Thinking in images to thinking in words. Child is perceptually-oriented. Child centers on one variable only. Child has difficulty in realizing that an object can possess more than one property.

End of second year

Development of novel cognitive and mental processes.

2 to 4 years

Appearance of Symbolic Function. Derived from imitation that happens externally and internally. Begins to classify collection of objects. Uses the pre-concept. Sometimes fails to see that one individual member of a class remains that same individual despite slight perceptual changes; and sometime he thinks that two different members of the same class are the same individual.

4 to 7 years

Increase in communication, less egocentric. Three kinds of beliefs common in first stage of development: animism, artificialism, and participation.

4 to 11 years

Egocentric stage: children do not know or follow rules, but insist that they do. Capable of making static images.

Concrete Operational Stage (7 to 11 years)

Emergence of logical operations. Child becomes able to reverse a process. Recognizes subclasses and superclasses.

7 to 11 years

Incipient Cooperation: child both cooperates and competes with his partner. Child capable of producing images, can both reproduce and anticipate kinetic situations. Reasoning is tied to particular situations and objects.

11 to 12 years

Genuine Cooperation: understands and masters the rules, invents and elaborates on the rules.

Formal Operational (11 years and above)

Child becomes more capable of abstract reasoning. Develops the ability to imagine the possibilities inherent in a situation. The child reasons and makes interpretations.

Chart developed by Casey May in Childish Curiosity: Making Connections with the Environment in Exhibit Design.

Relevant Theory
The major downfall and most criticizes elements of Piaget's theory is the fact that Piaget generalizes his developmental stages for all children, and makes no distinction across and states not potential differences between cultural or ethnic lines. Herbert Ginsburg in The Myths of the Deprived Child though defends Piaget's view that these developmental stages are universal. Ginsburg writes:

The cross-cultural studies show that the basics of cognitive functioning, at least as Piaget describes it, are quite similar in a variety of cultures throughout the world. The ages at which children master the Piagetian tasks may not be precisely the same in Geneva as in Hong Kong, but in both cases cognitive development seems to follow the same general course. In view of this, it seems unlikely that the minds of lower-class children within Western societies differ in remarkable ways from those of middle-class children. The available research supports this conjecture. Some studies show no social-class differences in intellect; other studies show minor differences.

The bulk of the evidence suggests that certain aspects of cognition are universal: all children acquire certain basic categories of thought. This is not to deny that there may be individual and social-class differences in other aspects of thought. Surely the content of poor children’s thought must include unique features...So there must be social-class differences in the content of thought, and there may be some social-class differences in the pattern of thought. Bu we must not permit these differences to obscure the basic similarities — the cognitive universals. Taking this perspective we see that much current theory concerning poor children’s intellect is often misleading and incorrect: poor children do not suffer from massive deficiencies of mind (Ginsburg 137-139).

II. Theories of Development and Child Abuse

Consequences of Child Abuse

Many forms of child abuse have been found to directly hinder the developmental process in children. This hindrance translates directly into the developmental processes of the child. Hyper vigilance describes the tendency to watch other’s every movement to the point that concentration is difficult, and can be common in abused children. Fear of failure can also keep a child from achieving to the highest of their ability due to distraction caused by fear. This fear can further keep children from attempting to achieve anything due to the same fear of failure. Passive-aggressive, resistance behaviors, and verbal development delay are all common. Developmental deficits due to abuse can even be as ambiguous as half-hearted, or negative attempts, or refusal to cooperate with authority (Lynch 99).

In a study conducted by Margaret A. Lynch of fifty abused children found three distinct developmental deficits found most frequently:

(a) ‘Impaired ability for enjoyment’ - 33 of the 50 children displayed this characteristic. They could not play freely, nor laugh, nor enjoy themselves in an uninhibited fashion;
(b) ‘Behavioral symptoms’ - 31 of the 50 children had symptoms such as enuresis, temper tantrums and sleep disturbance, which are commonly recognized signs of emotional disturbance;
(c) ‘Low self-esteem’ - 26 of the 50 children showed very low self-esteem. The factors found to be related to the severity and frequency of symptoms in the child were: the number of home changes, parental emotional disturbance, a punitive home, and instability of home.” (Lynch, 100)

Lynch summarizes the needs of abused children in this way:

It is often an abused child’s hostility to adults and peers that singles him out; yet at the same time they lack confidence and are the under-achievers. Some of them are noticeably withdrawn and

Relevant Theory
depressed. We felt that a number of these children desperately needed a good, consistent, trustworthy adult friend outside the home. Considering the interest we found among the children’s teachers, we felt that these professionals could be included more often in the long-term therapeutic plan as they could mistake to have a sigh of relief when an abused child has gone to school. They may be at less risk physically but their overall development will need careful watching. With many abused children there is obviously a need for individual play therapy to continue will after the abuse has been stopped.

Lynch in this statement confirms the needs for therapeutic spaces for abused children. These needs, developmental in nature, can be fulfilled in removing a child from abusive situations primarily, but of equal importance is the need for continued therapy through education, nature, and positive reinforcement. This therapy will aid in the development of those assets that could be lacking in the child.

**Needs of Homeless Children**

In attempting to understand the developmental needs of abandoned and homeless children, one must realize the most fundamental need is to have a safe, secure, and healthy environment, which has been stripped from them or worse, never given to them. In a study conducted by E. Anne Eddowes entitled *Meeting the Developmental and Educational Needs of Homeless Infants and Young Children*, a list of the needs of homeless children is provided:

<table>
<thead>
<tr>
<th>Overall Need</th>
<th>Specific Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Care</td>
<td>Nutrition</td>
</tr>
<tr>
<td></td>
<td>Sleep</td>
</tr>
<tr>
<td></td>
<td>Clean Clothing</td>
</tr>
<tr>
<td></td>
<td>Grooming</td>
</tr>
<tr>
<td></td>
<td>Predictable Schedule</td>
</tr>
<tr>
<td></td>
<td>Safety</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stability/Security</th>
<th>Privacy</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Trust</td>
</tr>
<tr>
<td></td>
<td>Comfort</td>
</tr>
<tr>
<td></td>
<td>Consistent Interactions</td>
</tr>
<tr>
<td></td>
<td>Continuity</td>
</tr>
<tr>
<td>Autonomy/Self-Control</td>
<td>Self-Help Skills</td>
</tr>
<tr>
<td></td>
<td>Choices</td>
</tr>
<tr>
<td></td>
<td>Solving Conflicts</td>
</tr>
<tr>
<td>Social Interactions</td>
<td>Self-Worth</td>
</tr>
<tr>
<td></td>
<td>Friends</td>
</tr>
<tr>
<td></td>
<td>Language</td>
</tr>
<tr>
<td>Competency/Creativity</td>
<td>Practical Skills</td>
</tr>
<tr>
<td></td>
<td>General Knowledge</td>
</tr>
<tr>
<td></td>
<td>Problem Solving</td>
</tr>
<tr>
<td></td>
<td>Creative Skills</td>
</tr>
</tbody>
</table>

(Stronge 25)

Using the components into overall needs can clearly display ways in which landscape design could play a role in developing places in which the needs are met. Two of these needs are clearly pivotal in special design: need for space, and need for stability and security. “Homeless children usually have very little safe space necessary for physical play and motor development.” Further, “In addition to physical space, children also have a need for personal space…private space in which to be alone can help children retreat from excess stimulation, and give them some control over outcomes in their activity” (Stronge 26). Of equal importance is the need for stability and security. “Little security is available in the lives of homeless children, who have few of the advantages afforded

**Relevant Theory**
children living in homes...Consistency, continuity, and predictability contribute to the young child’s sense of well-being” (Stronge 27).

This list shows the needs of nearly every child who enters La Senda Children’s Home in Sumpango, Guatemala. The staff there works diligently to provide for these and other less fundamental needs for their children. Although these needs were being met, there was a tremendous opportunity to use this facility as a site for landscape architectural design, manifest in the form of an educational, therapeutic and recreational environment, to foster and fulfill these needs in a natural environment.

III. Benefits of Educational and Therapeutic Spaces for Children

In the April 1999 edition of Landscape Architecture magazine, Registered nurse/landscape architect Nancy Gerlach-Spriggs writes: “We feel renewed when we spend any time in nature, and in that sense, any garden can revive and rehabilitate us” (134). For children specifically, time in nature offers unique and viable benefits to their cognitive, physical, emotional, and social development. Educator David Orr adds: “Ecological literacy is becoming more difficult, I believe, not because there are fewer books about nature, but because there is less opportunity for the direct experience of it...A sense of place requires more direct contact with the natural aspects of a place, with soils, landscape, and wildlife. This sense is lost as we move down the continuum toward the totalized urban environment where nature exists in tiny, isolated fragments by permission only” (88-89). Thus for those children not directly connected to or without knowledge of the natural environment around them, the proven rehabilitative and therapeutic qualities provided by that environment are lost to that child.

In an attempt to link the development of a child to their needs for natural education and possibly more importantly natural therapy, David Sobel, in his book Beyond Ecophobia: Reclaiming the Heart in Nature Education presents a unique educational approach. Sobel collected and analyzed neighborhoods of varying cultures and the children they contained. Sobel breaks the development of a child into three stages: early childhood, elementary school years, and early adolescents. The distinctive features within these groups grounds his educational recommendations:

- **Early Childhood** – focus on building empathy with nature, particularly animals. Sobel describes the affinity young children have for animals, which can build strong emotional bonds, as well as engage imagination and role-playing.

- **Elementary School Years** – Exploration of the landscape is key. Given this group’s fascination with what lies beyond their familiar range, Sobel describes field studies of streams or watersheds that link the experience of a local place with expanding scales and processes.

- **Early Adolescents** – Social relationships are essential, and can galvanize social action. In this stage leading to adulthood, adolescents need to realize their potentials to interact with and affect their society.

By meeting the environmental needs of children, they learn and develop many social and intellectual assets, which will aid in the assimilation of that child into the greater environment, whether that child suffers from developmental deficits (which most children of La Senda do)

**Relevant Theory**
or shows no sign of deficit. It was these fundamental connections of education to the environment and thus to the therapeutic needs of the child that were most crucial to this study and are essential in the development of a space that attempted to merge all three elements (education, environment, and therapy).

C. Case Studies

In attempting to study built projects that aid in the understanding of therapeutic landscapes for children that are based on education, it was important to focus not simply on small or large, public or private, but to study cases of all size, form and function to best inform design decisions. The studies move from master planning for the benefit of multitudes, a health care facility dedicated to horticultural therapy, and ending with child-based therapeutic gardens, a community-based educational park, and examples of low-cost child centered adventure play spaces. All of these studies were pivotal in the design of a facility and more specifically a garden space that was to be a therapeutic space based on education for abandoned, abused, and neglected children adjusting to a new environment, and was synthesized into the design of a total environment.

I. Howard A. Rusk Institute of Rehabilitation Medicine
(New York, New York)

To best understand the overwhelming quality of this case study, one must first understand the man for which it is named. Howard A. Rusk, much like Frederick Law Olmsted, believed that natural settings promoted a return to health, and that belief was fostered in his rural upbringing. Nancy Gerlach-Spriggs writes that, “Dr. Rusk understood fully the many elements that must work together in any successful course of rehabilitation. He stressed the need to attend to “the whole person,” and this outlook, in turn, led him to build gardens at his hospital.

The gardens were a reflection of his concern to provide restorative environments for his patients, children and adults.” (43)

Howard A. Rusk left his St. Louis practice of internal medicine in 1942 for an assignment to the U.S. Army Air Force hospital at the Jefferson Barracks. Rusk attempted to solve two major problems facing the military. Firstly, he confronted the problem of how to manage injured patients too weak for military drills but too strong for hospital confinement. Secondly, he attempted to respond to the suffering of veterans who have lost limbs or suffered terrible burns through the world of rehabilitation. Rusk writes, “to bring the severely injured man back to mental as well as physical health,” was his main goal. He further thought that it was essential for these patients to be taken out of the environment of military hospitals, and placed in surroundings that would improve their outlook (Gerlach-Spriggs 44).

In December of 1945, Dr. Rusk moved from St. Louis to New York to become director of the NYU Department of Physical Medicine. Here he set up practice curbs and moved in half of an old bus so that physically and emotionally ill people could regain skills essential to city living. In 1951 he opened his brand new Institute of Physical Medicine and Rehabilitation (now called the Howard A. Rusk Institute of Rehabilitation Medicine) in New York City. His emphasis on rehabilitation with nature led to the development of four gardens to promote the well being of his patients, visitors, and staff and to support the physical and occupational therapy programs (Gerlach-Spriggs 47).
Key Design Elements

- Sense of Place
  - Being in the heart of urban development, New York City to some is a harsh, aggressive place, that is dirty, noisy, and overwhelming. It is this fact that makes the gardens of the Howard A. Rusk Institute an oasis of distinct character and increased therapeutic benefit.

- Children's Play Yard

- Enid A. Haupt Glass Garden
  - Intended for patient visits and horticultural therapy

- Enid A. Haupt Perennial Garden
  - Strolling garden for patients, visitors, and staff to allow for rehabilitation in a natural setting

- Alva and Bernard F. Gimbel Garden
  - Strolling garden for patients, visitors, and staff to allow for rehabilitation in a natural setting

The Glass Garden, which opened in 1959, was the first garden built at the Rusk Institute and in fact the garden of the entire New York University Medical Center. A revolutionary concept in its time, the garden was conceived by Enid A. Haupt and Dr. Rusk as a respite, and a place to escape the rigors of the clinical setting. This pivotal piece is open every day and receives more than 100,000 visits per year by people who come to enjoy and learn about plants, to purchase them, or to work with them in their therapy sessions. In fact, results of exit interviews and focus groups consistently show that patients find horticultural therapy to have been a positive experience, and suggestions for improvement are usually requests for more programs or for the gardens to remain open longer hours on the weekends (Gerlach-Spriggs 55-56).

Nancy Chambers, the current director of the Rusk Institute believes we are part of nature and need nature in our lives and these are the values she interprets for the institution. The garden is intended less as a visual experience that as an immersion in an all-encompassing environment. This immersion is played out through the life (plants, birds, fish, people), air, light and shadows, sounds, and a complete sensory experience. Design attention is paid to elements such as contrasting colors, shape, and texture (Gerlach-Spriggs 56).

The “cornerstone” of activity in the Glass Garden is horticultural therapy. During therapy sessions, the greenhouse work provides an opportunity for restorative manual labor and social interaction in the context of nature. To confront and challenge disability in the company of others is viewed as an important part of the healing process. Horticultural therapy also allows patients to reverse the role being cared for and become caregivers of plant life. The ultimate goal is to make therapy seem like a respite, and joy (Gerlach-Spriggs 56).

Adjacent to the Glass Garden, the Enid A. Haupt Perennial Garden adds another dimension to the therapeutic environment of the Rusk Institute. This 4,000-square-foot open-air garden, designed by Bruce Kelly and David Vernel, was conceived as the backyard space for the Glass Garden. Used for recreation, and horticultural therapy, its paths curve throughout the garden, creating a range of spaces from private and contemplative to large and open for group sessions (Gerlach-Spriggs 60).

Although the Rusk Institute is clearly clinical in appearance, the patients of this place are not imprisoned by conventional health care practices, but instead are given rehabilitative opportunities in nature that are given to few

Case Studies
in need of such care. The gardens of the Rusk Institute display, in plant and land form, the theoretical beliefs of Howard A. Rusk himself. They are the belief that true rehabilitation comes not from simple physical treatment, but the treatment of the entire body and spirit.

II. Therapeutic Garden at the Institute for Child and Adolescent Development (Wellesley, Massachusetts)

Designer: Douglas Reed Landscape Architects, Inc.
Cost: $250,000.00

This one-acre children’s therapeutic garden, which received the ASLA President’s Award of Excellence in 1997, is an integral part of a nonprofit organization dedicated to treating traumatized children and training professionals. The Institute for Child and Adolescent Development specializes in the treating of emotional, learning, and behavioral disorders that can develop when children suffer hidden trauma from the witnessing of tragedies such as illness, violence, or death. These children can develop violent behavior. Untreated, these behaviors interfere with learning and the development of body image, leaving a child unable to regulate feelings, or to give positive meanings to experiences (Cooper-Marcus 337).

Designer Douglas Reed states that this garden expresses the fundamental idea that human growth and development is rooted in childhood and engagement with the landscape. By forging connections with plants, rocks, and water, the child gains a deeper sense of self with the surrounding physical and spiritual universe. To better understand this relationship, Reed and clinic director Sebastiano Santostefano visited designed landscapes to develop images of relevant prototypes such as man-made landforms, like Indian mounds and garden mounts, and natural forms like coastal dunes. These forms are all important symbols that evoke feelings of being protected and embraced by the earth, which later became pivotal to the final design (Cooper-Marcus 338).

Key Design Elements
- Narrative Watercourse
- Weaving its way through the site, the watercourse links a sequence of spaces that correspond to stage of a child’s recovery
  - Cave-like ravine
  - Symbolizing safety and security of an embracing form
  - Upland wooded plateau
  - Focusing on exploration
  - Island
  - Symbolizing seclusion
  - Pond
  - Symbolizing discovery
  - Steep and shallow slopes
  - To invite risk
  - Sunny Glade
  - Running and playing
  - Low fieldstone seat wall
  - Retains the terrace and defines the entrance into the adjacent ravine

The watercourse originates on the terrace in a low green-granite basin, spills over the basin’s edges, emerges from stainless-steel pipes, splashes into an eight-inch-wide, steel-sided rill that meanders through the central ravine, and ends in the pond. Vegetation is layered and combined with the landforms to create patterns of ling and shade and a mix of intimate and expansive spaces. The garden is never fully revealed from any one vantage point, which encourages the

Case Studies
child to move through its sequences of space, while the diversity of plants provides for interest throughout the year. Although wheelchair access could be and issue as there is not hard-surfaced accessible route through the garden, the designer states that “there is nothing unsafe in this type of landscape used under such close supervision (Cooper-Marcus 340).”

In an attempt to understand the actual therapeutic value of this garden, the staff has compiled many reported cases of healing, which are interpreted by psychologists, and lend weight to the conviction that the primary experience of nature is fundamental to individual health – and by implication to society and culture – indeed to human life itself (Cooper-Marcus 340). This award winning design is yet another notch to the case of true health benefits in therapeutic gardens for children. The studies conducted by this foundation have proven the symbols created in landform in this garden have provided improvements directly connected to the designer’s intent, thus making it a true champion in the field of therapeutic design.

III. Meadowbrook Pond (Seattle, Washington)
Designer: Peggy Gaynor

Along Thornton Creek in northeast Seattle, the site of Meadowbrook Pond, which was once a defunct sewage treatment plant, is now a flood control and sedimentation pond with the look of a sculpted garden with whimsical features animating the naturalized settings of landforms, pond, and Thornton Creek. The design development process consisted of school and community participation ranging from site visits from John Rogers Elementary School, and the building of a greenhouse by students from Nathan Hale High School. This process lead to the development of spaces such as earth-sculpted spaces, a water pavilion offering the opportunity to touch the water, playful mosaics, and native plants to aid in the educational process.

The design qualities included natural and cultural systems, connections, legible and complex images, varied scales, flexibility, and aesthetic quality.

- **Natural and Cultural Systems**
The site supports wildlife such as herons, eagle, salmon, and river otter in the wetland habitat. Views and sounds within the site also focus on nature using the landforms as a street buffer.

- **Connections**
The site entry is well marked, and upon entering, landforms flank the winding paths and offer a distinctive separation between the site and adjacent busy street.

- **Legible and Complex Image**
The site offers multiple unique and memorable landforms bridges and structures.

- **Varied Scales**
A rich diversity of scales is found including intimate spaces among sculpted landforms, and the broad island-laden pond crossed by a bridge.

- **Flexibility**
The site offers conditions and materials that foster flexibility in its character and use over time.

- **Aesthetic**
Meadowbrook Pond’s blending of natural systems and artistic expressions creates and engaging aesthetic.

**Case Studies**
Most importantly to the educational potential of this space that can be used in the creation of an educational and therapeutic space come from the experiential values of this space. Julie Johnson writes that: "While not designed explicitly for learning, Meadowbrook Pond holds tremendous potential as a learning environment for area schools and community members" (Section 5, 6). The site’s qualities engage multiple intelligences through varied experiences:

- **Sensation**
  The site’s rushing and still water, tufa walls, Sound Mirror, mosaics, structures, landforms and diverse vegetation offer myriad sensory experiences.

- **Choices**
  The site’s variety of spaces and paths offer choices for different forms of sociability and movement. Unlike formal play areas, the site does not prescribe particular activities.

- **Manipulation**
  Experiences in manipulation abound through natural materials. The site’s wetland vegetation serves as a key component for study and experimentation. "Loose parts," such as pebbles and the water itself, provide basic elements for creative play and experimentation.

- **Sense of Place**
  Meadowbrook Pond provides numerous comfortable settings to pause and rest, and has successfully invited use by its neighboring community as well as school children.


Designers: Michell and Partners
Cost: $11,000

The secret of a successful adventure playground is in its continual development; it is never complete, never developed. It is a sort of ‘terrain vague’ that can be many things to many children.

~Jack Lambert (Hurtwood 55)

The following two case studies present a very unique perspective on creating spaces for children. They are pivotal to this case due to their low cost construction and their perspective on creating spaces that are child developed and child used. As Lady Allen of Hurtwood states in her book Planning for Play.

Adventure playgrounds are places where children of all ages can develop their own ideas of play. Most young people, at one time or another, have a deep urge to experiment with earth, fire, water, and timber, to work with real tools without fear of undo criticism or censure. In these playgrounds their love of freedom to take calculated risks is recognized and can be enjoyed under tolerant and sympathetic guidance.

It is to be hoped that now old-fashioned playgrounds of fixed equipment on a sea of asphalt will soon be relics of the past. They are condemned because children quickly tire of the inflexible ironmongery (55).

Adventure playgrounds were inspired with the opening of Emdrup playground in 1943 in Denmark. In that year, famous landscape architect, Professor C. Th. Sorensen became impressed by the fact that children genuinely preferred playing in junk yards and building sites, and developing their own brand of play with the waste objects they found there. This philosophy is directly implemented in Notting Hill Adventure Playground.

**Case Studies**
In a densely populated and underprivileged area on a one-third acre site, children of all ages are brought together to experiment and create.

**Key Design Elements**

- **School-age Playground**
  - Main playground, divided into three sections: adventure area, ball game area, and garden area.
  - Adventure area – the largest of areas intended to provide open play and creative thinking.
  - Ball game area – divided from remainder of playground by a four-foot retaining wall with excavated material from the building piled against it, covered in concrete, and covered with granite sets to create steps.
  - Garden area – most secluded area which allows children to explore, create and nurture.

- **Under-fives Area**
  - Most sheltered part of the playground, with sand-pit, wading pool, and central paved area for wheeled toys; more quiet activity than adventure area.

- **Activity building**
  - Activity room
  - Playroom
  - Offices

- **Roof**
  - Creates differing levels of play to increase experience of play.

- **Fencing**
  - Twelve-foot fence around perimeter to provide seclusion from history of vandalism and dumping.

The simple elegance and revolutionary philosophies of play spaces such as these became the model for the first and best American designer to create low cost adventure oriented spaces for intercity children, M. Paul Friedberg in the 1960s and 1970s. Friedberg is the only designer in the nation to take such bold steps in the revolution of children’s play.

**D. Design Issues, Trends, and New Ideas**

**I. Types of Children’s Healing Gardens and Education**

In a study of design issues and trends, it was important to first discuss the differing typologies of both therapeutic landscapes and educational landscapes. In researching these garden types it was quickly evident that the two disciplines merge into one, and the lines that divide the two became blurred completely.

Clare Cooper-Marcus in her book, *Healing Gardens Therapeutic Benefits and Design Recommendations* (335), gives four basic types of healing gardens for children which has been generated “in large part from work in the field and in particular from case studies.” The four types include:

- **Formal therapeutic garden.** Accent on explicit, defined, garden-based approach to therapy, most likely targeted toward a specific area of therapeutic need, requiring therefore a custom-designed landscape to accommodate particular therapeutic strategies.

**Design Trends**
Informal, strolling garden. Focus on de-stressing, exploration, restoration, medication, prayer, and relaxation (for children, parents, and staff). Accent on providing a diversity of informal settings for walking, privacy, sitting, socializing, and sensory interest (color, texture, fragrance, butterflies fluttering, birdsong). High quality aesthetic surroundings, including special child-landscape features.

Non-formal play and horticultural therapy garden. Accent on active participation by children (and parents) in the gardening process. Emphasis on diversity and freedom of choice by the individual child to act on the garden environment in many ways. This freedom serves to balance the medical environment over which the child has no control.

Community-based, multiuse, multipurpose garden. Accent on diverse “habilitative” program serving several populations, most likely embracing a range of formal, non-formal, and informal programming approaches.

In Natural Learning, Robin Moore and Herb Wong describe three “domains of education” (195-196) that are vital to the design of educational spaces that coincide directly with the first three types of children’s healing gardens defined by Clare Cooper-Marcus:

Formal education. Characterized as the familiar context of a teacher presenting material to children in a class context.

Informal education. Encompasses all learning from a child’s daily experiences, of which play is a central quality.

Non-formal education. Defined as a bridge between these two forms, where resource people may facilitate learning in non-classroom settings, such as natural areas and community facilities.

The obvious link between education and therapeutic spaces and the blurred line the separates them was of great benefit to this study as one of its underlying principles was to determine how to better link education and therapy into a cohesive unit.

II. General Design Principles for Children’s Healing Gardens

Julie M. Johnson, in her study “Design for Learning: Values, Qualities and Processes of Enriching School Landscapes,” defines both experiences and landscape qualities as design considerations in creating educational landscapes that enrich learning, but which could equally be applied to therapeutic landscapes that enrich emotional growth and wellness.

A. Experiences

Rich and Varied Sensations

Learning experiences engage the senses of touch, sounds, smells, tastes, and sight with opportunities to discover changes and variety for each sense.

Children learn through relating space to their own body and movement, engaging large and fine motor skills as well as cognition.

Creative learning and play intensifies the senses through imagination, surprise, or discovery.

Framed views, attention to details, magnifying the minuscule or becoming another life form, can foster a sense of wonder.

Abundant Choices

Varied activities foster the development of different intelligences. These range from active to passive, organized to individual, physical challenge or risk as well as mastered activities that represent security.

Design Trends
Choice in social interaction allows one to be part of, observe, or remain separate from a group. Providing children with choices in social interaction is essential.

Alternatives where children move through, over, under, around spaces and use different forms of moving, such as crawling, walking, running, or cycling, offer developmental challenges as well as enhanced ways of knowing a place.

- Opportunities to Make Changes

Children need to create and change their environment. This process of constructing or deconstructing gives empowering experiences, be it in a garden, pond, fort, or dirt mound.

Opportunities to interact and experiment with objects and materials are essential to enriched learning.

- Personalized Sense of Place

Opportunities to choose from and be in a range of comfortable setting help foster meanings and emotional attachment. Such settings may be ones that mitigate the climate, allow children to explore yet feel safe, and afford choice in where to go and with whom.

Opportunities to be in spaces that one can claim as one’s own, as well as places that can support community traditions, and build personal connections with place.

B. Landscape Qualities

- Natural and cultural systems

Places and objects enable discovery of how natural and cultural elements interact as part of a system.

Earth, water, and vegetation are present in varied expressions, textures, and sizes, to engage senses and imagination.

Daily weather and seasonal natural patterns are revealed through elements such as sundials, vegetation, wetlands or water catchment systems.

Cultural or historic elements are included which related to neighborhood or community places, activities, or events.

- Connections

Plant species and built elements relate to the site’s microclimate, neighborhood, community, and region. Thus, enabling the development of ecological literacy grounded in their immediate setting with tangible and abstract connections to the community and region.

To enable the study of recycling of common materials and more sustainable development approaches.

Connections made to the greater biosphere with elements featuring the air and sky, such as framed views, wind-activated materials or sculpture.

- Varied Scales

Varied scales of paths and places support a range of functional, social, and personal meanings.

Varied topography and structure levels define a range of spaces, and afford choices in movement, sociability, and activity.
Flexibility

Open-ended, flexible, or unfinished spaces provide opportunities for children’s imagination and creativity to flourish.

When elements can be moved, changed, and re-created, children can engage in creative play and discovery.

Aesthetic Quality

For children, beauty is not simply experienced as a visual composition, but as a setting that engages all the senses.

Places are needed for children to create, enact and display their own expressions of art, such as a changeable gallery and/or performance space.

This very detailed set of design considerations displays the latest trends that the leading designers in the field of educational and therapeutic children’s spaces are utilizing in the conceptual process. This 2000 study, conducted by a registered landscape architect, represents the latest and most developed thought in this field and is a necessity as referential material in design of this type and has been included in this study for that specific reason.

On a more basic level, Clare Cooper-Marcus in, Healing Gardens Therapeutic Benefits and Design Recommendations (326-327), states that the general field of children’s environments suggests five basic assumptions about child development, play, and the outdoor environment that can be useful in children’s garden design:

1. Outdoor play. Outdoor play, in and of itself, is a critical factor in healthy child development.

2. Environmental quality. Through design, the quality of the outdoor play environment can critically affect the range and depth of play activity and the attractiveness of the site to children. Environments for children have to be designed in a way that liberates children’s freedom of engagement with their surroundings.

3. Significance of nature to child development through play. Nature can be designed into the environment in a way that children can have intimate contact with the basic elements of life: sunlight, fresh air, soil, water, plants, and animals. Gardening, working, and playing with plants provide constant opportunities for children to participate in the process of life.

4. Indoor-outdoor links. The ease with which children can observe nature from inside and/or move easily from indoors to outside significantly affects the positive impact of the natural environments on their quality of life.

It is the drawing upon both the therapeutic needs and developmental needs in a synthesis that will create a space for children that will foster comfort, confidence, tranquility, and intellectual, physical and emotional development that is vital to the lives of children Without deliberate, and relentless attempts to unify both genres of design (therapeutic design and educational landscape design), a designer would face great difficulty in attempting to create a space that gives children both rewarding educational opportunities and at the same time allows for meaningful emotional and physical therapy. It was the goal of this project, given the information presented in preceding sections to harmoniously blend the two design genres into a legible, beneficial, and lasting design for the children that need it so desperately.

Design Trends
PART III: METHODOLOGY

A. Criteria for Site Selection
La Senda Christian Children’s Home in Sumpango, Guatemala was chosen as the site for this therapeutic master plan due to its need of outdoor environments that will reflect the rehabilitative, educational, and social mission of the home to provide as safe and nurturing family environment for abandoned and abused children in Guatemala. Further, the site, like user group, is diverse in both culture and experience, and allows for the environment to become a place of reconciliation and growth as a community and family for the children. The directors of La Senda have been very helpful and have shown a high level of excitement about this project throughout the design process, and although worlds away in both culture and geography from the United States, Steve and Pam English have been open to client-designer interaction.

More fundamentally, this site was chosen for two reasons. Firstly, the scale of the site allows for a diverse and comprehensive experience that can aid in the growth and development of the children. And secondly, the facility itself, unlike most facilities of its type in Latin America, has the ultimate goal of creating a loving family environment while facilitating both educational and emotional development, and Christian live in which the designed spaces can foster and express these goals to the children user group.

B. Description of Site and Context
La Senda Children’s Home is located in central Guatemala (see Fig. 1) approximately one half of a mile south of the city of Sumpango, Guatemala, approximately fifteen miles northeast of Chimaltenango, and approximately thirty-five miles northwest of Guatemala City (see Fig. 2). The site is located on the Pan American Highway on a plateau overlooking the mountainous landscape of Guatemala, and is surrounded primarily by privately owned agricultural fields, and animal farms housed on steep slopes on virtually all sides (see Fig. 3). The property itself occupies five acres, and is contained on all sides by a concrete wall varying in height from four to eight feet, with a metal gate at the entrance to the Pan American Highway.

A sizable elevation change of approximately thirty percent occurs to the south of the site in which the water well is located at the lowest point. At the top of that slope, adjacent to the entrance drive is located the storage shed, and classroom building in which the children are provided with daily supplements to the education they receive outside of the home. The main living structure is located on the highest elevation to take advantage of the views of the surrounding mountains, and is fronted by a large open turf area used for physical activity, which the directors of the facility find very important to maintain in some respect. The extent of the site that was able to be utilized for the purposes of this master planning process was considered all that is located within the walled property, and all that is without the walls was treated solely as potential view sheds and focal points.

Site Selection
Existing Conditions
Existing Conditions
Total Shadow Coverage  The coverage of shadows through the site begins to illustrate the discrepancy between the natural landscape surrounding La Senda and the built landscape within. The large area on the Southern portion of the site has been scarred by construction and continual erosion as made the terrain on this portion of the site virtually non-usable.

Figure/Ground_Site Vegetation  There is presently a lack of continuity between plant material on and off of La Senda site. This situation places increased emphasis on the emotions of living within the confines of a walled environment while providing an area of substantial buffer could eliminate this discrepancy and provide a feeling of connection to the greater environment for users. Further, large amounts of open, under utilized space are present on site of La Senda in areas of severe topography.

Severe Slope_Site Drainage  Over 50% of the site contain slopes of 10% or greater with exposed and eroding soil. In its present condition a majority of the site is not suitable for unsupervised use and thus reduces the total available land area from six acres to one single acre for a facility that will house fifty children. The main facility of La Senda has been placed on a ridge zone that allows drainage away from the building and to take advantage of picturesque views.

Zones of Activity  La Senda contains three distinct use types. Unfortunately, a majority of the site is under utilized due to the severe topography and unsafe conditions. A vast majority of use takes place in the direct zone of interaction between the classroom buildings and the main facility, and this main use zone will need to be maintained by any future development as the primary activity node.
Severe Slope_Site Drainage
Site Contains areas of severe topography that limit uses and makes use by children dangerous

- Site Development should take advantage of these natural features while making them safe for users

Fully walled site creates potentially overbearing environment

- Site design should allow users to freely view beyond the walls of La Senda into the surrounding culturally rich landscape

Children of La Senda have many varying negative experiences and developmental deficits that must be treated with care and compassion

- Site should provide spaces for children of all social and developmental levels to foster growth and interaction

Educational system of Guatemala does not provide quality development and thus supplemental education is provided for the children daily

- Landscape of La Senda should be a place in which education is fostered and enriched

La Senda Children’s Home has the potential to shape the lives of many abandoned, abused, and neglected children like no other influence in their lives

Opportunities and Constraints
• Allow the children users of the site to connect to the natural environment
  ➢ Natural spaces in which the processes of the environment and natural elements become real and tangible to the children user group

• Create multiple references to the context of the site to connect the cultural surrounding to life within the walls of La Senda
  ➢ An overall plan that symbolizes the cultural context of the patchwork agriculture and the many experiences which are brought to La Senda by the children

• Present a multitude of spaces which address all five fundamental senses, as well as addressing physical, social, and intellectual development to increase and maintain interest over extended periods of time
  ➢ Site should provide progression of spaces that challenge and reward achievement

• Provide spaces that illustrate the spiritual journey of Christianity culminating with baptism and teaching to develop in Christian faith
  ➢ Display this pattern as the continuous link of the varied “patches” of experiences and backgrounds to symbolize the never ending presence of God in the life of the Children
The primary goal of each programmatic element is to enhance traditional learning and Christian teaching through unique outdoor spaces promoting discovery education and environmental connectivity which working together create a complete therapeutic environment.

In an attempt to better engage the programming of the site, the children users were placed into three distinct age groups to facilitate the developmental needs of the client. Further, an intellectual, environmental, and spiritual developmental goal was set for each age group to focus the programmatic process.

Programmatic Basis
Age Groups A – C  

**Comprehension**

> Comprehension of objects, space, and time

> Empathy with nature, role play, imagination

> Comprehension of loving, compassionate, sharing lifestyle as an expression of God’s love

Age Groups B – C  

**Emotion**

> Language, Communication

> Emotional bond to environmental elements

> Establishment of values and actions conforming to a Christian lifestyle

Age Group C  

**Understanding**

> Reasoning, Cooperation, Imagination, Abstract thinking

> Exploration of Landscape, Understanding of what is beyond range, realization of ability to affect environment

> Reflection into the truth of Jesus as Savior, and practice of the lifestyle commitment which that truth requires

Age Group Division:  
A. (0-3 years)  
B. (3-9 years)  
C. (9+ years)

Developmental Goals of Design
Age Groups A – C
Natural Habitat/Study Trains
Art/Activity Space
Sand Play
Water Play
Open Lawn Play
Music/Sound Play

Age Groups B – C
Food Production/Cultivation
Performance Space
Outdoor Classroom/Organized Activity Space
Contemplative/Personal Space

Age Group C
Adventure Play
Group Therapy/Team Building
Nature Discovery/Exploration
Baptismal/Christian Teaching and Growth

Age Group Division:  A. (0-3 years)  B. (3-9 years)  C. (9+ years)

Programmatic Elements
The programming of the site can be seen as a segmentation of three groups as shown in figure 15, but the reality of the programmatic, and later the site concept is to create an experiential progression that builds in complexity as the child develops creating an ever changing and always challenging environment. The experiences provided for the oldest children is simply the blossoming of ideas and opportunities provided for the youngest children.

The programmatic progression provides a basis for spatial progression. The spatial requirements for the given age groups when applied to the existing site conditions provide three distinct zones. The site design nearest to the main facility structure provides a microcosm of the activities provided as age and ability increase. The space allows the user to experience the fundamental building blocks of development in the outdoor setting. As age and development progress, an area of greater physical challenge and greater land area is provided for educational exploration. Finally, in the area of greatest physical challenge, the most developed users are afforded the opportunity to explore the land of largest area. As can be seen in figure 17 the site does attempt to allow the user of youngest age and ability to become a participant in at least some part of the more advanced portions of the site creating a desire for advancement and development through the mimicking of older more developed users.
Age Groups A-C
Age Groups B-C
Age Group C

Age Group Division:  A. (0-3 years)  B. (3-9 years)  C. (9+ years)
element that is key to the productivity of Guatemalan ecology and economy. A water system, beginning with a habitat retention zone near the main structure, continuing through the second development zone and down into the most natural setting, and ending in a series of detention basins that will function to recharge the well that provides water for the facility. This well water is then transported to a holding tank that is located adjacent to the origin of the site’s water system. This water system will provide an ecological connection to the greater environment as during the rain season, from October to March, when the landscape is lush, the water system will be flowing. Conversely, during the dry season, the water channels on site and greater water system will be dry, thus creating amphitheaters of education lessons in what was water detention basins. This provides a strong educational tool and allows for connection to the greater Guatemalan environment providing a symbolic opportunity for the children of La Senda to move beyond the walls inside which they live. Further connecting to the greater environment the plant material within the walls of La Senda has become more consistent with the plant material outside the walls. This feature allows feelings of greater freedom and connection to the larger picturesque landscape of Guatemala.

**Edutheraplay Master Plan**

The Edutheraplay environment allows the greatest opportunity for direct interaction between the main facility and classroom buildings. As such, multiple spaces focusing on development and education are central to this space. As the most easily monitors and supervised portion of the site, this zone provides the greatest opportunities for educational and social interaction and development. The open lawn areas, enhanced from the existing conditions, provide opportunity for physical development that was essential to the goals of the client due to the relative remoteness of the site to quality open play environments. The feeling of increased open play space was enhanced by the removal of the extremely linear, and minimally used utility road with a more organic form which interplays with the other activity spaces and

**La Senda Master Plan**
through a paving material that allows for turf growth, becomes a part of the open lawn zone. The zone immediately outside of the classroom buildings also becomes more safe with the addition of a plaza for outdoor lessons, and the movement of the service road away from the buildings.

**Edutherapy Detail Plan**

The Edutherapy environment provides children of all ages and ability levels to experience the therapy of educational, physical and emotional development in an environment that provides spaces for personal contemplation and group interaction. Beginning with a spiral mound that contains an ever-expanding mosaic in which the children of the home are provided a tile to expand the mosaic and symbolically become part of this always growing environment. Descending the mound leads to a tunnel of five willows and a secret tunnel to the most secluded and private space of this environment. Although secluded, this space can be easily supervised from the second floor terrace of the main structure providing safety and seclusion simultaneously. Moving through the tunnel leads to an art space in which large pillars function as vertical chalk boards, and changing elevation and color landings provide further outdoor art potential. This environment also provides an opportunity for outdoor lessons as the landings can become amphitheater seats. Moving through the art space to the performing arts and music environment exposes seating and a stage environment for impromptu and organized performances and lessons. This space also provides a symbolic bridge between the more structured portion of the environment and the increasingly naturalistic water play and habitat space. Also providing this symbolic bridge is a small food production and cultivation space where the children can develop the understanding of connection between cultivated plant material and native and natural plant material. This space allows children who are so much in need of care, to reverse the role and become care givers providing an opportunity to take pride in work through cultivated plant material. This space leads to a small habitat zone in which young children are

**La Senda Master Plan**
provided the chance to connect to the natural environment through guided activities. This connection to the environment will become key to the experience of the other portions of the site. The final space in this environment, which is most fundamental is the water play space which at times will function as a baptismal and Christian teaching space. This naturalistic space becomes the pinnacle of the symbolic journey of this environment and becomes the basis of growth exhibited in the other zones of the site. It is in this intimate zone that the foundations of spiritual, emotional, and intellectual development are established for the children of La Senda.

**Transition Growth Master Plan**

The naturalistic zone that encompasses the land between the existing entry drive infrastructure is designed as the recreational and educational link between the Edtheraplay Center adjacent to the main facility and the individualized discovery therapy zone. This transitional zone provides a plaza space in which outdoor lessons can be taught. The design of this plaza, with serpentine arbor, and elevation change provides a natural space for a shift of focus from organized activity to individualized learning. Originating in this plaza is the water system that links this zone to the discovery zone to the south. The organization and materials of this space provide the opportunity for all ages and abilities to understand the seasonal patterns of the country through the either flowing water or dry stream channel. This zone also provides a short nature trail loop for a slightly more intense nature study than is offered in the Edtheraplay Center. Within this zone, children are allowed to observe and study, through more individualized observation, a separate palette of plant material and wildlife. As the Edtheraplay Center focuses on attracting very passive wildlife such as butterflies, this zone attracts wildlife such as birds. The closed loop system trail allows supervisors to give increased freedom of discovery to the children with the insurance of safety.

La Senda Master Plan
Discovery Therapy Master Plan

The most secluded and most difficult zone to traverse, the Discovery Therapy zone allows the older children multiple opportunities to grow and develop through personal discovery and imaginative productivity. In the northwest of this zone is located the storage and utility structure. Adjacent to this facility is located a space in which children are allowed not only to play in a creative manor, but are in fact allowed to use that creativity to produce the play equipment. This type of activity zone, entitled adventure play in the early 1970s, allows for children, under proper supervision, to use creativity and cooperation to develop a space uniquely their own. Associated to this space, but with less intensity, and accessed through a handicapped accessible ramp is an area of group therapy in which children are provided an opportunity for social therapy and growth through supervised activities requiring teamwork for completion. Located between these zones is a community amphitheater that provides a link to this discovery therapy zone to the Edutheraplay Center through the transition plaza. Moving deeper into the Discovery Therapy zone the children are immersed in a natural setting that provides an opportunity to connect to the ecology of the native environment. Further, the use of plant material to allow for a buffer that reduces the presence of the wall structure around the perimeter of the site offers the children the opportunity to feel a sense of freedom from the enclosed environment of La Senda. A series of trail loops, small amphitheaters, and secluded lawn zones provides multiple opportunities for educational lessons or personal reflection. This zone, being most separated from the main facility and hosting the most difficult terrain to traverse, limits access to the oldest, and most developed children and thus provides incentive for younger children to develop and strive toward. Also, this separation from the main facility affords the potential to extend use of the La Senda’s site to the greater community for both Christian and secular teaching and education services, while allowing confident safety for the directors through this separation of activity and from the children if needed.

La Senda Master Plan
Comfortable separation of activity
Cultural connection through nature
Microcosm/Macrocosm
Therapy through education/exploration

Design for Therapy
Age Groups a–e

Age Group Division:  A. (0-3 years)  B. (3-9 years)  C. (9+ years)

Edutheraplay Center
EdutheraPlay Center
Transition

Age Groups b-c

Age Group Division: A. (0-3 years)  B. (3-9 years)  C. (9+ years)

Transition to Growth
Age Group Division:  A. (0-3 years)  B. (3-9 years)  C. (9+ years)

Therapy of Discovery
EdutheraPlay Center

The EdutheraPlay Center, as seen in this aerial perspective of the design model, is a series of spaces that function as a unit of diverse activity nodes that better link the main facility to the classroom buildings. Moreover, the topographic discrepancy between the two building elements is treated much more softly than in the facility’s existing state. Through turf ramps, and stone terraces which can be used as seating for educational lessons, or Christian teaching in conjunction with the baptismal/water play zone, the children are given a safer environment in which to be active. This topographic change with the main facility and lawn area being elevated from a majority of the activity of the EdutheraPlay Center allows for increased freedom to the children to discover the environment while maintaining an easily monitorial series of space. This view also shows the spatial relationship of three key elements: the spiral mound, the transitional plaza, and the community amphitheater. As stated earlier, it is the intent of the design to provide a desire within the children to advance intellectually, physically, and emotionally to be awarded access to other portions of the site. Allowing views into these progressional spaces is intended to create this desire within the children.

EdutheraPlay Center

Laying a rendered vignette over this model image illustrates the vibrant colors and use of material that brings the EdutheraPlay Center to life. The art space, being the most vibrant and central space within the center, becomes an important hub of activity and potential outdoor lesson space above and beyond the performance amphitheater space. This view further illustrates the relationship of the plant cultivation zone and the habitat zone as a link to the importance of plant material in both a natural and refined forms.

Detail Design Elements
Transition Plaza

The transitional growth plaza is shown in its distinct relationship to the community amphitheater in both materials and form. This plaza, offering two zones, acts as a pivot point between the Eduthera Play Center and the community amphitheater and discovery therapy zone. In the upper plaza portion, oriented toward the Eduthera Play Center and main facility, the water system originates that becomes a defining element throughout the site. This section of the plaza is utilized as a gathering space for not only the children of La Senda, but any work teams who visit, and also the entire family unit may use this space for outdoor lessons, or outdoor meals (using the water channel as a fire pit for food preparation in times when water is not flowing through the site). Following the serpentine trellis around to the lower section of the plaza, which is two feet in elevation lower than the upper section and is reached via a stone staircase, one enters a zone oriented toward the discovery therapy environment thus completing the symbolic transition to a more advanced state of development. Within this zone, the water system becomes a more advanced educational tool with the use of water tables that allow children to understand the effects of gravity on water flow and movement. These tables also provide bench seating for lessons that may take in this space. To better connect to the closed nature trail that accents this plaza, natural materials such as stone and wood are utilized.

Community Amphitheater

Again showing the relationship between the transitional plaza and the discovery therapy zone, this view shows the community amphitheater as the gateway to the final and most physically challenging space. With natural building materials such as stone and wood and site planning that allows the amphitheater to feel like it has been built into the site rather than being placed upon the land.

Detail Design Elements
Community Amphitheater

This rendering displays the semi-enclosed and stepped nature of the amphitheater. The semi-enclosed arbor system provides an opportunity to utilize the space in any weather condition. Adjacent to the two semi-enclosed plaza spaces, with a feel much like the transitional plaza, is a series of terraced lawn spaces creating multiple opportunities for lessons and teaching. Central to this teaching opportunity is the baptismal pool at the bottom of the plaza. The origin of this pool is a series of waterfalls originating from the plaza better connecting the hardscaped plaza to the naturalistic lower level.

Community Amphitheater

In this elevation view of the community amphitheater, the terraced feel becomes even more evident. Through not only the dual stepped plaza spaces but also through the stair cases and terraced lawns, this space becomes truly the gateway into a personal discovery environment. Beyond the symbolic gateway this amphitheater provides, there are two other relevant symbols afforded in this space. As the pinnacle of the Edutheraplay Center was baptism, this more community and adult oriented environment utilizes baptism as the beginning of the spiritual journey. The baptismal pool, when coupled with the two stepped plaza spaces, represents both the spiritual assertion of baptism and also the Christian trinity. Finally, the pitched trellis system, open central roof element, and circular design of the plazas symbolically represents the architecture of the native Mayans. It is with all of these elements that allows this space to potentially be the most educational and thus therapeutic space within the entire La Senda site.

Detail Design Elements
Transition to Growth
Therapy of Discovery
Therapy of Discovery
Connect
Context
Development
Spiritual journey
La Senda Master Plan

Through a naturalistic environment that provides increased continuity between the plant material of the surrounding context and that within the site, and multiple environmental education possibilities from water systems to cultivation of plant material this master plan allows the children of La Senda to connect to the greater environment and further connect to the Guatemalan context in spite of the wall that surrounds the site. Further, with outdoor spaces that provide educational opportunities, and thus foster social, emotional, and environmental growth and therapy, in a series of progressively more challenging spaces, La Senda is now a place in which development can occur not only inside its structures, but at any place within its walls. All of these design goals, like all other services provided at this site, are intended to do nothing more than show the love of God, and His Son Jesus Christ to the children at La Senda. It was the primary goal of this design to portray this intent throughout the landscape. Through multiple amphitheater and gathering spaces, references to Christianity, and loving and challenging environments; the journey of spirituality, and the truth of Christianity is displayed for the children in the desire of the clients. The hope in the hearts of the people who work so hard to create a loving environment for Guatemalan children in need now surrounds those children in a therapeutic and educational environment.

Whoever receives one of these little children in My name receives Me

Mark 9:35

La Senda Master Plan
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