2002

The Pedagogics of Play

Jay McClure
Savannah College of Art and Design

The Pedagogics of Play

Jay McClure
Savannah College of Art & Design

Play's Genesis:

> "... Man is made God's plaything, and that is the best part of him. Therefore every man and woman should live life accordingly, and play the noblest games...what, then is the right way of living? Life must be lived as play..."
> Plato, laws

> "Behind the wall, the god's play; they play with numbers, of which the universe is made up".
> Le Corbusier

In the beginning play understands the unseen and the seen. Play at first is without form and void, nothing, then the prompting of ideas activates play. Play creates stories; it gives us a sense of place, belonging, and an order to this world. Play gives shape to a place and time, moments in a continuation, gathers and scatters, breaks down builds up, tears and sews, embraces and shuns embracing. Play creates visions, a world of pragmatism or fantasy. Play helps define the "Entelechy" (an Aristotelian word which means the inner nature of something which determines its development), a kind as it were, allowing the image to flourish after a particular likeness, only limited to ones ability, trust and practice of this notion we call play. Play helps us enter a state of autonomous freedom, which allows creativity of the child within to search, discover and share. Play develops a constructive intuition in the unconscious (Carl Jung's definition of the unconscious) and guides our understanding of the true fundamentals of thinking, perception and emotions.

Play teaches man the humility of knowing the deep mysteries of existence, for it listens to questions and pre-suppositions as: By the breath of God frost is given: and the breadth of the waters is straitened. Play helps us see our ignorance, the limits we have in our wisdom. Do we argue with our creator? Where were we when the foundation of the earth was laid? Tell me if we know so much, do we know how its dimensions were determined and who did the surveying? Who defined the boundaries of the sea as it burst from the womb? Have we commanded the morning to appear and caused the dawn to rise in the east? Do we know where the gates of

Death are located? Where does the light come from, and where does the darkness go? Does the rain have a father? Where does dew come from? Who is the mother of the ice? Who gives birth to the frost from the heavens? Can we hold back the movements of the stars? Are we able to restrain the Pleiades or Orion? Can we ensure the proper sequence of the seasons or guide the constellation of the Bear with her cubs across the heavens? Do we know the laws of the universe and how God rules the earth? Who gives intuition and instinct? Have we given the horse its strength or clothed its neck with a flowing mane? When it charges to war, it is unafraid. It does not run from the sword. The arrows rattle against it, and the spear and javelin flash. Are we the ones who makes the hawk soar and spread its wings to the south? What do we know of the command an eagle rises to? The mighty hippopotamus? The tremendous strength in the crocodile's limbs who can penetrate its double layer of armor? Are we God's critic? Do we have the answers? Play has a conversation within us; there are things far too wonderful to understand. Listen to me, I stand at the door of your heart knocking, let me enter in and dine with you. You are a vessel of clay, returning to the dust, your life is but a vapor. Play will guide you into the desires of your heart. Whatever you do, do well, for when you go to the grave, there will be no more work, dreaming, planning, knowledge or wisdom. So search in play as if it were hidden treasure. Wisdom is more precious than rubies; nothing you desire can compare with her. Let play walk you under the tree of life and introduce you to wisdom, embrace her, happy are those who hold her tightly.

Play asks a rudimentary question, Can you write? Imagine? Build a story? A story that excites the imagination moves the soul, one that speaks to the mysterious fears, hopes and dreams of human nature, which awakens thrilling emotions? It was a wet, ungenial summer, an incessant rain often confined the child within me, and I found myself in arms of the pale ghost of memories past, deserted from my practical mind. This miserable doom bestowed a kiss of death on my faded childhood, just when I reached the heavens of promise. I knelt before this goliath, shadowy form, clothed like the ghost of Hamlet, in complete armour; the silence of midnight was upon me. I advance slowly under the moon's fitful beam into the murky domain of play. Who am I? I ask the gatekeeper in the castle of play. His shape lost beneath the shadow of "I am", pondering this "I think therefore I am". Youth cradled my bosom, the chamber of my heart opened to me, bending her face toward my forehead; I withered like a flower on a stalk... Let play take you on journeys of the unknown to explore new depths inside your imagination. Play has a beginning; this beginning is linked to experiences that have gone before. The Hindus give the world an elephant to support it, but they make the elephant stand upon a tortoise. Invention, it must be humbly admitted, does not consist in creating out of void, but out of randomness and order; the materials must, afford

the essence that an idea cannot bring into being the substance itself. In all matters of play, discovery and invention are contained in the imagination. One is continually reminded of this notion in the story of Moby Dick. Invention in play consists in the capacity of seizing on the capabilities of a story, and tailoring ideas that make suggestions back towards the idea. What I like to hear from the students is "I found it!" the haunting on my midnight pillow no longer is wet with anguish but tears of joy. The author said, "today I have really labored I have written a sentence". Finally a story is fashioned, play's tapestry weaves its beauty, beginning with thoughts, developing into words and images, a culture changes, a new order emerges, a new ism, unique brush strokes found. Mary Shelley wrote; "And now, once again, I bid my hideous progeny go forth and prosper."

> To see a World in a Grain of Sand
> And a Heaven in a Wild Flower
> Hold Infinity in the palm of your hand
> And Eternity in an hour.
> William Blake, "Auguries of Innocence"

Play's Language:

Imagination, freedom, seeking, curiosity, creativity, paradigm shifts, observation, perception, pattern recognition, alternatives, manipulation, challenge, discover, choice, classifications, experimentation, faith in individuality, problem solving, randomness, ambiguity, combinations, expression, innovation, joy, risk-taking, reason, exploration, invention, delight, wonder, unique, question, new, intuitive, and make-believe.

Play's Framework:

> " Definition of play. It is an activity, which proceeds within certain limits of time and space, in a visible order, according to rules freely accepted, and outside the sphere of necessity or material utility. The play-mood is one of rapture and enthusiasm, and is sacred or festive in accordance with the occasion. A feeling of exaltation and tension accompanies the action".
> Johna Huizinga, Homo Ludens

How to begin? Play should be introduced in the connection of this arduous task for finding meaning, wrestling with form, aesthetics, continually questioning heart and re-examining natures plethora of beauty.

Agree on terminology and a framework for discussion within each design problem. Recognize the student's needs to bring their empirical and rational beginnings to the table. Recognize these experiences judgments and values all differ from culture, demographics, time, and within each unique individual. A major difficulty in beginning design is asking the right questions for students to ponder, exposing them to various terms, unveiling design precedents, defining the nature of a concept (meaning in the idea) and a methodology to search this out. We ask students to examine concepts of architecture when possibly they do not even know what constitutes conceptual thought. A method of inquiry into bringing the unknown to the known is this idea of play. Another dilemma for understanding architecture is to provide a carefully chosen framework of terminology, which constitutes an architectural language.

First: Agree on terminology to be used to have intellectual discussions (language/meaning)

Second: Establish a framework of questions and facts (design precedents/culture/history)

Third: Discuss uniqueness within each student (philosophy/psychology/faith in individual))

Fourth: Understand basic structural components and its beauty in making (nature/science/art)

Fifth: Introduce the joy of searching through the notion of play (methodology/making)

Teachers should emphasize the importance of play to a student's development, noting their individual talents they need to explore, tryout, take apart and investigate which is fundamental to learning. Design fundamental programs should develop pedagogies that guide student's play into progressive learning experiences in the essentials of form, mathematics, geometry, and creativity.

Encourage play as a means for making; various systems of building blocks can be introduced. Block systems are specifically designed to develop three general capabilities:

1. An ability to represent objects
2. Understanding of mathematics
3. Awareness of design symmetry, balance and proportion

It is imperative in teaching a theory of play in architecture that you look at the causes of things. Towards this ontological search I have developed a tool called "Blocks." Before making the blocks, we make a series of grids or fields. These fields are used to locate each element in space, unify the structure, "fit," order all the spaces and parts to the whole, unity of proportion, and an indissoluble part of the site. We make the blocks based on various commensurable ratios, dissonances and other attributes of harmonic, arithmetic and geometric principles. Students should craft the blocks out of various species of wood such as Tyrol maple, bubinga, Indian ebony, Honduras rosewood, pear wood, and koa; all are used to make fine wooden musical instruments. Teachers can make relationships between music and architecture by allowing students to play wooden recorders and see how the blocks have voices. Some exercises are: forms of beauty, forms of measure, forms of movement, forms of memory, forms of nature, forms of order, forms of wonder, forms of representation, forms of puzzles, forms of silence, forms of music-dissonance-harmony-melody, forms of function, forms of value, forms of geometry and forms of arithmetic. Other materials besides wood can be introduced yet easily manipulated.

In addition, use of blocks involves physical skills, care in manipulation, craft in making, manipulation of alternatives, exploration, curiosity, resourcefulness, thinking skills, (synthesis and analysis) by comparing and contrasting, categorizing and imagining.

All play objects should be simple in construction, easy to manipulate, such there is not too much frustration. Make the objects durable for strenuous handling. Exercises should begin by exposing students to solid shapes and geometric forms in increasing complexity (the sphere and circle, the cube and square, the cylinder, cone, the rectangle, triangular prism, and triangle). We know the basic Gestalt of all forms come from four lines the vertical, horizontal, angular, and curvilinear. Within this beautiful paradigm expose the students to the wonder of developing an understanding ("to see") of form, space, and relationships of parts to the whole. In these exercises, develop a language and various questioning techniques. First describe what the nature of a question is, its importance and application. What does it mean to make or build space? Understanding historical connections in defining architecture is nothing new but the beginning student should develop or the teacher should nurture this search, discovery, and sharing of making architecture. Understanding these rudiments of architecture are a life-long quest, painstaking joy, complexity never complete but this is exactly what makes architectural questioning a quiet, joyful, patient search?

Play teaches students in the beginning answers are not as important as asking the right questions. As they build their knowledge base, students will be able to differentiate areas they agree with and those of non-agreement. Hopefully a good pedagogy will challenge the students awareness, preconceptions and values they have learned about design.

Play's Directions:

1. Perception in play can be found through the use of measure (number) form and shapes nature's order, plutonic solids and Cézannes' "constructions after nature." As he utilized what he termed "passage", the blurring of boundaries between the typically simple, angular planes of the foreground and background. And finally language (writing) is fundamental to learning the necessity of play.

2. Students need to totally occupy him or herself in a plastic fashion, and find exercises that develop these senses.

3. Students need to create within their own "Sitz im Leben" (seat in life). One can translate into many possibilities such as: a situational experience in a given context, immediacy of the moment (present yourself warts and all), world views are basic to plays understanding philosophical points of reference (a priori and a posteriori) which try to understand truth of the individual through empiricism, rationalism and revelation.

4. Students need to know (the epistemological necessity, the epistemological problem and the epistemological answer) find exercises that stimulate curiosity, observation, and experimentation.

5. Students need to grow and cultivate beginning design language and build frameworks to discuss these ideas.

6. Students need to develop socially, group, play act, overcome inhibitions, verbal reviews, to understand the morality and ethics of plays trust and love that are first formed between a mother and child. All human activity must be self-generated therefore the traditional educational methods of rote memorization and mechanical drill are psychologically unsound within the true nature of play.

7. "Entelechy" (an Aristotelian word), which means the inner nature of something that determines its development, meaning, cause, and effect. This definition should be at the heart of the students search within play.

8. Students need to find unity in the sequencing of problems (the golden thread) and their inner connections should progress from simple to complex.

9. Self-activity (free activity, self-occupation, or self-employment) is the spontaneous impulse of the student to explore, motivate him or herself simply by intellectual curiosity.

10. Students need an impulse to action, wherein knowledge originates from the passion within, and expression or self-expression (self-portrait) instead of recitation?

11. Students need to liberate their creative forces and understand the artistic talent within.

12. Students need to allow their own experiences and perceptions in creating genuine and authentic work.

Object teaching is crucial to the pedagogy of play. One must recognize the handling of material things will aid students in their creative development and provide varied and complex experiences through which I call "clever simplicity". By examining real objects or things students will develop originality in thinking and problem solving skills because the object is tangible to tactile and visual sensor inputs. With the use of real objects such as blocks it is easier for the student to comprehend basic concepts of balance, rhythm, and tension as they can easily manipulate the shapes through plays inexhaustible exploration "to see" desired results. Kindergartener's object teaching can be traced back via Pestalozzi's (Anschauung) and Rousseau's ideal of a bookless education, to Kant's quest for knowledge of "The thing in itself" and finally to Friedrich Froebels pedagogical writings in (The Education of Man) and (Pedagogics of the kindergarten) where he developed his methodology of gifts and occupations.

Play's Activities:

> To start out by "playing" develops courage, leads in a natural manner to an inventive way of building and furthers the ... facility of discovery." "Learning...through experimentation takes more time, entails detours and wrong direction. Walking begins with crawling, and speaking with baby talk."
> Josef Albers

1. Topological Play - Building types: school, church - Object types: chair, car

2. Mathematical Play - Ratios, commensurability, geometries, (addition, subtraction, division and multiplication)

3. Beautiful Play - Symmetry, balance, center, rhythm, repetition, picture form, flower form, star form, order, parts to a whole

Within these three activities you can use two components of play

Guided Play	vs.	Free Play
Direction		Imagine
Reading stimulus		Intuitive

Play experiences within various activities are as following;

Possibility finding,
Characteristics of solids
Compare and contrast
Explore- see and touch, texture, form, scale material and number
Examine the issues
Imagining the what If's
Describe, write, and verbalize ideas
Abstract themes
3D/2D comparison
Constructive links between component parts
Consistency in combinations of various elements
Meaning in combinations
Logical progressions
Resourcefulness and inventiveness
Combinations
Connections-ways to touch, constructiveness
Knocking down a creation is half the fun. Don't get too attached with ideas
Ideas are endless; they are of little value until developed.
Change and rearrange
Differentiate (different ways)
Classify findings
Ask, seek, and knock
Additive, subtractive, multiply and divide concepts, structures
Symmetrical vs. asymmetrical

Geometric Shapes to work within plays activities:

Solid	Plane
Sphere	Circle
Cube	Square
Cylinder	Circle/square
Triangular prism	Triangle
Rectangular prism	Rectangle

There is always more to learn, to imagine, and to understand! You will never complete play, but you have to finish play (deadline). Guide the student; give direction and stimulus, not to do for the student. Let students ask questions if they need assistance in starting, then give at least three options or suggestions and let them choose the direction. Play is the students natural medium of self-expression and an opportunity given to "play out" feelings. Play gives the student the permission to be oneself; it accepts the self-completely, without evaluation or pressure to change. It recognizes and clarifies emotionalized attitudes by reflecting on what was expressed. Play offers an assumption that the student has within, an ability to solve problems satisfactorily. Growth will happen with the student when he or she recognizes play as a vehicle to engage ones experiences, readings, attitudes, thoughts, and feelings that bring an awareness ("to see") or insight, which is a prerequisite for successful design. Play brings the student to a profound awareness of feelings that can come to the surface, gets them out in the open, to face them, learn to control fears, tension, frustration, insecurity, bewilderment, confusion as well as confidence, joy, and security. A studio that fosters an environment of care and concern not apathy and intimidation is a good garden of growth. In the security of the place (play room) students feel important, significant, belonging, and personal. Let them feel in command of the situation (uninhibited), a private world to unfold the wings. A place to look directly at oneself, play offer's the student to accept, express, not judge, test and feel free to find solutions to a problem, similar to the notion of brainstorming by defering judgment. No wonder the students contact with the first design problem, and environment expresses bewilderment. What is this? Suspicion, doubt and confusion set in. We grow up in an environment that asks the student to regurgitate answers (approval finding) parents, church, and school, a culture of control determines, directs and inhibits student responses. By nature play in design challenges control and offers autonomous freedom to have faith in ones own individuality. Moreover play necessitates studio critiques, allow students to personalize their space, form a non-controlling methodology to search, discover and share their findings.

Play's Taxonomy:

> "The more awkward (children's drawings) are, the more instructive an example they offer us."
> Paul Klee

Put-together play- putting the object together (additive)
2D assembly play (tangram, drawing, blackboard play)
3D assembly play (blocks, Soma cubes)
In between 2D and 3D play (bas-relief, parquetry, cutouts, mosaic, sewing, knitting)
Take-apart play- opening or taking the object apart (subtractive)
Sticks and stones, interlacing, jointed slats, rings
Interlocking play- disassembly and assembly of object (additive/subtractive)
Figurative objects
Geometric objects
3D jigsaw
Burr play (wood or plastic)
Peas work
Disentanglement play- to disentangle and re-entangle the parts
Iron and sheet metal
Wire
String
Sequential movement play –move parts to a particular position in space
Solitaire play
Counter play
Sliding block play
Rotational play
Maze and circulation play
Dexterity play –manual dexterity is required to solve this play

Tactile/ pricking
Vanish play –explain a vanishing or changing image
Impossible object play –discover how object is made
Folding play –the play is to achieve a specific object by folding
a) Origami
b) Cutting/weaving
Within the Taxonomy of play consider working with some of these basic issues: Geometry, point-line-plane-volume, graph-grid-networks, curves-circles, shapes, patterns, dissections, numbers, logic-probability, topology, science, and perception.

Play's Sandbox:

> "The purpose of my work with children is to get to the primitive urge, the original, the untouched...[Evident in] the primary writing of children: drawing."
> Helene Nonne-Schmidt

Little by little he touched the sand, week-by-week he had gotten closer to the sand, and finally he said, "Today I got into the sandbox." Feeling their way, testing themselves, unfolding of personalities, responsibility, this is what happens in play.

Play offers an individual the realization of the depth and power inside self. What is the medium of the student's expression? Free play, an expression of what one wants to do. One can order this world, when a student plays freely and without direction, they express their personality. The real self, having accepted its growth in self-confidence, extends the frontiers of personality in expression. A world unto yourself, your innermost secrets live, play helps unlock the unconscious!

Play's acceptance by the teacher and student can have a warm and friendly relationship, which the teacher establishes. Then the student is enabled to face him or herself directly feeling content and secure in this genuinely co-operative relationship experiencing an absolute oneness and togetherness in the effort to achieve complete self-understanding and self-acceptance. Along with this non-directive counseling experience, the student can develop a consistent philosophy of life as follows: (world view) gain respect for oneself as an individual of value. He or she learns self-confidence and acceptance and is able to extend the frontier of their personality expression through the depth of play.

Think how once the large sandbox served as an ideal setting in which to place real or imagined objects. Does sand offer freedom to an elastic imagination? What makes it so special? Easy to manipulate, feel its texture, structural properties, invent ideas; it could become snow, water, sky, and the moon. We should introduce materials to students that offer this same beauty of discovery, exploration, experimentation, and endless possibilities. This is where play is at home when it is free to discover itself with minimal limitations. The teacher should allow students to direct and initiate their own play discoveries again within minimal boundaries. Start the language small such as center, balance, rhythm, and repetition. Karl Orff suggested every child was born with the natural musical connection of rhythm, movement, and singing which he used to teach children music through play, by modifying instruments that furthered rhythmic expressions, movements, and melodic expression through vocalizing. Chernikhov's constructivist rules allow the pedagogy of play to occur, by simply putting real materials in the hands and allowing imaginative fabrications to come into existence. Some of Chernikhov's rules were constructive links between component parts, consistency in combinations of various elements, and meaning in the combinations and logical progressions. How we allow rational thoughts to connect with poetic thoughts through the engagement of materials, precedents, elements, and design methodology will foster an understanding into the notion of plays design build philosophy.

Look at the game of chess, how many options, variations, and possibilities are in this contest. It helps the mind to open to "what if's" a form of play, developing a course of play, alternative finding, if this then this, if this then these ten alternatives. There is order, clarity, a grid, structure, and rules yet many variations that play opens up to. Consider this, play can find many alternatives; do not allow students to shortcut this road, as play produces various combinations within this methodology. Play helps us invite the realm of risk of "what if's"? It cannot hurt to try out, explore, take a chance, see its potential, discover its usefulness, clarify its meaning, compare and contrast these explorations play invents. Piet Hien, in developing soma blocks said this is a beautiful freak of nature the seven simplest irregular combinations of cubes can form the cube again, variety growing out of unity returns to unity. The charm of this puzzle derives in part, from the fact that only seven pieces are used: one is not overwhelmed by complexity. Tangrams are another simple puzzle where the charm lies in its subtlety; it is considered one of the most outstanding of all dissection puzzles. There are only seven pieces called tans, which are made from simple shapes. Yet again these seven simple shapes can be assembled in an extraordinary variety of ways. The soma cube (3D) and the tangram (2D) are probably the two best examples of introducing plays beginning design language, (i.e.) connections, combinations, alternatives, problem solving, spatial analysis, variety within unity and visualization.

Play can be a refuge from everyday existence, a sanctuary for the intellect; one can take off cultural mores, and sit quietly in the tabernacle of play's endless tapestry. Play can be a park bench, a classroom, a desk by a window, a room, a fishing spot, and a workbench where people find this autonomy in freedom. Freedom does not insure play can manifest results as we make choices. Play makes its own rules, order, its psychology, and its world of make-believe, which is the true center for its imaginative impulse. Make-believe allows the "what ifs" to become formulated into pre-suppositional absolutes. Bringing the unknown to the known or the immeasurable to the measurable, the artist to scientist. The scientist has immeasurable qualities, but she holds her line and does not travel with the immeasurable because she is interested in knowing. She is interested in the laws of nature, so she allows nature to reveal herself, making pre-suppositional absolutes concerning universals to particulars. Einstein understood this polemic, the nature of play allowed him to accept the knowledge (the epistemological necessity) we belong to an order we know not.

Yet when Einstein allowed play to guide him into the knowledge of this order, he accepted a pre-suppositional absolute thus enabling him to write, invent and discover the beautiful formula of relativity.

Play allows us to look into the spiritual question of faith, another pre-suppositional absolute, a spiritual possibility of play. Then faith can be defined as the substance of things hoped for, for the evidence of things not seen, a suppositional belief. We often associate play with childish behavior, selfish ambition, immaturity, only for the child, "stop playing around". Yet we can become very serious and dedicated within the notion of play, such as playing a violin, playing an NFL football game. Do not underestimate play's potential or influence in man seeking political office; money, one-upmanship, litigation, competitions, games or gamesmanship are part of our existence. Play can have its own intoxicating forms; play can feel satisfaction, be absorbing, one cannot put it down like an author writing a fiction novel. Play can be a world-view, how to perfect our tennis stroke, a painting stroke, our penmanship etc. Much of what I see in the human condition, play becomes the energy to keep the heart alive, vital, and continually seeking, because as you discover the language of play, its tools, its questions, its media, its insatiable appetite for more and more; fundamentally you discover it is inexhaustible and indefinable. You feed it ideas it expands, manipulates, alters redefines looks for contrast within and soon you are in an endless cycle of more questions. This is where I tell the student you never finish an idea you simply complete it you have a dead line. The cloud stops changing as soon as you photograph it, you capture its temporary image but thereafter it continues to slowly change, drift, and disappear into other images.

Ovid wrote "In our play we reveal what kind of people we are." This is true when we examine the depth of our play, it's meaning in our religion, politics, social gatherings, aesthetics and creations. One can immerse oneself in a profound play, which becomes a way of life, a vision of sorts, a drug of dependent diplomacy, rewarding and health to the soul. In the pragmatic day-to-day existence it is good to let the laughter of play become the medicine to refrain depression and mediocrity. For the spirit of depression and heaviness try putting on the garment of praise, which is an act of play that various religions practice. Routine can kill or atrophy the creative mind. When we learn to cherish the moment of play, we fully engage or saturate our heart and mind in the carefree and obligatory world of joy. This is when we see how anhedonic in living we have become. Walter Kerr writes in the decline of pleasure, "Because we are leading half-lives, half-heartedly, and with only one-half of our mind's activity engaged in making contact with the universe about us we are vaguely wretched." We must allow this child likeness to ignore the care and worry and fling ourselves into the wonder, joy and experience to which play can free, humble and exalt the mind and soul.

The broadest role of a studio critique will be to help guide the student toward the natural order of play, to freely expand the problem solving process within carefully thought out sequential problems. These problems build self-confidence, self-awareness, and motivation finding which becomes the self-portrait within is. This activity and process ultimately builds a design language of play and various frameworks, which aid the discourse of architectural concepts.

Play's Thoughts:

Critical, dialectical, reflective, sequential, strategic and analytical thinking
Positive outcomes within the enhancement of self-expression
Understanding various design methodologies
Social interaction, using role-playing to overcome inhibitions
Exploration of alternatives, defer judgment
Reflective skepticism and managing contradictions
Rapid visualization techniques in drawing, imagination and making
Logical reasoning, deductions vs. emotive feelings (rational/intuitive)
Judgment and justifications of ideas and actions
Assumption hunting, recognizing ambiguity in reasoning
Bias from facts, opinions and pre-determined conceptions
Staying flexible while identifying contradictions in polemics
Ambidextrous thinking (left brain-right brain)
Task, content and integration
Random discoveries, strategies and perceptions
Experimentation in emancipatory, technical, and communicative learning
Let your mind go naked and run through the forest (freedom)
Change 1000: ideas are a dime a dozen until implemented and developed
Evolution of an idea: questions, saturation, anxiety, incubation, realization, and verification
A genuine conversation with problem solving
Fantasizing, day dreaming, brainstorming
Clarification of ideas within evolving variations
Recognizing pattern languages in the creative act of invention
Design dialog: fear and confidence treat those two imposters the same
Input, organization and output
Clever simplicity within infinite possibilities
Conveyance of a tactile, material progression
Understanding of plutonic geometries
Relation of whole to parts
Experimentation of various elements
Liberate students' thinking, return to childhood
Origins and primitive impulses
Visual language learned through occupations and gifts (Frobel)
Formal compositional elements with technical constructions
Risk taking
Self-discovery
Plays tapestry
Elementary explorations of forms and materials
Story telling, play acting, overcoming inhibitions
Blind, gesture and rhythmic drawing
Child psychology
Plays need for: Observation, reasons behind objects, expression, creativity and curiosity

Play objects: crayons, clay, blocks, toys, games, paper, scissors, glue etc.
Memories, dreams and reflections

Play's Character and Philosophy:

> " Play is the purest, the most spiritual, product of man at this stage, and is at once the prefiguration and imitation of the total human life, - of the inner, secret, natural life in man and in all things, it produces, therefore, joy, freedom, satisfaction, repose within and without, peace with the world. The springs of all good rest within it and go out from it."
> Friedrich Froebel

Being open, childlike, humble, kind, suffering long, enduring all things, not envious or jealous, not puffed up, good, seeking not itself, not easily provoked, believing all things, hoping all things, loving unconditionally, unifying, sharing, preserving, helping, discerning thoughts and intentions, understanding, seeking wisdom and knowledge, fruitful, it does not dominate over the components or objects in its world. Play describes a mate (a playmate) to wander in the garden of plenty to sow seeds of self-esteem, faith in individuality, and awareness in your culture.

Sow seeds not on a hard heart, a heart full of cares and one with no roots or depth, but on good soil, receptive and giving. Play is not a taker but a giver not in competition with anything but itself. Play lives in the glass of dimness and ambiguity, it sees in part, knows in part, speaks in part, resists the proud in heart, gives grace to the humble. Submit yourself to its beauty and it will come near. Play's simplicity confounds the wise in heart; play is without partiality, hypocrisy, discrimination, bitterness, and criticism.

Play's Determinants:

Stimulus pattern
Temporal organizational sets
Emotional and motivational states
Practical examples thought
Personal attributes
Knowledge-epistemological problem

Einstein said, "Imagination is more important than knowledge. "At the heart of this play opens its doors of mystery to the mind. The mind ponders or thinks. Play helps control, direct, order and opens us up to this imagination of thinking. Solving problems initiates the mind "to think". This then will become "play thinks". The mind weaves plays tapestry, both the inner garment of character and the outer garment of experience, guided by joy and passion interlocking inside enlightenment. The aphorism " as a man thinketh in his heart so is he" not only embraces the whole of one's being, but is so comprehensive to reach out to empirical and rational thinking. One could say what we encourage the student to think and read becomes the complete sum of all experiences in an architectural pedagogy.

Play is the blossom of thought, joy and suffering become its fruits; thus does one garner the sweet and bitter fruitage of ones own husbandry. We are made or unmade by our self; in the amoury of thought we forge weapons to destroy or fashion tools that build beauty. This polemic is what we wrestle within. A great truth defines man as the master of thought, molder of character, maker and shaper of condition, culture, experience and fate. Love, the greatest of all thoughts within play contains the seeds to produce or rejuvenate one's greatest fruit, loving God, neighbor and self. Digging deep in the soul we see character, truth, a builder of destiny linking cause and effect by a quiet, patient practice, and search into understanding the mystery and wonder that play directs our path. Ask, it shall be given, seek, you will find and knock, it will open with an unrelenting tenacity that does not quit or give up. When you enter into this conscience you will enter the "temple of play" a place where we return to the child inside. A place where anything is possible! Jesus Christ said, "Unless we become as children we cannot enter into the kingdom of Heaven", not to be childish but child-like. Play at its most profound understanding directs, leads and gives wisdom to this child-like state.

Bibliography:

Froebel, Friedrich, The Education of Man. Translated by William N. Hailmann. New York: D. Appleton, 1887.

Froebel, Friedrich, Froebel's Letters. Edited by Arnold Heinemann. Boston: Lee and Shepard, 1893.

Snider, Denton J. The Psychology of Froebel's Play-Gifts. St. Louis: Sigma, 1900.

Blotkamp, Carel, et al., De Stijl: The Formative Years. Cambridge, Mass.: MIT Press, 1986.

Klee, Paul. Pedagogical Sketchbook. London: Faber and Faber, 1968.

Kandinsky, Wassily. Kandinsky, Complete Writings on Art. Boston: G.K.Hall, 1982.

Whitford, Frank, Bauhaus. New York: Thames and Hudson, 1984.

Barnard, Henry. Pestalozzi and Pestalozzianism. New York: F.C. Brownell, 1859.

Pestalozzi, Heinrich. ABC der Anschauung, oder Anschauungslehre der Massverhaeltnisse. Tuebingen, Germany: J.G. Cotta, 1803.

Rousseau, Jean-Jacques. Emile. Translated by William H. Payne, New York: D. Appleton, 1892.

Wick, Rainer K. Teaching at the Bauhaus. Ostfildern-Ruit, Germany: Hatje Cantz, 2000.

Brosterman, Norman. Inventing Kindergarten. Edited by Eric Himmel. New York: Harry N. Abrams, 1997.

Slocum, Jerry and Botermans, Jack. The Book or Ingenious and Diabolical Puzzles. New York: Times Books, 1994.

Slocum, Jerry and Botermans, Jack. New Book of Puzzles. New York: W.H. Freeman and Company, 1992.

Vickery, Robert L. Jr. Sharing Architecture. Charlottesville,

Virginia: The University Press of Virginia, 1989.

Moscovich, Ivan. 1000 Playthinks. New York: Workman Publishing Company, Inc., 2001.

Kappraff, Jay. Connections. New York: McGraw-Hill, Inc., 1991.

Hein, Piet. Soma Cube Directions. Parker Brothers Inc. Salem Mass 1965.

de Bono, Edward. Serious Creativity. New York: Harper Business, 1992.

Ackerman, Diane. Deep Play. New York: Vintage Books, 1999.

AxLine, Virginia M. Play Therapy. New York: Ballantine Books, 1947.

Krech, David, Crutchfield, Richard S. and Livson, Norman. Elements of Psychology. New York: Alfred A. Knopf, Inc., 1958.

__ _ Holy Bible. New Living Translation. Wheaton, Illinois: Tyndale House Publishers, Inc., 1996.

__ _ Plato The Republic. Translated by Desmond lee. London: Penguin Books, 1955.

Lobell, john. Between silence and light spirit in the architecture of Louis I. Kahn. Boulder, Colorado: Shambhala Publications, Inc., 1979.

Extra ideas concerning play

Play's Methods:

Alphabet soup, Train Track Metaphor, Brainy Blocks, Brain dump, Magnify, Post-A-Tecture, Critical Cartman, Dr. Spock, Seven Dwarfs, Nursery rhymes, Toy box, Comic strip, Elephant/Mouse, Labyrinth layers, Imaginary friends, Sand box, Think tank, Walkie-talkie, Surf the net, Dollhouse, Dentist, Candy land, Wizard of oz, Scenario, Explorations, Scattergories, Mr. Potato head, Tinker toy, Etch a sketch, Connections, Sherlock Holmes, Incubation, Analogy finding, Time machine, Grocery list, Hollywood, Improvise, Question, Gather, Synectics

Plays psychology:

I Origins growth and development

A. Heredity and environment

1. The DNA of play, 2. Mutation, 3. Egg, sperm, atrophy

B. The human organism, growth and development of play

1. Maturation-learning principle, 2. Readiness, 3. Sensor motor development

II Thinking and language of play

Development thinking of play, Accommodation, Adaptation, Assimilation, Conservation, Equilibration, Organization, Schemata, Development and structure of the language of play, Developmental Psycholinguistics, Redundancy in language, Speech spectrum, "Syllabic babbling" stage, Syntax, Verbal conditioning, Verbal – context effect

III ´Intelligence

Intelligence and its Measurement of play, Abilities, aptitudes and interests, Spatial – Perceptual, motor and talent test, Development and Structure of intelligence of play, Age, Stability and predictability of play, Factor analysis, Group – factor theory, Sampling theory, Two – factor theory, Variations in Intelligence of play, Genetic influence, Parent – Child, Environmental influence, Gender influence, Ethnic, national and social difference, "Culture – Fair"

Note: Whose standards?

IV Perception of play

Sensory Stimuli and Psychophysics of play, Stimulus and stimulus object, Measuring the psychophysical relationship of play, Absolute and differential threshold, Weber's law, Perceptual differentiation and grouping of play, Differentiation of the perceptual field, Assimilation, contrast, figure/ground, contour, Perceptual grouping: Proximity, similarity, form, Whole to parts, Framework, Transposition, Changes in perceptual organization of play, Changes with constant stimulus pattern, Satiation of organization, Changes with changes in stimulus pattern, Perceptual set and organization, Span of apprehension, Perceptual constancies, Size constancy, Shape constancy, Object constancy

V Learning and memory associations with play

Conditioned – Response learning, Conditioning, Temporal patterning, generalization, discrimination, Inhibition, Reinforcement, Instrumental learning, Instrumental conditioning, Trial – Error play, Maze play, Exercise and effect, Verbal learning, Acquisition, Anticipation, recall and recognition method, Free recall, Clustering, Incidental, incremental and intentional learning, Meaningfulness, Nonsense syllable, Paired associates, Spontaneous recovery, Unlearning

VI Problem solving

Processes of creative problem solving, Changing perceptions of the problem, " Aha!" Experience, Productive thinking, Directed thinking, Functional solution, Illumination, Incubation, Invention, Prediction, Preparation, Reproductive problem solving, Specific solution, Verification, Determinants of creative problem solving, Personal factors, Knowledge of play, Einstellung, Situational factors, VII Emotion and motivation of play, Developments and determinants of emotions in play, Development of emotional play, Differentiation of emotions, Age changes in emotional expression, Determinants of emotions, Theories of emotional play, Emotion as a representational process, Emotion as arousal, Emotion as disruptive, Emotions as primary motives, Attributes of motives in play, Biological, Environmental, Abundancy motivation, Conscious need, Deficiency motivation, Instinct play, Self – actualization, Motivational arousal and interaction, Motivational arousal, Orienting reactions and uncertainty, Optimal uncertainty, Adaptive reactionary play, Defensive reactionary play, Motivational interaction, Patterns of conflict

VIII Conflict and adjustment in play

Frustration, conflict and defense in play, Constructive effects, Substitution play, Redefining situational play, Disruptive effects, Aggressive play, Escape in play, Indirect effects, Repression, Reaction – formation, Rationalization, Insulation and projection play, Displacement, Play therapy, Free association, Transferenc

IX Personality play

Personality: Definition and description, Comprehensive play,

Organization, pattern and uniqueness of play, Traits both surface and source, Introvert/ extrovert, Right side/Left side
"Ideal" value types: Theoretical, economic, aesthetic, social, political and religious, Empirical typology of play, Rational typology of play, The measurement of personality of play, Techniques for measuring play, Self – rating, Situational, Personality inventories, Projective techniques
Psychological needs of play: Abasement, achievement, affiliation, aggression, autonomy, counteraction, defendance, deference, dominance, exhibition, harmavoidance, infavoidance, nurturance, order, rejection, sentience, succorance, understanding, Sources of the determinants of personality in play, Hereditary factors, Somatic factors, Social and cultural influences, Theories of personality in play, Id, ego, superego, Basic anxiety, Identification, Identity diffusion and formation, Inferiority complex
X Social processes of play
Social perception through play, Stimulus pattern and perception, Organizational factors, Context effects in impression formation, Implicit personality theory of play, Stereotyping play, Halo effectual play, Effect of social function, Effect of interpersonal attitude, Primacy effect, Social attitudes within play, The nature of attitude, Formations of attitudes, Group influence, Self – expression function, The communicator, the message, Resistance to attitude change, Scale value, Social object, Experimentation in individual and group play, Conformity, Originality, Ego strength, Self – confidence, Audience effect, Coaction effect, Normative group influence, Social facilitation, Brainstorming