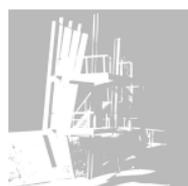


The Predicament of Beginning

Abstracts of the 18th National Conference
on the Beginning Design Student, Portland
State University, Portland, Oregon

March 14 - 16, 2002

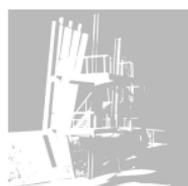


THE ENIGMA OF THE
FIRST ASSIGNMENT .
CRITICISM AND
JUDGEMENT .
ENCOUNTERING
MATERIALS .
LEARNING TO LOOK .
REPRESENTING IDEAS
. THE ABSTRACTION
OF PLACE . THE
MODEL OF LANGUAGE
. THE PLACE OF
ABSTRACTION

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The Predicament of Beginning



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"(De)Formation"

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Laura Lee, Carnegie Mellon University

Gregory Luhan, University of Kentucky

Simon Tomkinson, Portland State University

In convening the 18th National Conference on the Beginning Design Student, the Department of Architecture at Portland State University has endeavored to provide a forum for propositions and debate concerning the possibilities, necessities, paradoxes, and fallacies of beginning education in design.

This document represents the positions and considered research of over 40 scholars from across North America and beyond, and hopes to embody a spirit of active exploration and sharing of ideas, experiences, and models for a pedagogy of initiation.

In making this possible many thanks are due to the faculty, staff and students of the Department of Architecture for their energy and commitment to both the event itself and to the issues that it addresses. We also wish to thank the three guest speakers and the session moderators for their part in provoking and sustaining discussion.

Content

THE ENIGMA OF THE FIRST ASSIGNMENT

Moderator: L. Rudolph Barton

Introduction to Three Dimensional Composition /
Dancing on the Digital Divide

Geoffrey Adams and **Karen King** 10

University of New Mexico

Ordinary Unfamiliarity: Foundation Pedagogy through
the Critique of the Everyday

Kevin R Klinger and **Marc Swackhamer** 10

University of Cincinnati

The Sandbox: An Introduction to Form & Form-Making
Through Notions of Surface

Brian T Rex 11

University of Nebraska

Spatial Themes in a Three Week Project

Corey Saft 12

Southern University and A & M College

CRITICISM AND JUDGEMENT I

Moderator: José Gamez

In the Beginning - we [design for] humans, an open-
ing studio curriculum for an architectural professional progra

Alex Maller 14

University of Nebraska

Negotiating Fear in Early Architectural Education

Ayad Rahmani 14

Washington State University

Rhetorical Investigations: A General Theory of Design
and Architectural Education

Simon Tomkinson 15

Portland State University

CRITICISM AND JUDGEMENT II

Moderator: Jeff Hartnett

Becoming Designers: Intelligent Shape Sorting

Esther Dudley 18

University of Plymouth

Why Do You Always Make Us Think? Maintaining a
Journal in the Beginning Design Studio

Karl Puljak 19

Louisiana Tech University

Ventures in Dichotomy: Rigor AND Tolerance in the Beginning Studio

Hector LaSala 20

University of Louisiana

The Silence of the Studio Lambs: How to Hear Your Students' Voices in a Postmodern Design Studio

Elijah Mirochnik 21

Lesley University

ENCOUNTERING MATERIALS I

Moderator: Jonathan Hale

Design as a Liberating Practice: design-build with first years

Eduardo Aquino 24

University of Manitoba

The Consuming Process

Gregory Herman 24

University of Arkansas

Assemblies: full scale construction in the freshman design sequence

Aron Temkin and Scott Smith 25

Florida Atlantic University

Reconsidering the Last Step

Pamela Unwin-Barkley 26

University of North Carolina at Charlotte

ENCOUNTERING MATERIALS II

Moderator: Simon Tomkinson

GESAMTKUNSTWERK: Architecture/Interior Architecture - Elemental Integration as a Pedagogical Foundation for Design Education

Rebecca O'Neal Dagg 30

Auburn University

Giving Back: Student Architectural Product Research in Service to Practitioners

Jill B Pable 31

California State University

The Art of Recycling

Laura M Terry 32

University of Arkansas

An Architectural Exhibition: "Bench with the Film of its Own Making"

Jonathan A. Hale 33

University of Nottingham

LEARNING TO LOOK I

Moderator: Lily Chi

Bounding Space

Jeffrey L Day and Brian T Rex 36

University of Nebraska

Educating Emerging Vision
Marcella Eaton and Karen Wilson Baptist 36
University of Manitoba

Musical Beginnings: musings on teaching with music in the fundamental design studio
John Maze 37
University of Florida

The Space of Mondrian
Lori Brown 38
Syracuse University

LEARNING TO LOOK II

Moderator: Laura Lee

Listening to the Past: Persuasive Stories and the Beginning Design Student
Nathaniel Coleman 40
Washington State University

Seeing/Site: A one-week project
Peter Hind 40
University of Nebraska

A Case for Analysis in the Beginning Design Student Curriculum
Melissa Weese Goodill 41
University of Maryland

Representing Place for the Design Process
Nancy Yen-wen Cheng 42
University of Oregon

REPRESENTING IDEAS

Moderator: Patricia Kucker

The Viewing Machine
Alice MinSoo Chun 46
University of Pennsylvania

The Parallel Projection, as Flights of Fancy
Mary Nixon 48
University of Pennsylvania

Allusion, Illusion and the Beginning Design Student
Albert C Smith and Kendra Schank Smith 48
University of Utah

The Design Process: Charcoal Drawings, the Qualitative Representation
Mo Zell 49
NC State University

THE ABSTRACTION OF PLACE

Moderator: Prue Chiles

Building the River: An Introduction to Urban Design in Savannah, Georgia
Christian Dagg 52
Auburn University

Rethinking Studio Pedagogy: Teaching Introductory Architectural Design at the Graduate Level

Michael E Gamble, Richard Dagenhart and Chris Jarrett 52
Georgia Institute of Technology

Learning from Cultural Space: Connecting Culture and Environment in Beginning Design

Jeffrey Hou 53
University of Washington

deTail of Two Cities: Utilizing urban analysis and recombination as the first project in the fundamental design studio

John Maze 54
University of Florida

THE MODEL OF LANGUAGE

Moderator: Eric Connell

Education of an Architect: Through African-American Constructions

Scott Ruff 56
Syracuse University

Design's Community of Knowledge: Identifying and Organizing Design's Fundamental Concepts to Support Teaching and Learning

William R Benedict 57
Cal Poly

While Mind Dances with Heart: Nurturing Design Vocabularies Through Personal and Cultural Identities

Shenglin Chang 58
University of Maryland

Design As Language

Patrick Louis Carrico 59
Portland State University

THE PLACE OF ABSTRACTION

Moderator: Gregory Luhan

"Quilting" Connections Between Two and Three Dimensional Design For the Beginning Design Student

Valerie S Goodwin 62
Florida A & M University

The Pedagogics of Play

Jay McClure 62
Savannah College of Art & Design

Specification and Invention: Strategies Between the 'Off the Shelf' and Abstraction

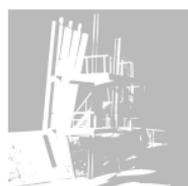
Greg Snyder 63
University of North Carolina

Setting a Baby into the Grass: A Biological Model of Interactions Between Concrete and Abstract Learning Experiences

Stephen Temple 64
University of Texas

The Predicament of Beginning

THE ENIGMA OF THE
FIRST ASSIGNMENT



**Introduction to Three Dimensional
Composition / Dancing on the
Digital Divide**, Geoffrey Adams and
Karen King, University of New Mexico
- **Ordinary Unfamiliarity:
Foundation Pedagogy through the
Critique of the Everyday**, Kevin
R Klinger and Marc Swackhamer,
University of Cincinnati - **The Sandbox:
An Introduction to Form &
Form-Making Through Notions of
Surface**, Brian T Rex, University of
Nebraska - **Spatial Themes in a Three
Week Project**, Corey Saft, Southern
University and A & M College

Introduction to Three Dimensional Composition / Dancing on the Digital Divide

Geoffrey Adams and Karen King

University of New Mexico

To introduce students to the tools that (will) define architecture in the 21st century, yet simultaneously acquaint them with tested methods of the past, this initial design project seeks a critical balance between digital and analog techniques. Students beginning our 3.5 year Masters of Architecture program engage a sequence of discreet yet interconnected design problems over the course of the first half (6-8 weeks) of the initial design studio. Starting with an elementary abstract three-dimensional design problem each ensuing step takes the previous solution as a starting point building in complexity and duration culminating in an architectural design problem incorporating issues of site, program, structure, materiality and economy and their necessary interface with composition and form. Multiple discreet problems provide periodic critique opportunities, building student confidence in their ability to meet deadlines and present and discuss their work. Problem segments include: part one: intersecting volumes, part two A: graphic representation and analysis, part two B: transformations, part three A: linear 2D collage, part three B: introduction of topography to linear compositions, part four: sphere + pogo (inhabitants). Oscillating between digital and analog design space the students gain skill and proficiency with a number of design tools, sketching, drafting and modeling in analog space and 3D modeling and 2D graphic software in digital space, and begin to form critical assessments of their application to design work.

Ordinary Unfamiliarity: Foundation Pedagogy through the Critique of the Everyday

Kevin R Klinger and Marc Swackhamer

University of Cincinnati

“Evidently, a new nature opens itself to the camera than opens to the naked eye – if only because an unconsciously penetrated space is substituted for a space consciously explored...”

—Walter Benjamin, “The Work of Art in the Age of Mechanical Reproduction”

“Sometimes when you arrive new to a place, you can really see it.”

—Brian Eno, composer

In our new first year program, we proceed from two principles of instruction: first, we direct the focus of work away from conventional architectural topics and use analogy to awaken native critical insight; second, we postpone traditional “design” activity by strictly emphasizing observation skills and critical analysis. We delay design activity until the first quarter of the second year, in preparation for which we organize first-year studio workshops around short iterative exercises that capitalize on the students’

familiarity with the everyday world. We then structure these problems to render the everyday world in unfamiliar terms. This oscillation between the ordinary and the unfamiliar greatly intensifies the analogical resonance between everyday experience and the production of buildings. The result is greater confidence in critical thinking earlier in the student's academic career.

Everybody understands food. The first quarter in our new four-quarter foundation sequence employs cuisine as the over arching theme of studio activity. Cuisine allows us to comfortably shift the locus of activity from the shelter to the dining room, where we use the table as our point of departure. The table opens to view commonplace relationships between artifacts and habits—social formations, decorum, ritual, and the universe of the meal. We begin the quarter with a visual analysis based on the film "Babette's Feast"; we end the quarter with the systematic disassembly of a large kitchen appliance. Throughout, we enrich analysis and observation with films, field trips, readings, and object-oriented exercises that extend exploration beyond cuisine.

Cutting is one architectural theme gleaned through the filter of cuisine in the first quarter. In a pair of exercises involving kitchen utensils, we introduce the cut as both a material operation and a representational practice. First, students construct elevations of their utensils through collage by cutting images from magazines that approximate surface textures, hues, and values; then, they engage in a physical cutting by disassembling their utensils and producing a graphic taxonomy of the resultant components through line drawings. These preliminary exercises subsequently prompt the disassembly of kitchen appliances. Throughout, we familiarize students with germane architectural themes, like cutting, by way of marginal studies that instigate questions and reveal previously concealed relationships.

Our aim in this paper is to evaluate what we've learned in this first quarter of work, and examine implications for the new foundation curriculum.

The Sandbox: An Introduction to Form & Form-Making Through Notions of Surface

Brian T Rex

University of Nebraska

Surface is a privileged condition of form that is intellectually flat, compressive, and planar while simultaneously being perceptually and tactilely voluptuous. It is both 2-D and 3-D and it is neither. A surface is complete and understandable but it rarely is seen as a singular and ordered thing in the way that an object is. There is something uncomfortable in calling a surface a thing when there's an object in mind. A surface is somehow never discrete because surfaces are visual manifestations of matter.

This four-week unit is designed as a first intellectual foray into the world of form and form-making. The primary

medium is a 20" by 20" by 10" lumber box that is filled half with sand and half with air. The intrinsic qualities of the sandbox are that it only reveals one surface of the sand for the student to work on, it acts as a register of the "site" of design activity in surveying the work, and it disarms a beginning design student by using a very familiar and plastic medium: sand.

Sand is a granular solid that is under the influences of gravity and its cohorts friction, cohesion, and angle of incidence. Its neutral state (condition of stasis) is a flat surfaced, level, five-inch deep granular pool in the box. Sand can seem as much liquid as does a solid. Consider that the surface between air and sand is a privileged position in space. The surface is a shared extent of two materials. Surfaces are geometric, chemical, and ultimately visual manifestations of form.

Critical questions addressed in the pedagogy:

- What is a surface?
- What is a two-dimensional description of a surface?
- Is there anything between 2 and 3 dimensions?
- How does one coax the 3rd dimension out of 2 dimensions in a sophisticated and inventive way?
- In what ways can an element and a surface relate to each other?
- How can one make an object affect the form of a surface?
- Two basic ways to consider and measure the surface of a form are through Geometry and through Topography. What methods can be used to calculate a section through a surface?

Spatial Themes in a Three Week Project

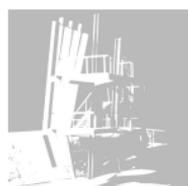
Southern University and A & M College

The enigma of the first assignment is truly only a sub-category of the terror of firsts – in our case, the terror of the blank page. The success of the first design project often rests on the question being posed so the student is actually asked to engage in a design activity and not to ponder what is design or what it means to design. This case study outlines the content and organization of the project and shows student work as well as critiques the successes and failures of the project.

This design project has three major components that seek to develop an awareness of site, program and the idea of assembly (or the construction of a thing). Each of these components has a structure that seeks to balance a given rule system with an open-ended quality and also a simplicity that allows a student to easily approach the problem with an inherent complexity that allows the problem to grow as the student gets into it. The presentation will speak to all three components but will highlight the idea of spatial themes as it was used to focus the architectural character of the students' projects.

The Predicament of Beginning

CRITICISM AND
JUDGEMENT I



**In the Beginning - we [design for]
humans, an opening studio cur-
riculum for an architectural pro-
fessional program, Alex Maller,
University of Nebraska -
Negotiating Fear in Early Architec-
tural Education, Ayad Rahmani
Washington State University -
Rhetorical Investigations, A
General Theory of Design and
Architectural Education, Simon
Tomkinson, Portland State University**

In the Beginning - we [design for] humans, an opening studio curriculum for an architectural professional program

Alex Maller

University of Nebraska

The paper describes and discusses a semester long studio sequence of assignments designed to introduce students into the architectural professional program at the Department of Architecture, University of Nebraska-Lincoln. As part of the Program's curriculum, the design studio of the third year's Fall semester was assigned the topic of Human Dimensions and Human Program. The pedagogical objective of the studio experience is to instill in the students' mind an initial design oriented understanding of critical debate and refutation rather than guide them toward correct answers; not to reach final solutions but to raise questions, take risks, experiment and learn from mistakes. The sequence comprised five assignments grouped into three topics. The scope and scale of the assignments ranges from simulations representing researched information, concepts and designed results to full-scale investigations and design making. The results are expected to be accurate and comprehensive in reference to the assignment's criteria and parameters.

Negotiating Fear in Early Architectural Education

Ayad Rahmani

Washington State University

In the announcement for the conference to which this abstract is being prepared, one question seemed particularly germane to the early education of an architect: how to remove fear from the process of generating solutions? Unlike perhaps other fields of inquiry, such as Physics of Mathematics, Social Science and Anthropology, where success is to a large degree measured against a backdrop of tangible standards, in architecture evaluations are much more slippery and tend to vary from one professor to the next. This has not been without an effect on the students; namely that having been placed in a situation where they have to speculate as to what the professor deems exemplary, what ensues is inhibition which in its own right is the product of the fear of failure. Fear is of course the result of a condition in which orientation is absent; when one undergoes a transition from a scenario where everything seems familiar to one where everything is not, the results are such that this person begins to build a layer of protection to help him or her chart a course of self determination. The early student of architecture often undergoes a similar course of action where he or she has to transition from a familiar world of things seen to the unfamiliar world of ideas and issues unseen. In this paper I will look at the ways through which fear can be negotiated and perhaps even eliminated and I will do so using the notions of agency and play. With agency I will look at the gap between the student and the professor and propose that this factor is inserted between the two to help remove

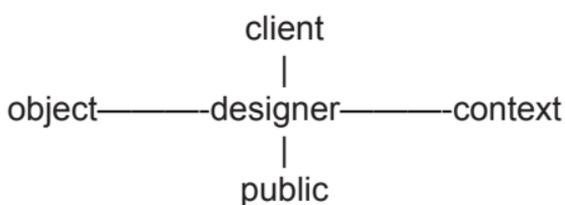
the focus on either party. And insofar as play is concerned, the issue is one of language; here I will address how a unity between the colloquial and the formal can help facilitate the imagination and allow the student to see success less as the product of competition but more in terms akin to shades of gray.

Rhetorical Investigations A General Theory of Design and Architectural Education

Simon Tomkinson

Portland State University

This paper will offer distinct outlines of a general theory of design, based on a critical review of method as a means for teaching design. The focus of this paper is to investigate the act of design as a distinct method, subject to review and qualification outside of the means of production, intended result, and realm of inquiry. The paper will be inherently cross-disciplinary, however the will address specifically architectural education. The position of the designer in this case is in the center of the axes between client and public, and object and context:



A construct and general theory of design will need to address each of these aspects of the design process, identifying with the theoretical framework each one of the five contributors above, the client, public, object, context and the designer themselves.

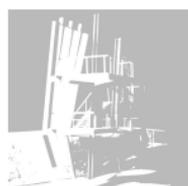
The methodology of the inquiry is centered on the use and application of Classical Rhetoric as a tool for communication and investigation. Classical Rhetoric has been defined as the art of speaking and writing well on any and all matters that fall outside of pure science or technique. As opposed to Science, which attempts to formulate and validate *truthful* statements, Classical Rhetoric is a distinct structure of thought available to formulate *probable* statements about matters of human concern. The structure of a rhetorical investigation is formulated to provide and analyze the context within which an idea is generated, supported and executed. The goal of the paper will be to uncover what historical linkages, methodological frameworks and *thought tools* that may be applied to articulate and construct a viable general theory of design.

This paper is in direct response to the challenges laid out in *Copy Proof*, by Hugues C. Boekraad and the work of the graphic design students at the Royal Academy in Amsterdam. Arguments cited from this source have been applied to architectural discourse, and thus are paraphrased in part to maintain links to the original material. In my own

design studios and students, I have been applying the ideas and constructs and have found some viable applications, in particular to students with little or no formal training.

The Predicament of Beginning

CRITICISM AND
JUDGEMENT II



Becoming Designers: Intelligent Shape Sorting, Esther Dudley, University of Plymouth - **Why Do You Always Make Us Think? Maintaining a Journal in the Beginning Design Studio**, Karl Puljak, Louisiana Tech University - **Ventures in Dichotomy: Rigor AND Tolerance in the Beginning Studio**, Hector LaSala, University of Louisiana - **The Silence of the Studio Lambs: How to Hear Your Students' Voices, in a Postmodern Design Studio**, Elijah Mirochnik, Lesley University

Intelligent Shape Sorting

Esther Dudley

Exeter School of Art & Design, University of Plymouth

The book *Becoming Designers*, which I co-edited with my colleague, Stuart Mealing at the University of Plymouth at Exeter, came from our perception that there were too few books for our students' reference which make plain ideas and theories that are central to the current debates in Graphic design. Published in June 2000 we hoped that it might have some impact on our own students' learning, featuring as it does, chapters by academics and graphic design professionals whose work has been brought to the students' attention or who have contributed to the course as guest lecturers.

The chapter I wrote for the book and which would serve as a strong starting point for discussion, I suggest, is entitled *Intelligent Shape Sorting* in which I argue for the continuation of a theoretical and historical foundation on which students should pursue their design development, culminating in the research and writing of a dissertation.

The scenario at the start of a new academic year is familiar to many theoretical teachers, I believe: the new undergraduates, dutifully attending all the tutorial and lecture appointments on their induction timetable, arrive in the lecture theatre for their first session of design research. One senses that the news to be delivered on that occasion, ie. that the design research component will be a constant feature of their three year degree course, might stretch their good will and be the moment for re-evaluation of the course in general. It always surprises me that this part of their degree course surprises them!

'Graphic Design will be the richer for graduates who are able to engage in criticism, analysis and debate' I offer on that first occasion. I spend the next three years proving the point

My paper would develop the strategies by which our students learn the importance of being able to research effectively and communicate in an articulate fashion, both for their own understanding of the context of their design practice and for the professional and academic need to engage with wide/deep aspects of their subject.

'The relevance of a cultural literacy, the familiarity that a culture has with its processes and their relationship with other cultures. cannot be underestimated...If aspects of a society's cultural life are valued and given prominence, an important social arena is created within which social development can take place in an informed and reasoned atmosphere' Christopher Crouch, *Why Teach Design History*.

I will refer to work by Philip Meggs, Jonathan Barnbrook, Kevin McCullagh, Pavel Buchler and Katy MaCleod as well as uplifting texts such as T.S Eliot's *The Rock*; *Proverbs* and the *Coldstream Report on Art & Design Education 1960*.

'Literacy and the ability to express ideas to colleagues and clients are part of the indispensable armoury of

the designer' Stuart Durant, ex BBC designer.

Why Do You Always Make Us Think? Maintaining a Journal in the Beginning Design Studio

Karl Puljak

Louisiana Tech University

The Good News:

On the surface, we consider freshman design studio at Louisiana Tech University not much more than an extension of kindergarten: sitting in a room making something or playing outside in the sunshine. Constructing everything from toothpick vessels to shirts made of paper to full-scale spaces out of concrete block, the studio day is a fun, active 3-hour class, full of experimentation upon primarily material-based assignments. Students even claim they enjoy it. What's more, if the students come to class and do the project, they will receive full credit: projects aren't evaluated. Merely participate and students get 100% of project points.

The Bad News:

What is evaluated (and accounts for 40% of the course grade) is a journal, which each student keeps of his/her work. The Journal is the source of preparation for the upcoming class period and, most importantly, the source of reflection upon the work completed at the end of a studio class. Its purpose is to prepare, research, document process, analyze materials, "eulogize" the resultant artifact, and reflect on the project's value to the world outside of the classroom. It is rigorous, somewhat prescriptive, very demanding. It challenges students to not take their actions or the world around them at face value without asking the questions: of what, how, or why. AND, the journal must be beautiful.

It's safe to say that our students HATE the journal.

A task that often seems worse than forcing a child to eat their brussels sprouts before leaving the dinner table, the "soft, yet firm" diligence required to maintain a quality studio journal continues to challenge both our beginning design faculty and students. For the last several years, we have continually sought to develop this tool of thoughtful reflection and to dodge the pitfalls of our unsuspecting freshmen. This presentation seeks to discuss issues of our journals: its grand purpose, its organization, its content, its evaluation, its resultant product and its criticism by our students. This paper contends that a method of critical thinking must begin immediately in the beginning design studios to instill the notion that (architectural) design must be a purposeful and thoughtful means of communication. This paper also hopes to open a discussion with other programs by asking the question of how instructors implement the responsibilities of critical preparation and introspection into the minds of beginning design students.

Believe me, we are still struggling with this one.

Ventures in Dichotomy: Rigor AND Tolerance in the Beginning Studio

Hector LaSala

University of Louisiana

Creative processes may have their own as yet unknown lawfulness which may be often obscured, and even distorted, by our stringent requirements...
-Gemma Corradi Fiumara, THE METAPHORIC PROCESS

I think that you will not have to remain without a solution if you trust in Things...in small Things that hardly anyone sees and can so suddenly become huge, immeasurable...then everything will become easier for you, more coherent and somehow more reconciling, not in your conscious mind perhaps, which stays behind, astonished, but in your innermost awareness, awakes, and knowledge. You are so young, so much before all beginning, and I would like to beg you...to have patience with everything unresolved...and try to love the questions themselves...live [design] your way into the answer.
-Rainer Maria Rilke, LETTERS TO A YOUNG POET

As a beginning design teacher for over twenty years, I have learned that educating beginning designers entails reaching a delicate and difficult equilibrium: while maintaining high aspirations for all students to exhibit sophistication of concerns and execution in their designs, one must also remain aware that the process of each student is unique and fragile. The effort at achieving this balance may easily become ineffectual if the teacher attempts to maintain a homogenous and arbitrary progress throughout the studio. Often the result is that the most competent students in the early stages dictate the pace of the project for everyone else.

The acquisition of maturation of skill along with the acts of exploration and discovery are by-products of the gradual and progressive internalization of the processes by which a student generates meaningful responses to a particular situation. Therefore, great care must be taken in the formulation of projects especially regarding the content and the timing. Undue complexity at the outset of any investigation often overwhelms most students' capacity to apprehend, order and play in the situation being explored. On the other hand, overly reduced content may fail to arouse curiosity and interest. Ultimately, genuine progress in the project needs to be viewed in the terms of the students' iterative understandings of the intentions being sought and developed. The pace at which such development and transformation takes place varies greatly from student to student in a beginning design studio. Each student differs in terms of level of competence and rate of learning. An increase of programmatic content that is appropriate for some students may, at any particular time, do damage to the development of others who are still groping with a previous phase.

This educational strategy at our school has resulted in a foundation studio sequence where all students are free and confident to explore and risk, fail and discover; each at his or her own pace. The works from these studios consistently demonstrate the students' ability to initiate and sustain design investigations at a high level of integrity, evidencing significance through each phase of a project, from concept through assembly, from material to event.

The Silence of the Studio Lambs: How to Hear Your Students' Voices in a Postmodern Design Studio

Elijah Mirochnik

Lesley University

In my paper I will compare and contrast traditional and postmodern enactments of knowledge in the beginning design studio, as a starting point for entertaining current philosophical discourse that urges a replacement of the old notion that knowledge is discovered with the new theory that knowledge is made or constructed. I will try to avoid the inaccessible jargon that is too often a part of postmodern thought by describing conversations that I have had with two architects, each of whom teach beginning architectural design studios at UC Berkeley. Descriptions of Joe's and Manny's teaching practices, in their own voices, will reveal their respective traditional and postmodern approaches to defining and enacting teaching, learning and knowing.

The contrasts between Joe's and Manny's narratives about what counts or does not count as legitimate knowledge or legitimate vocabulary within their interactions with their students will be shown to be useful in that they point to aspects of the traditional theory of knowledge (held by Manny) that Joe had implicitly abandoned, and the new theory Joe had adopted as the basis of his set of teaching practices. The traditional theory of knowledge implicit in Manny's narrative suggests that since knowledge exists outside of experience, the discovery of real knowledge can occur only through detachment from the self, and is made possible by way of the mind's capacity for cold disinterest, logic, and reason. Opinion, emotion, intuition, interest, and bias, within Manny's traditional definition of knowledge, are aspects of experience that are always suspect. Manny's interest in being the official in charge of controlling his students outcroppings of undesirable, biased, first person "I" vocabularies, illustrate the set of premises that underlay traditional knowledge theory.

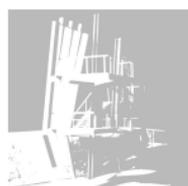
In contrast to Manny, Joe recognizes that his students' first person "I" voices are indicators of their inner lives, their past experiences, and their sets of interests that can ultimately be expressed through their designs. Joe's narration of his teaching practices reveals his thinking that it is unnecessary for him to prohibit any of his students' ideas or ways of talking about their designs. In contrast to Manny's emphasis on his students separating themselves from their selves, Joe emphasizes that his students connect with their selves; connect with their intuitions, with their social concerns, with their interests in certain geometries, with anything personal that can become the basis for the central idea or the metaphoric proposition they need to move their designs forward, toward a coherent consummation.

Joe illustrates a postmodern rejection of the tradition of invalidating students' bodily modes of intelligence. The contrast between Joe's bodily metaphors of balance and connection and the metaphors of separation and control

that are reflective of Manny's set of teaching practices in which students separate themselves from their emotions and personal vocabularies in order to learn a set of objective approaches to designing, will be shown to be useful contrasts that can illuminate the important differences between a traditional and postmodern approach to teaching in the beginning design studio. The contrast between their respective metaphors will also be shown as the contrast between educational practices built upon a traditional theory of knowledge and an alternative set of teaching practices driven by a new set of premises about students' ways of knowing within the design process.

The Predicament of Beginning

ENCOUNTERING
MATERIALS I



Design as a Liberating Practice: design-build with first years, Eduardo Aquino, University of Manitoba - **The Consuming Process,** Gregory Herman, University of Arkansas - **Assemblies: full scale construction in the freshman design sequence,** Aron Temkin and Scott Smith, Florida Atlantic University and Carnegie Mellon University - **Reconsidering the Last Step,** Pamela Unwin-Barkley, University of North Carolina at Charlotte

Design as a Liberating Practice: design-build with first years

Eduardo Aquino

University of Manitoba

Like many design students a question has pursued me since my days in Architecture School. If design defines spaces to be experienced tangibly, why do we go through design school without ever having the opportunity to conceive and build the total experience of real spaces, in full-scale? Challenging the traditional notion that design-build projects are for advanced students, recently I have been using design-build studio exercises at the beginning of design education, creating an opportunity for first year design students to advance their learning through design investigations that culminate in a built, full-scale spatial experience. Is it possible to use the studio as a place where the student and the educator understand design not only as a mere discipline but also as a political act? Drawing from the teachings of Paulo Freire, bell hooks, and Robert Irwin, Design as a Liberating Practice proposes a new attitude for the studio which promotes education as a process of conscientization, using the process of conceiving and constructing full-scale projects in collaboration with students. More than simply teaching them technical skills, critical thinking, and creativity, the studio can become a space where students learn to empower themselves to find their own sense of freedom, destiny, and position in contemporary society.

The Consuming Process

Gregory Herman

University of Arkansas

“The best possible design is seldom the one which is quickest to make, or anything like it; and, even where it is, the best quality of workmanship can usually be achieved only by the workman spending apparently inordinate amount of time on the job” -David Pye

Through an exposition of several projects given to first-year design students, this presentation will discuss the need for the imposition of the time-consuming project upon the Beginning Design Student. The vast majority of students arrive for the study of Design as participants in a “flash culture,” in which experiences and involvement are kept brief and perfunctory at best. Usually lacking a broad-ranging literacy, most students expect a quick and constantly changing range of experiences in both their academic and (too often) personal lives. The provision of the Time Consuming Process—that which is impossible to fulfill quickly—serves to prepare the Design student for entry into the realm of Architecture—a “patient study.”

It is often stated that the design process begins when the student endeavors to learn to “see.” But seeing must involve more than mere “looking.” Reflecting, criticizing and recording are all crucial to a successful attempt to “see.” The value of temporal, and the inability to rush any design process, and among the most crucial aspects a

Beginning Design student must learn. Critical feedback, iteration, and a sense of the desirability of dialogue with peers—recognizing the collective and collaborative aspects to the productive life of an architect—must be instilled from the start if an understanding of the true principles of the design process are to be advanced.

Projects involving long-term focus from the start—atypical in most Beginning Design curricula—privilege a series of areas upon which the student can focus. Materiality becomes an issue if the project involves the exploration and preparation of specific media, such as plaster, wood and metal. A sense of material empathy is only achievable with the use of actual material specimens, rather than the common mode of representation through analogous materiality. The use of tools as extension of the hand and eye serves to illustrate the “disconnect” to be overcome throughout the process. Reverence for the material, and coming to grips with its demands and limitations, has value beyond mere satisfactory completion of a task. Laborious tasks such as rendering textures, confronting details and recording ordinary conditions remove the tendency to generalize and gloss-over. Long-term focus gives the student a sense of the need to remain involved, and that the thing that is intensively and carefully pursued will provide the most rewards.

This discussion will be supported by an exhibition of student work done with more conventional media, such as paints, graphite and paper, as well as with more challenging materials as plaster, concrete and metal.

Assemblies: full scale construction in the freshman design sequence

Aron Temkin and **Scott Smith**

Florida Atlantic University and Carnegie Mellon University

The freshman design studio at Carnegie Mellon University's School of Architecture has a tradition of full-scale design and construction within the first year design sequence. In the first semester students develop abstract assemblies – typically textural compositions – that serve as an early lesson in composition, craftsmanship, and form making, and receive instruction in the various hand tools and machinery available in the Shop. In the spring term each design studio has approximately five weeks of access to the shop during which time each student designs, develops, and constructs an original piece of furniture.

This spring shop project has gone through many evolutions including: a library step stool, a chair for a musician, a Parsons table, a stand for a book, a stool, a bench, an Adirondack chair, and a screen for filtering the sun. Some of the educational objectives are familiar for a first year design project: lessons in design process, factors of human scale, drawing as a foundation for building, and the importance of craftsmanship. Other aspects of this work which are less common in a foundation curriculum are issues of materiality (and the implicit value and limitations of materials), the difference between modeling and making (i.e. the representation of an idea versus the realization of the idea), and the inevitability of revision which occurs

between the process of designing and the process of construction.

This paper examines the history of the shop project in two sections. In the first section the works are evaluated in relation to the project brief. The assignment has been written many ways, but may be summarized as either encouraging invention or encouraging interpretation. Certain patterns, particularly with regard to the median level of student success, appear closely related to this distinction. In the second section of the paper the shop projects are compared with regard to the varying success of several project objectives. These objectives include: the production of working drawings, the development of a design that is materially responsive (i.e. works with the material's natural properties), and the opportunity to teach design as a process of refinement and revision. original work of Scott C. Smith.

Reconsidering the Last Step

Pamela Unwin-Barkley

University of North Carolina at Charlotte

This paper presentation will demonstrate a series of projects that I developed that span the first semester of a five-year design sequence. The emphasis on the course work is to develop ideas through transformation and analysis of what the student has created. Since the projects build on each other, the students are actively transforming or analyzing the final iteration of one project to become the generator of the next inquiry. The paper will discuss how the projects vary in method, scale, and scope, as well as how each project is interrelated by what notion the student decides to elaborate from one project to another.

Throughout the semester, I stress the importance that each student must begin the next step by questioning the outcome of the last phase. I intend to discuss ways that I have engaged in my studios that avoid a passive approach to learning, whereby the students are fed the objectives and then they work to demonstrate what is outlined. Instead, I require that each student outline the next step of each project in light of the framework that I provide. From the outline the students begin their design process either through elaboration, transformation, or editing.

As a means of discussion and evaluation we discuss the clarity of the early concept, the reason for the development, and the tenacity to reach resolution. In light of the fact that it takes years to understand the process of learning things whose meaning and importance cannot be grasped in advance of doing, I work with the students to develop questions and not answers of the assignments. In many cases the questions reveal the significance of what they are being asked to pursue.

At the beginning of the semester, the students work on methods of representing three-dimensional space in two-dimensions. The second stage is to construct three-

dimensional constructs that eventually become an outdoor sculpture pavilion that accommodate four pieces of minimalist sculpture. The third stage is to work with real materials in a shop environment as a group to construct various corner conditions. The final project is a culmination of the many methods, skills and discoveries throughout the semester. The project requires the students to site two small buildings, a garden shed and a picnic pavilion in a garden that they develop.

Two-Dimensional representations of three dimension spaces

1.1 Cube Collage

Mapping Overlaps

Terrain Studies

Figure Ground Relationships

Using the two-dimensional investigations the students are asked to explore three-dimensional scaled constructions that eventually became an outdoor pavilion to hold four pieces of sculpture

Composing Volumes

Transformation

Sculpture Pavilion

Using real material, wood and steel the students construct a corner condition from the previous project.

3.1 Constructed Connections

From the wood connections the students developed an outdoor picnic pavilion and garden shed.

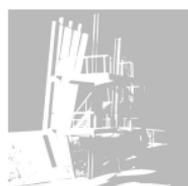
4.1 An Outdoor Room

4.2 Mapping and Sequencing

4.3 Spatial Boundaries

The Predicament of Beginning

ENCOUNTERING
MATERIALS II



GESAMTKUNSTWERK:
Architecture/Interior Architecture
- Elemental Integration as a
Pedagogical Foundation for Design
Education, Rebecca O'Neal Dagg,
Auburn University - Giving Back:
Student Architectural Product
Research in Service to
Practitioners, Jill B Pable, California
State University - The Art of
Recycling, Laura M Terry, University
of Arkansas - An Architectural
Exhibition: "Bench with the Film
of its Own Making", Jonathan
A. Hale, University of Nottingham

GESAMTKUNSTWERK: Architecture/ Interior Architecture - Elemental Integration as a Pedagogical Foundation for Design Education

Rebecca O'Neal Dagg

Auburn University

This paper discusses the fundamental pedagogical basis for incorporating Architecture and Interior Architecture into the beginning design curriculum, focusing on the model of the Architecture/Interior Architecture [ARIA] dual degree program at Auburn University. The ARIA program is a unique program in the country offering a holistic approach to design that focuses on the relationship between interior and exterior space early in the design student's education. Beginning in second year, hands-on material research, material application, interior space design, built interior objects, graphic design and digital media exposure contribute to the student's ability to conceptualize "total design" and to initiate the design process. An emphasis on material research continues throughout the curriculum fostered by the establishment of the ARIA Sustainable Material Library and Laboratory. Our program is unique not only because it enables ARIA students to be eligible for Architecture and Interior Design licensing, but also because it offers students a structure for entering into the current design discourse. As foundation for their education, the ARIA program content addresses and reflects the current market in Architecture professional practice, in which Architects are increasingly required to design interior spaces and operate "material practices." This paper will discuss the pedagogical framework of the ARIA program model, the curriculum, emphasis on material research, the use of the case study method, and specific beginning level courses to include the crucial Elements of Interior Architecture courses. Elements of Interior Architecture 1 isolates and studies the following elements of Interior Architecture: Form, Function, Spatial Composition and Transformation, Spatial Perception, Spatial Sequence, Interior Typologies, Light, Experience, Proportion, Scale, and Materiality. Elements of Interior Architecture 2 isolates the elemental Interior Architecture issues of material research and the tectonics of making, including sustainable material research, prototyping, and exposure to design/build.

Further, the paper presents the implementation of the ARIA studio framework, which is taught following and inclusive of two paradigms for practicing Interior Architecture. [It should be noted that the focus of the ARIA program includes, but is not limited to, small scale design.] Model 1 is expressed through the design of interior space within and responsive to an existing architectural enclosure and can include issues of adaptive reuse and renovation of existing spaces. [Historical examples include Carlo Scarpa's Castel Vecchio, Charles Mackintosh's Willow Room de Luxe Tea Room, and Adolf Loos' American Bar. Contemporary examples of the design of the interior within an existing enclosure include Office d'A's Chapel at Northeastern University, Diller + Scofidio's Brasserie Restaurant in the Seagram Building in New York, and Phillippe Starck's hotel

interiors in Manhattan. Herzog and De Meuron's new Tate Gallery, and La Pena and Torres' monastery are examples of this design model applying adaptive reuse issues]. Model 2 is expressed through the simultaneous design of the interior and the exterior including the entire building and spatial environment (furniture, lighting, materiality, spatial and contextual relationships.) [Historical examples include many projects by Le Corbusier, Alvar Aalto, Eileen Gray, and Frank Lloyd Wright. A specific historical project is Garret Rietveld's Schroeder House. Contemporary examples include Peter Zumthor's Bath at Vals and Raimund Abraham's Austrian Cultural Centre in Manhattan.]

Giving Back: Student Architectural Product Research in Service to Practitioners

Jill B Pable

California State University

Purpose

It is the nature of the profession that practicing architects and designers are busy people who are faced with keeping abreast of quickly changing construction technologies. Manufacturers of architectural and interior products provide knowledge, but their information is often biased to serve their business objectives. Therefore, impartial information regarding new products is scarce. Students, particularly those new to the field, have the need to develop research skills, become acquainted with materials sources, and develop the ability to critically consider manufacturers' claims. Further, students benefit from interaction with the professionals they seek to emulate. Therefore, an architectural materials service learning project was created that immersed a mixture of beginning and intermediate students in materials topic research and reporting methods. This information was then presented to local design professionals in connection with a professional organization meeting.

Methodology

Student teams randomly composed of beginning and intermediate students were assigned topics including environmental carpet reclamation, new building products, specialty class, innovation in textiles, issues in inclusion of audio/visual components, and environmental graphics/signage. Each team contacted manufacturers and conducted research via interviews, written and digital content, and other sources. Content was reviewed by the instructor and the University counsel for copyright issues and accuracy. The teams then created three-panel printed brochures, digital Powerpoint presentations (after instruction in how to use software), and table poster/sample displays that explained their research with the assistance of a \$1000 service learning grant provided by the University (see Figures 1 and 2). These funds also provided the means to create and distribute professional quality invitations, designed by a department graphics design student, announcing the event to local design and architectural firms.

Summary of Results

Partnering with the regional IIDA professional design

chapter; the "Information Fest 2001" evening event was held in which professionals browsed the students' table displays and became acquainted with the product information through the presentations and brochures (see Figure 3). Many students went beyond the project's requirements and included videos, distributed numerous samples, and performed demonstrations during the event for attendees.

The student team mixes of beginning with intermediate students provided multiple points of view and a chance to work in a partnership effort towards a common end, pooling resources and maximizing individual skills.

An interesting aspect of the project was the positioning of the students as a source of authoritative information that professionals placed high value on. This provided the student a new-found footing with the professional community and may have increased the students' sense of self-worth and realization that their contribution, even in their beginning stages, is indeed valuable. Prospective hiring architectural and interior design firms in attendance appreciated an opportunity to network and review the students' skills. Other introductory level students were also invited and witnessed the importance of research as well as the crucial nature of information delivery.

The Art of Recycling

Laura M Terry

University of Arkansas

"Other industrial countries produce half as much trash as we do and recycle a major portion of it... The cheapest and safest way to deal with trash are those that make common sense: producing less waste and recycling more"

The Environmental Defense Fund

As the role of architects and educators increasingly expands to include environmental and ethical issues, the kinds of projects we engage are students in much change as well. Beginning students in architecture schools across the country have known more wealth and have consumed more goods than those in the past. And yet the world's resources cannot keep up with the demand for goods and services. Without educating our students about the responsibility of architects and designers to the environment, our nation faces a crisis of both culture and nature. The purpose of this paper is to offer one possible project for educating young students about their roles in the greater scheme of the world. The impetus of this research was the end of school ritual of cleaning out the studios. I watched as the dumpsters behind the architecture school were piled higher and higher with perfectly good corrugated cardboard, chipboard, foam core and other essential model building materials. At that time, they only recycling in the building was aluminum and paper, and that only happened when the recycling bins were easy to locate. The Art of Recycling Project offers students the chance to design a system of collecting materials and resources to be recycled internally throughout the School of Architecture, ultimately benefiting both the students and the environment.

The beauty of this project is the amount of teamwork and personal investment required of the students. The beginning phase of the project is a one-week research

project in which students are divided into teams. Topics for research include information and statistics, programming, location, materials, precedents, supply recycling and video documentation. The immersion in the research provides the students with a black and white account of just how much waste we generate everyday. A simple survey of one week worth of trash in the studio revealed that roughly 750 cans or bottles are never recycled. The students are overwhelmed by these staggering statistics.

Following the week of research, students begin their work on individual designs for the collection station, to include both bins for aluminum, glass, plastic and paper as well as storage for materials like chipboard and foam core to be recycled internally. The projects are narrowed down from 42 proposals to 6. The students are again divided into groups to develop the 6 finalists for a final review. These groups are expected to deal with issues of materiality, connections, service and cost. After a presentation and final review, one project is selected for students to build and install in the building.

This project is excellent for the beginning design student for several reasons. In addition to building a better understanding of the world and how designers effect it, the students learn to explore the potentials and limitations of design by the materials, tools and costs of construction. Another valuable quality of this project is to teach students to measure the scale shift from a mode of representation (drawings, models) to a full-scale construction. Finally, the students learn the benefits of architectural design as both an individual search and a group endeavor. This hands-on project relies on student input, research and insight. Through the research aspect of the project, the students acquire ownership regarding the recycling of materials, hopefully making them more responsible students and ultimately, architects. The students end the semester with the value of seeing their efforts build a tangible program that benefits the school and the environment. The students are empowered by their actions.

An Architectural Exhibition: “Bench with the Film of its Own Making”

Jonathan A. Hale

University of Nottingham

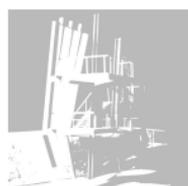
This paper describes a design-and-build studio project carried out at the University of Nottingham with students in their fourth year. Elements of it could also be considered appropriate for the 'Beginning Design Student'. The programme is based on the premise that there is a fundamental continuity between the human body and the rest of the world. In order to explain the significance of this idea for the way in which we design buildings, two relationships are considered: the relationship between buildings and their makers and that between buildings and their users. By making this distinction I try to draw out some of the lessons that a theory of materiality might suggest for the understanding of building use. The students were asked to develop new ideas for an architectural exhibition, beyond the traditional format of photographs

and drawings on a gallery wall. One of the most successful projects looked at the New Art Gallery in Walsall.

The students produced two pieces of work that tried to highlight this double relationship between the body and the world. Firstly, a bench using some of the same materials as used inside the building; secondly a video showing the construction process - partly inspired by the Robert Morris sculpture "Box with the Sound of its Own Making." In conclusion, I suggest that our bodily engagement with the materiality of things may form the basis of our sense of self-consciousness - as well as our understanding of the nature of the world around us.

The Predicament of Beginning

LEARNING TO LOOK I



Bounding Space, Jeffrey L Day and Brian T Rex, University of Nebraska - **Educating Emerging Vision**, Marcella Eaton and Karen Wilson Baptist, University of Manitoba - **Musical Beginnings: musings on teaching with music in the fundamental design studio**, John Maze, University of Florida - **The Space of Mondrian**, Lori Brown, Syracuse University

Bounding Space

Jeffrey L Day and **Brian T Rex**

University of Nebraska

The goal of this introductory, cross-disciplinary design studio is visual literacy. The students, from design fields such as textiles, graphic design, film, interiors, fine art, stagecraft, and architecture need to be able to generate, operate, and critique visual communications.

The vehicle of the studio is the student's most familiar place, her bedroom. Abstraction of the familiar allows one to step outside of habitual understandings of the thing. This process of seeing a thing is a process of defamiliarization.

The method of the studio is design through analysis. By proposing that analysis is design, we introduce students to design fundamentals in a limited field where a priori concepts are avoided to allow ideas to evolve through the work.

The subjects of these foundations exercises are boundaries and their varying qualities ranging from actual, precise, and material (Bona Fide) limits to spatial, legal, immaterial, and ephemeral (Fiat) boundaries. These terms are introduced in the studio as part of an effort to help the students develop not only a complex understanding of form and space, but also a view of design as the resultant vector of an analytical approach to a place.

The cognition and description of spatial conditions are essential components of any foundation for design and the visual arts. However, the ability to discern subtle spatial distinctions and the limits of spatial boundaries is often clouded by habit and familiarity. One thinks one "knows" the spatial make-up of one's bedroom, but can one really see the space of the room from a position outside of this perceived familiarity?

Educating Emerging Vision

Marcella Eaton and **Karen Wilson Baptist**

University of Manitoba

Teaching in a large 'beginning multi-disciplinary design' studio involves an awakening of both the educator and the student. Learning to look takes on multiple meanings in this environment. Inevitably the different disciplines share a core of similar knowledge and values. What is seen, however, and what is valued in the observation is often contrary. Initially the gaze is often discipline-bound. Through the experience of the multi-disciplinary studio approach, an expanded vision can emerge. As the lines distinguishing disciplines become increasingly blurred in practice, both educators and students have much to gain from the experience of sharing views and approaches from the beginning of studio education.

Learning to see requires practice, risk-taking, and a deliber-

ate awakening of conscious perception. Vision which can be interpreted as an integrated human capacity that emerges from the world of lived experience, is participatory and engaged rather than detached and observatory. Learning to look - vision - is deeply subjective, emerging from experience and critical consciousness. When vision becomes clear, students become aware of what was once hidden, lost, or invisible to them. Awakened vision requires a response. Educators must teach learners to balance their vision with action, channeling 'seeing' as a force against fear, and isolation, (that so often occurs in the beginning design studio) and non-sustainable practices (that so often occurs in the pedagogy of beginning design education). Learning to look in a conscious, participatory and critical manner educates individuals to be empowered and activated by emerging visions of what the world could be.

Musical Beginnings: musings on teaching with music in the fundamental design studio

John Maze

University of Florida

Grasping the concept of critical observation is one of the greatest thresholds in the education of an architect. Beginning design students often have difficulty honing their abilities to accurately perceive the world around them, resulting in design work that is misplaced or inappropriate for its context. Most any design teacher will agree that there is a profound difference in "looking" and "seeing" a situation, problem, or place. The former refers to passive acknowledgement that something is present, the details of which are obscured by preconceived understanding and images. The latter refers to actual observation and understanding of what is present, including relative connections that are drawn with past experience and other intuitions. Arguably, the earlier a student is able to intuit understanding acutely, the earlier he will be able to resolve the complexities of given architectural problems.

This paper addresses the utilization of music as an initial design problem in the fundamental design studio. Students strengthen their perceptual abilities through critical observation of various musical forms including Irish traditional music, American minimalist music, jazz, and European classical music. The music becomes a context within which projects are created, offering its own particular design vocabulary for the students to excavate and incorporate in their work. This paper discusses the strengths and weaknesses of such an introduction of the basic tenants of architectural design to undergraduate students, while proposing future enhancements to further the investigation. Projects from three different schools of architecture where this sort of project has been taught will be compared in order to understand linkages to disparate architectural curriculums.

The Space of Mondrian

Lori Brown

Syracuse University

The painter starts from the real world and when he or she finishes a work, it is an abstraction of the so-called real world. The architect on the other hand, starts from the abstract world and, because of the nature of his or her work; it gravitates towards the real world. The relevant architect is that one which, on having finished the work, is as close to the original abstraction as possible; and this is what distinguishes architects from builders.

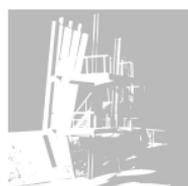
-John Hejduk 1974

This intense five week beginning architecture studio's pedagogical intent stemmed from ways of seeing translated into ways of making. The students had two five-week sessions to gain enough skills in hopes of transferring into the second year program. Not only were the students to learn basic drafting and modeling skills, but the five weeks was framed in such a way that each part of the process conceptually built upon the next. The work included in my proposal is from the first five-week session.

Beginning with paintings by Piet Mondrian, the students were asked to perform a series of geometric analyses and manipulations. These were explored both two and three dimensionally. Once successfully completing these studies, the students were asked to use a palette of materials [rockit, a fast drying concrete, basswood, metal, and plexiglass] in ways that continued their investigation of the painting. Not only addressing both the positive and negative spatial ideas within their analysis, this process explored how different materials convey different meanings, how light creates depth, and how these materials actually join together. The final project, a retreat for a cellist, began with the last model as a point of departure for their design. In some cases, the final forms were reminiscent of the Mondrian paintings but all the projects were able to exist within their own created narrative – moving far beyond the original painting.

The Predicament of Beginning

LEARNING TO LOOK II



Listening to the Past: Persuasive Stories and the Beginning Design Student, Nathaniel Coleman, Washington State University - **Seeing/Site: A one-week project,** Peter Hind, University of Nebraska - **A Case for Analysis in the Beginning Design Student Curriculum,** Melissa Weese Goodill, University of Maryland - **Representing Place for the Design Process,** Nancy Yen-wen Cheng, University of Oregon

Listening to the Past: Persuasive Stories and the Beginning Design Student

Nathaniel Coleman

Washington State University

Architecture students tell stories about their work. Often, though, what is said is accepted as valid simply because it is said. Closer scrutiny of the relationship between what is said and what is presented frequently reveals a wide gap between intention and result. Concurrently, beginning design students are thought of as requiring skill development above all else. Overemphasis on skills, or technique, though, undervalues developing conceptual sophistication. If students are not introduced to design as an ill-defined problem, akin to effective and persuasive argument, their propensity is to produce work that is unfocused, lacking in conceptual sophistication, and ineffectively developed or represented.

Cultural memory as a resource for design invention reveals persuasiveness—making effective arguments (textual, oral, and visual statements)—as a crucial ability for beginning design students. Students will come to see the world and care about it only if faculty members show them why this is worthwhile. After all, what other tool do faculty have as they attempt to win over the hearts and minds of students to a concern for the constructed realm we inhabit?

Persuasiveness resists the reduced cultural role of architecture. It offers a hopeful dimension in the form of possible reform; reform based on the conviction that architecture might still have an ethical function, which at its most basic is its orientating objective (confirmed by work—introduced to us from the past—that prepares the ground for human occupation in all its depth), a conviction beginning design students do not (do?) arrive at school with.

Seeing/Site: A one-week project

Peter Hind

University of Nebraska

This paper focuses on a foundation design project that effectively immerses students into the design process through the use of everyday experiences. The project and resulting paper presented here addresses the questions: What is the beginning? How do we perceive space? Can analysis be design? Or both? Can archeology be design? What is measurable?

“Seeing/Site,” is the first project given to freshman students in the Analysis Composition rotation of the Visual Literacy (Vis Lit) program taught within an accredited architecture program. The program is in its fifth year with enrollment close to 300 students and eight faculty members instructing. Visual Literacy encompasses architecture, interior design, fine art, textiles/clothing design, and fashion merchandising. Seven-week units comprise the yearlong course: Drawing I, Drawing II, Color, and Analysis Composition. Analysis Composition focuses on issues of form, mass, surface, and space and is the specific focus of the proposed

paper:

The duration for "Seeing/Site" is one week (four studio sessions) and requires students to work in groups of four. The groups of students are required to survey a 10'-0" x 10'-0" section of ground that is distinctly topographic, one that they believe they know well, and that they travel through daily. After establishing the importance of a datum, six lines are delineated; four that make up the perimeter of the square and two that bisect these lines perpendicularly. These lines then become half scale and are then merged and re-presented in one drawing. Students also photograph, and sketch the site. These images are then the basis for three-dimensional constructions that question the existence of space within two dimensions.

After careful editing, the site is detached from the image with gray paint, rendering a new landscape. Within this new landscape a one-inch square section of topography is chosen for further analysis and development. This square brings the issue of scale to the project. It then becomes transformed into three-dimensional form and is increased in scale ten times. These constructions begin to uncover the possibility/ability to create new space and are the first act of design in the unit.

A portion of the studio time focuses on discussions of Aristotle's notion of *Topos* and Plato's *Chora*. From this introduction, David Leatherbarrow's discussion of space and site from, *The Roots of Architectural Invention* is related to Mies Van de Rohe, Carlo Scarpa and others. Finally, the connection between site and space is concluded with a presentation of Gordon Matta Clark's work on deconstruction and Rachael Whiteread's recent work, *Looking Up*.

Students are also asked to inspect the site in much of the same way a detective might scrutinize a crime scene. Discussions and readings about Sherlock Holmes are the focus for a portion of the studio time and are directed by the student groups. The method of inquiry is at a scale of one to one and is done by making a casting of a piece of the original site. To be successful, students need to consider the transition from one surface to another. In this portion students expose the actual space and surface of the site as an artifact.

The one-week time constraint placed on the project makes it a unique opportunity for students to immerse themselves into design. This combination paper/exhibit is suitable for the proposed sessions entitled: "The Enigma of the First Assignment" or "Learning to Look." The presentation/discussion of this project will provide the participants of this conference with the opportunity to question the effectiveness of this introductory design project as a means of initiating students into the world of three-dimensional design.

A Case for Analysis in the Beginning Design Student Curriculum

Melissa Weese Goodill

University of Maryland

The beginning student of architecture is typically confronted with a number of new and abstract issues in the design

studio. At the forefront is the elusive “design process”. Most beginning students are accustomed up to this point in their education to a formulaic solution procedure and are understandably frustrated by the lack of specificity of the idea of the design process. Adding to this burden is the beginning students’ inability to graphically represent their ideas.

This paper will articulate a case for the introduction of analysis at the beginning of the design studio sequence in order to propose a framework for initiating the design process and strengthen perceptual, graphic and diagramming skills. Two different methodologies will be explored:

1. Integration of analysis within the design studio. The process of analysis is often used as a device to introduce historical precedent, but fails to make the connection between the analytical process and the design process. Additionally, the process of analysis might be applied to other sources, including analysis as a form of self-criticism and the analysis and subsequent transformation of non-visual media, such as literary works. Within the context of a beginning design studio at the University of Maryland, these forms of analysis were investigated in order to suggest to students possible methods of approaching the design process.

2. A specific course devoted to analysis in the beginning year, using as a laboratory a large metropolitan area with significant architectural works. Often such a course takes place in upper years, generally in the context of a study-abroad program. The process of drawing and analyzing built works on-site might be even more rewarding if introduced at an earlier point in the educational process. In an analysis course offered in the second semester of their first year at the University of Maryland, architecture students were exposed to the diverse architectural and urban conditions of a particular region and developed methods for critical examination through on-site documentation and analysis. In addition they increased perceptual and graphic skills and began to understand the possibilities of the architectural journal as a tool in the design process.

Representing Place for the Design Process

Nancy Yen-wen Cheng

University of Oregon

How does the process of recording and presenting place-based information give students an understanding of an environment? For the past four years, we have guided second-year undergraduates in using different methods to portray downtown blocks prior to designing on them. The project illuminates what place-based information is most valuable for design and how the place-recording methods open designers to perceiving. In recent iterations, we have consolidated site material from different parallel classes onto a shared website. The project allows us to observe how paper and digital representations can be best used

in the design process.

In order to study a 5 block area and its adjacent district, we assigned students to look at specific topics. Students visited the site to gather topical information and document the site in photographs, sketches and field notes for measured drawings, cardboard and digital models. Among more than 20 studies, the most successful studies were

- * Building stories: uncovering information about physical form, history, uses, socio-economic status of selected buildings as microcosm for the area.
- * Then and now: a comparison of historic photographs and present day views
- * Material inventories: photography and rubbings to record surfaces, textures, color, geometry and composition of construction
- * Rapid visual screening to inventory specific construction features
- * Node, path, edge, landmark: Coding of site features according to the precepts of Kevin Lynch
- * Activity maps: recording the location and types of human activity observed in public spaces

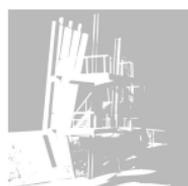
The paper analyzes what factors differentiated the studies that worked well, looking at methods of analysis and representation. Both instructor observations and student peer feedback provide ways to evaluate the efforts. The paper continues to explain how to structure the field study exercise to maximize resourceful individual and team learning in both creation and use of the shared site analysis.

Initial lessons learned include:

- * Redefining the study focus from content topics to research methods enriched both the learning and the products.
- * Strong examples ensure quality results. Models and rules were shared through hand-outs, presentations and Web pages.
- * The Web shows off some material better than others: Text, historic photos, still images come across well. Human activity and opinions are much more difficult to capture and convey. Scale, haptic sensations show more in movies than in still images.
- * Areas for investigation need to include non-visual media, such as audiotapes, thermal and light meters, to provide a richer picture.
- * Group interaction around digital information requires either accessible printouts or new ways of interacting around a screen. Current computers allow only one person to control the viewing of information and requires that person to disengage from the group discussion to do so.

The Predicament of Beginning

REPRESENTING IDEAS



The Viewing Machine, Alice MinSoo Chun, University of Pennsylvania - **The Parallel Projection, as Flights of Fancy**, Mary Nixon, University of Pennsylvania - **Allusion, Illusion and the Beginning Design Student**, Albert C Smith and Kendra Schank Smith, University of Utah - **The Design Process: Charcoal Drawings, the Qualitative Representation**, Mo Zell, North Carolina State University

The Viewing Machine

Alice MinSoo Chun

University of Pennsylvania

Technology in architecture, rhetoric of construction, is an elegant procedure, which expresses an erotic search for knowledge. As Marco Frascari explicates, "Technology is the fertile factor for the architectural production of elegant meanings, it deals with both the construction- the logos of techne (elegant art)— and the construing—the techne of logos (rhetoric)." In this case technology translates from figures of thought to figures of site, and figures of making. It may be construed as a condition that attempts to answer the question: How does one begin? The curriculum that we have developed for the Undergraduate Architecture Program at the University of Pennsylvania provides a place for the cultivation of technology through the demonstration of architectural ideas. Strategy for making is discovered through the constant variable, as William Richard Lethaby explicates, "the building interest: the delight in experimental construction, is the adventure into the unknown....This adventure into the constructional unknown can only be done by using an elegant technology." As a Janosian condition, it reconciles the art of thinking and constructing. One vehicle for the this reconciliation is through a project called the "viewing machine" which is taught during the first year of architecture.

The translations are ambiguous but the implications may be understood by verbal and visual cunning. A constant conjuring of calculation is required to play the role and rational in the pursuit of craftful technology and it's meaning in the first year. One intention is to explore the visual dimension by re-presenting "idea' and issues of technology through the implementation of assembly, collage and montage. This first "step" is devoted to the conjuring of "idea ' as a visual intersection between the "eye of the mind" and the body of building possibilities. Development of visualization and perception is pursued through the discipline of drawing. Measure, projection, and prediction is utilized for the translation of the imagination into graphic material. A series of collages and montages are constructed for idea categories.

The Process: The production and projection of architecture as interpretations and translations from the intangible to the tangible. In this case "site" and "sight" are explored in conjunction with the construction and use of a device for (re) interpretation: a viewing machine. Fragments of a site are in a sense measured scientifically as well as phenomenally with the help of the device and (re) interpreted as a series of drawings (or constructions), which reflect and generate program.

The poetic analogue to the process of measurement, calculation, and cunning as pursued through the underlying strategy of the studio is seen through the figure of Metis, (the ephemeral goddess, daughter of Ocean). This figure becomes woven into the components of discoveries, drawings and constructions, which are assembled along with an inherent creative process of intuition, necessity, and

desire. The qualities and character of Metis are referenced by Ann Bergren in "The (Re) Marriage of Penelope and Odysseus":

"Metis: Metis engages both the mental and manual prowess, both language and material. Metis works by continual shape-shifting, turning the morphe of defeat into victory's tool. Its methods include the trick or trap (dolos), the profit gaining scheme (kerdos), and the ability to seize the opportunity (kairos). Each of these exploits the essential forms of Metis, the 'turning' (tropos) that binds opposites, manifest in the reversal and the circle, in weaving twisting, knotting, and in every joint. The mistress or master of Metis knows how to manipulate 'the circular reciprocity between what is bound and what is binding'. Etymologically, Metis is derived from verbal root meaning 'to measure' with its implication of calculation and exact knowledge. A traditional connection between Metis and the builders

A skill is seen in the figure of Athena, daughter of goddess Metis, who teaches making (poiesai) of elaborate chariots to 'builder men' (tektonas andras) and weaving to maidens (parthenikas). Metis does not completely revise architecture out of its dependence on foundational concepts but alters the ground upon which this foundation rests."

The viewing machine is an apparatus to explore the phenomenon of perception and experience. To employ the device, it is required to be a witness and master of Metis. It does not hold bounty to urban or rural space. The machine feeds from both the landscape and city as conditions of sight/site. Manipulations within a "frame mechanism" affect and inform the viewer of possible relationships between the viewer and the viewed. The machine also carries a "contaminant" (mirror, lens, liquid, glass, figure, etc.) within the viewing hinge or frame. This contaminant causes an overlapping, twisting, or collapsing between the first space viewed and the second space of the machine. The machine collapses or inverts the distance between "construing and constructing" and "manipulates the reciprocity of what is bound and what is binding". The result is a third space or hybrid condition between the perception of space and object, the internal space of machine and external space of the viewed. It creates in effect a "space prior to reason".

Observations and recordings of this hybrid space proceed with themes, settings, and elements taken from the site. The construct of this experience and its discoveries attempt to record a dimension or measure between, the physical and meta-physical, (space and time, movement, memory, senses, death and rebirth, etc.). This method of "measure" works to embrace imaginary and physical relationships to arrive to a condition of programmatic possibilities. It is closer to what Martin Heidegger describes in Poetry Language, Thought

"...The taking of measure is what is poetic in dwelling...Measure taking is no science, Measure taking gauges the between which brings the two, heaven and earth, to one another. This measure-taking has its own metron, and thus it's own metric."

The parallel projection, as flights of fancy

Mary Nixon

University of Pennsylvania

The poet's eye, in a fine frenzy rolling,
Doth glance from heaven to earth, from earth to
heaven;
And, as imagination bodies forth
The forms of things unknown, the poet's pen
Turns them to shapes, and gives to airy nothing
A local habitation and a name.
William Shakespeare, A Midsummer Night's Dream

As spoken by Theseus, William Shakespeare beautifully describes a creative method of the poet. The architect too possesses a poet's eye. And where the poet will use words to compose imaginary places, the architect's efforts will result in drawings. Both the poet and architect rely on sight capable of seeing from above and below, from heaven to earth and back again. For a student of architecture, developing imaginative points-of-view and drawing acumen, is a must. The isometric perspective is one such drawing type that aptly addresses point-of-view. Its three dimensional properties and simple methodology make it a standard of beginning designers. What the isometric is about, is an important element to mastering its use.

This paper examines the long history and sometimes-parallel track to architecture the isometric has enjoyed. An explanation of the difference types of isometric or oblique perspectives will be reviewed. The paper will concentrate on a period, late in the 19th century and early in the 20th, when there were great strides in mathematics, science and technology. With these developments the world-view changed. To illustrate the shift from demigod to democrat, I will center on the American Architect Claude Bragdon, a follower of Emerson and an advocate of Louis Sullivan. Bragdon is among those credited with reintroducing the isometric perspective to the Modernist Movement. Though modern man has mastered many things, the dream of flight and its communication will always occupy the poet and the architect.

Allusion, Illusion and the Beginning Design Student

Albert C. Smith and Kendra Schank Smith

University of Utah

In many schools of architecture, there has been tension between how to teach practical verses theoretical design issues that can also effect how we teach the use of media to beginning design students. For example, in some beginning courses, techniques are thoroughly practiced but the critical use of these techniques is generally ignored, the result is of seductive images that have little bases in concern for materiality, function or design aesthetics. On the other side of this issue, is the popularity of ambiguous, emotional overly personal markings that can refer to anything the student is thinking, these projects are equally hard to critique as they become so personal they are lost in the allusion of the beautiful and constantly referencing image. This paper will discuss a series of beginning

architectural projects that contain aspects of allusion and illusion as a means of describing our pedagogical position in teaching such classes. We will present examples, from recent classes, to question and elucidate both the inherent differences of these potentially dichotomous terms and conclude how they might lead us in a more concordant direction for beginning students in architecture.

Allusions require students to play with references or associative connections, while illusions with a vision of the future that evokes connotations of falsity may be against play. On the surface, these may seem to consist of opposite intentions. Considering that each word has origins in the concept of *play*, a dialogue between the two may suggest potential relationships with representational media and help students comprehend their constantly changing modes of definition. As a method to illustrate these concepts, we would like to present beginning communication/design projects that introduce the importance of being able to move back and forth between allusion and illusion based in play and recalibration of definition. These projects will highlight our position that beginning architectural design courses should not be viewed as just a means of presenting completed concepts but rather an integrated introduction to architectural thought and making through the architectural media.

We believe the overall strategy for such beginning design courses should be to approach representation as an act of making (description of building and construction), and exploration and inquiry (study, ideation, criticism). There are at least two reasons for this. First, architectural design cannot be developed and tested in full scale for obvious economic and political inconveniences, thus visualizing this future building must come through utilizing substitute media. Second, the human mind has clear limitations in generating, sustaining, and communicating credible simulations of architecture without external recordings. By using representations engaging both allusions and illusions to articulate and communicate architectural actions and thoughts, our students are not only able to demonstrate solutions to their problems but also create a language without which architectural work would be inconceivable.

Our conclusions will suggest that the meanings of these two terms need each other since they are two sides of the definition (the future building) and help us to comprehend both the conceptual beginnings (allusion), and the view of the future (illusion). Thus, we will argue that in beginning architectural communication/design courses it may be artificial to separate the concepts of 'illusion' from 'allusion' as they may be one and the same.

The Design Process: Charcoal Drawings, the Qualitative Representation

Mo Zell

North Carolina State University

Beginning design studios generally stress a quantitative method of representation; a method that explains a project in a formal and precise manner, typically including hard-line plans, sections and elevations. Absent or underutilized from the design process is a qualitative method of representation that records more of the evocative qualities of a project.

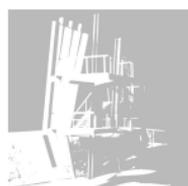
This qualitative method of representation is emphasized in my teaching through charcoal drawing as an exploration of space.

The medium itself allows an artistic freedom to describe space and derives strength from the high contrasts in light and shadow. Its “messy” quality liberates students from their own fear of sketching incorrectly. It is the strength of the medium as a bold, expressive device that I find extremely helpful in the studio setting.

As part of a 2nd year design studio at Clemson University, students were introduced to charcoal drawing through several projects including the first, a 250 SF room for a traveler. Charcoal drawings were developed to understand not only scale and movement but also materials and their relationship with the traveler. The students were investigating the spatial and tactile qualities of an interior space paying special attention to lighting qualities. The project was intentionally small in scale and internally focused to increase the students' awareness of space making. Throughout the entire semester, charcoal drawings were used to express evocative qualities that traditional hard line drawings could not reveal.

The Predicament of Beginning

THE ABSTRACTION OF
PLACE



Building the River: An Introduction to Urban Design in Savannah, Georgia, Christian Dagg, Auburn University - **Rethinking Studio Pedagogy: Teaching Introductory Architectural Design at the Graduate Level,** Michael E Gamble, Richard Dagenhart and Chris Jarrett, Georgia Institute of Technology - **Learning from Cultural Space: Connecting Culture and Environment in Beginning Design,** Jeffrey Hou, University of Washington - **deTail of Two Cities: Utilizing urban analysis and recombination as the first project in the fundamental design studio,** John Maze, University of Florida

Building the River: An Introduction to Urban Design in Savannah, Georgia

Christian Dagg

Auburn University

This paper discusses one strategy for exposing architecture students to beginning questions in urban design and how this exposure can be structured within the design studio. Focusing on the city of Savannah, Georgia, the study of urban morphology and resultant building typologies are a basis for the studio research and design proposals completed in the spring of 2001 at Auburn University in Alabama. The studio was co-taught with Brian Mackay-Lyons, who has established his own Architecture and Urban Design practice in Nova Scotia. MacKay-Lyons' practice served as a backdrop for the studio through an emphasis on contextual research, through the sequence of design exercises and finally through the products of the studio. This studio serves as a precedent for teaching the conceptualization of the contemporary southern waterfront city at the level of both urban design and architecture.

One ward of the original urban plan was utilized as a site in order to discover localized typological and morphological variations inflected upon this ideal order. Additionally, a length of the riverfront was utilized as a site to take advantage of Savannah's orientation, climate and topography. Eventually, the studio identified five distinctive site types, and ten distinct street types, out of a total of sixteen project sites. A series of emergent conventions arose out of the interaction between the sites that allowed not just for the consideration of a "redeveloped" Savannah, but also provided the space for speculation about the possibility of an ideal city type appropriate for any waterfront condition.

Rethinking Studio Pedagogy: Teaching Introductory Architectural Design at the Graduate Level

Michael E Gamble, Richard Dagenhart and Chris Jarrett

Georgia Institute of Technology

Over the last two years, our Architecture Program committed considerable intellectual capital to the rethinking of graduate level introductory design studio pedagogy for students entering our Masters of Architecture 1 / 3 year program. This reevaluation concentrates on several unique challenges inherent in the graduate level introductory design curriculum, which include:

the inherent differences between the age and personality profiles of undergraduate and graduate students. Many programs treat the curricula as equal, with graduate students executing the same exercises as undergraduates, only at a faster pace.

the developmental gap that exists in the second year

of most M. Arch I programs between students with architecture and non-architecture backgrounds.

Our goal is to retool the core (I,II,III) design studio pedagogy in order to bring those students with undergraduate degrees in non-architecture disciplines up to the same level of design skill development as 1st year graduate students with 4 year Bachelors of Science in Architecture degrees. In short, these incoming students are disciplined, mature and educated and need a highly structured environment that works to develop skills in design and the conventions of representation, teach theory as a part of everyday studio work instead of a separate activity, and introduce an understanding of design strategy to enable mature projects to emerge more quickly.

This paper focuses specifically on innovations in and the implementation of the pedagogy in the pivotal Core II Studio, which is taught in the Fall.

in response to the overall charge of our graduate program, the prerequisites of more advanced studios, and specific needs of the students, this revised curriculum is innovative on three key fronts: Structure of Projects, Studio Themes, Studio Organization and Reviews

In our new structure, Core II centers on the early delivery of aspects of the 'real world' into the graduate design curriculum, in juxtaposition to the traditionally abstract/formal/academic aspects of early design education, intersecting the formal and the disciplinary with the everyday and ordinary. Urban and suburban parking lots, vacant lots, backyards, cemeteries, and aspects of the center and periphery figure prominently in exercises concerned with design conventions.

This paper and presentation will discuss advances in our introductory design pedagogy supported with examples of student work from the studio.

Learning from Cultural Space: Connecting Culture and Environment in Beginning Design

Jeffrey Hou

University of Washington

How can beginning design connect life experience to the understanding of space? How can an introductory design exercise introduce the students to the increasing complexity of space and spatial processes? This paper examines a beginning design exercise assigned for the first-year environmental design students at University of California, Berkeley. Based on J.B. Jackson's essay "The Westward-moving House," the students were asked to each create a three-dimensional collage of the dwelling space from three generations of one's family. The assignment allowed the students to bridge their prior experiences and background to an exploration in design. It also connected the act of design to the broader social and cultural context and processes. The complexity of the students' experiences and background in turn

impelled them to explore a wide range of spatial and representational strategies in design. The paper argues that introductory design projects need not solely be abstract spatial and formal exercises. Instead, the social and cultural complexity of space in design can be appropriately addressed at the beginning level. Such approach can establish a broader cultural and socio-economic context for the exploration of space and design and allow students to develop skills in critically shaping and responding to the profound social and spatial changes facing the cities and regions today.

deTail of Two Cities: Utilizing urban analysis and recombination as the first project in the fundamental design studio

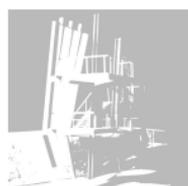
John Maze

University of Florida

This paper describes a methodology for introducing students in the fundamental design studio to urban analysis, urban design, and basic tenants of architectural design through the invention of a fictitious city based on the amalgamation of two existing American cities. Developed while teaching at the University of Virginia, I have used this project repeatedly always combining Phoenix, Arizona (a city far way to be discovered through research) with an eastern colonial city (a city nearby to be discovered through first hand experience). Students learn how settlements develop vernacularly or by design as they create their new cultural and urban landscapes.

The Predicament of Beginning

THE MODEL OF
LANGUAGE



Education of an Architect: Through African-American Constructions, Scott Ruff, Syracuse University - **Design's Community of Knowledge: Identifying and Organizing Design's Fundamental Concepts to Support Teaching and Learning,** William R Benedict, Cal Poly - **While Mind Dances with Heart: Nurturing Design Vocabularies Through Personal and Cultural Identities,** Shenglin Chang, University of Maryland - **Design As Language,** Patrick Louis Carrico, Portland State University

Education of an Architect: Through African-American Constructions

Scott Ruff

Syracuse University

I could not conjure my God in this place, and it seemed His failure. Surprise... overwhelmed me.

Lorene Cary, Breaking Ice I

Since the time I entered architecture school a simple question has worked, first my sub-consciousness and soon my consciousness. Where am 'I' in this thing called architecture? It is probably a small question for many something that enters the thoughts of many students for brief moments, but quickly passes, never to become world shattering. Possibly because many of these students come to see themselves within their heroes, icons, and mentors, through the history that is taught and the theories and methods that are espoused and implemented, they find validation in merely 'doing', following the plan. But as an African-American growing in self-awareness but not in presence I began to feel strangely less as each day within my curriculum passed. I had come to a place (architecture) where 'I' (an African- American) was and is virtually non-existent as a culture. This seeming impasse greatly affected my work and me. Although most architecture programs present architecture through some level of abstract processing, those processes are not without cultural linkages and some expected cultural outcomes based upon the instructor's and the institution's self referential knowledge. As the above quote poetically expresses, I found my self overwhelmed by the notion of me not belonging. The projects didn't speak to me, and even with brief moments of clarity, when a slight connection presented its self to me; my guides, the translators (the instructors) did not and possibly could not understand, from where I was coming and due to my inexperience, I couldn't understand either. So I struggle(d), greatly, to conjure my God, to find myself within architecture, collecting small disparate shards of ideas and material culture that don't all come together, but offer a way, a passage. Presented here are a few pieces of what I believe can be connective material that starts a process of re-educating myself and educating others with an awareness of 'self' fused into an introduction of architecture to both African-American and Non- African American students. These projects are by no means isolated within African-American tradition but are probably more akin to the hybridization of ideas, such as Negro Spirituals as developed by the turn of the 20th century, Fisk Jubilee singers, blues, jazz and a host of other American developments that find their origins strongly based within the black resistance to complete cultural assimilation and erasure.

This presentation documents and positions a series of projects, developed over a three year period (1997-2000), while teaching the first year design course at Hampton University department of architecture, one of seven Historically Black Colleges and Universities offering an accredited architecture degree. Included with the assumed objective of introducing the students to design fundamen-

tals and basic representational skills (drawing), these projects were also developed to incorporate approaches informed by African-American/ Black culture and experiences. Each project utilized one of four different analogues to develop the students abstract conceptualizing and compositional abilities: 1) Hand Jive Spatial, addresses architecture through body and gestural movement. This project conceptually draws upon the African- American traditions of making music between the hands and the body, and multiple grips and catches in the “simple” hand shake, translating there ideas of minimal means to communicate and create sound to minimal means to create form and define space. 2) Poetry project: language and syntax, analyzes poetry any type, of the student’s choosing, especially rap. The literary compositions are filtered through such lenses as: their rhyme scheme, rhythm, word count, meaning, mood interpretation and a host of other criteria. The entire project breaks down the compositions, recomposing them visually. 3) Strip Compositions: weaving/ sewing draws upon an African strip weaving tradition, kente cloth, as a reservoir of inspiration, of process and method. 4) African-American Constructions: a reading of Mama Day, story telling / narrative, draws on specific technical devices within the story that are particular to African American tradition in story telling as devices to develop space. Each project is intended to be comprehensive within the framework of the class, never completely isolating one aspect of the curriculum over the other: conceptualization, freehand drawing, technical drawing, critical thinking and modeling of conceptualization through various media. The four analogues were chosen because of their “apparent” nurtured embedded – ness within aspects of the black cultural ethos, yet their “immediate distance” within the students ability to readily relate these approaches to architectural design. This play between familiarity and strangeness creates an instant dialogue within most students generating questions, which seek answers.

Design's Community of Knowledge: Identifying and Organizing Design's Fundamental Concepts to Support Teaching and Learning

William R Benedict

California Polytechnic State University

The words we use and the concepts they represent affect how we see, think and talk about the world. Each community of knowledge (e.g., Architecture, Physics, Sociology, etc.) has a language that is specific to that community or discipline. Membership in a community of knowledge involves learning the community’s language and developing an understanding of the concepts that it identifies. Our level of understanding of a community’s language can either obscure or clarify—it can help or hinder communication. The degree to which we understand the language and concepts of a community of knowledge is directly related to our ability to learn and develop within that community. The shared language makes communication within the

community more efficient and supports greater discrimination, subtlety and nuance. As we talk to ourselves and each other we sharpen our ability to think and construct a community of knowledge.

The goal of beginning design education is to build a foundation for dialogue that will lead to the sharing of perceptions concerning the what, why and how of design and its products. The value of the dialogue lies in its ability to improve the quality of our thinking and experiences, to identify and understand the factors that contribute to our perceptions, and to enhance our ability to create experiences, objects and environments.

There are over one hundred concepts associated with basic visual design. They are called different names by different teachers and writers and appear in different combinations in different courses and books. It is no wonder that beginning design students have a difficult time acquiring the understanding needed to implement the concepts in their thinking as opposed to mimicking existing patterns or styles. We see what we have concepts to see and describe what we have language to communicate. Little meaningful dialogue is possible without an appropriate vocabulary of concepts.

By identifying, defining and relating what can easily become an overwhelming number of ideas, each of us (student, teacher, professional and client) can develop a cognitive structure that supports current and future learning. The intention is not to define "the" structure but to model one that provides a shared starting point for dialogue and development. The goals are to engage diverse individuals in dialogue, make the community of knowledge explicit, support both intuitive and rational design processes and enrich design seeing, thinking and communication.

The following will present a rationale for clarifying and making explicit our community of knowledge, propose a hierarchical mapping of visual design's basic concepts and define key terms.

While Mind Dances with Heart: Nurturing Design Vocabularies Through Personal and Cultural Identities

Shenglin Chang

University of Maryland

Designers trained within the rational design paradigm tend to become professionals who believe that they must detach their identities and emotions from the process of creating places for their users and clients. Based on this rational paradigm, teaching beginning students how to approach the design of a specific site has traditionally employed the following steps: the invention of design concepts, the analysis of physical and ecological forms, and the response to users' behavior patterns and needs. A typical strategy that students are taught within the traditional paradigm of rationality, is one in which they

search the library for books or journals that reveal how the master designers of the past would have solved the programmatic and typological problems that the site presents. In other words, students have traditionally been taught to use someone else's' vocabulary, rather than inventing their own, as a way of developing the design of a landscape.

The approach that I take in teaching my beginning landscape design studio is one in which I draw upon my former career as a dancer/choreographer. I have found that within the process of creating and performing dance, the rational and the visceral constantly intersect: choreography and performance is a process in which the mind dances with the heart. In my paper I will reflect on a particular beginning studio that I taught recently, in which I took my students through a process where their personal memories and emotional responses became important counterpoints to their rational thinking: a process in which the balance between minds and hearts guided them through their design journey.

Design As Language

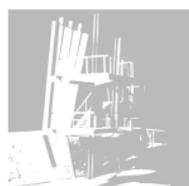
Patrick Louis Carrico

Portland State University

Art can fail. Design can become obsolete. Statements can be made that are so time specific they seem alien out of context. Giving in to the temptations of trend in design is a stunting pitfall that can be avoided by emphasizing specifically concise and universal language in a piece of art. Although this seems an obvious statement, in my own experience the tenants of formal analysis were used in critique, but not justified. Statements such as "this piece could use more texture" are not helpful if the student and the instructor have different ends in mind. While learning art, the student often has ideas about design that are heavily influenced by the esthetics of the time and classroom arguments boil down to nothing more than generational conflict.

The Predicament of Beginning

THE PLACE OF
ABSTRACTION



"Quilting" Connections Between Two and Three Dimensional Design For the Beginning Design Student, Valerie S Goodwin, Florida A & M University - **The Pedagogics of Play,** Jay McClure, Savannah College of Art & Design - **Specification and Invention: Strategies Between the 'Off the Shelf' and Abstraction,** Greg Snyder, University of North Carolina at Charlotte - **Setting a Baby into the Grass: A Biological Model of Interactions Between Concrete and Abstract Learning Experiences,** Stephen Temple, University of Texas

“Quilting” Connections Between Two and Three Dimensional Design For the Beginning Design Student

Valerie S Goodwin

Florida A & M University

What experiment or design projects appear to be successful for the beginning design student? How do we ask students to do something they do not know how to do? Can the fundamentals concepts of designing be grasped only in the context of doing?

As an Architect who is also a quilt artist, I am interested in the idea of finding common ground between architecture (whose expression relies partly on three dimensional expression) and the compositional aspects of quilts (a two dimensional art form). The design fundamentals of both are very similar. Both rely on fundamentals related to composition, ordering systems, color and pattern. Focusing on basic vocabulary and skills common to all designers in the allied arts is a long standing tradition in beginning design studios.

As a result of my interest, I developed a series of design projects wherein beginning architecture students were asked to explore issues as they relate to connections between textile arts and architecture. The concept for this series relies on the use of projects that build on each other and are divided into discreet manageable parts. Each represents an incremental step in the overall learning process. Pedagogical issues are carried forward into each successive project and are layered with specific design goals as the semester unfolds.

Implementation

Design process is emphasized so that the successful student is encouraged to use the design exploration / product of their previous projects. The goal is to help the student learn from themselves, their previous work – as well as the instructor. The student is asked to learn new design skills directly related to previous work. I implemented these ideas in Second Year design at our School of Architecture. The exhibit will cover additional information and examples of student work. The following are highlights of the exhibit.

The Pedagogics of Play

Jay McClure

Savannah College of Art & Design

The paper is to reintroduce students to the nature of play. By using play as pedagogy to rediscover and understand the world of objects. To liberate the imagination through constructive fabrications, and unite dissimilar elements into a found order. Understanding toy as a tool, in exploration, discovery, methodology, metaphor of design process and human factors, physical dexterity, social and psychological attributes.

Outline for this research includes:

1. Conveyance of a tactile, material progression
2. Understanding of plutonic geometries

3. Relation of whole to parts
4. Experimentation of various elements
5. Liberate students' thinking, return to childhood
6. Origins and primitive impulses
7. Visual language learned through occupations and gifts (Frobel)
8. Formal compositional elements with technical constructions
9. Risk taking
10. Self discovery
11. Plays tapestry
12. Elementary explorations of forms and materials
13. Story telling, play acting, overcoming inhibitions
14. Blind, gesture and rhythmic drawing
15. Child psychology
16. Plays need for: Observation, reasons behind objects, expression, creativity, and curiosity
17. Play objects: crayons, clay, blocks, toys, games, paper, scissors, etc.

Example of an exercise: Sphere

The sphere perfect in form, is the practical expression of stability and the material expression of motion. By grasping, rolling, dropping, hiding, and throwing the sphere, the child will gain intuitive and experiential knowledge of object, space, time, color, movement, union, attraction, and gravity. Nuts and berries are natural spheres, as are seedpods of the dandelion, Sycamore, the sun and moon. In play, the sphere might become a bird as it flies, a cat as it springs up, a dog jumping over a hedge, or anything else in the child's collection of empirical knowledge. In the realm of beauty, the spheres can color themselves with the primary colors – red, yellow, and blue – and the synthesis of their unions - violet, green, and orange. According to Frobel, the sphere was the germ of everyone, the paradigm for everything, and the most sublime expression of unity: In the first play with the sphere, the life of the child makes itself known and the outer world makes itself known to the child in unity.

Understanding and implementing the nature of play, the student will develop confidence in decision making, invention in problem solving, discovery in design, uniqueness in self expression, and the painstaking joy of creating architecture. This paper attempts to provide guidance for development of the nature of play and innovative ways to accommodate learning in architectural education.

Specification and Invention: Strategies Between the 'Off the Shelf' and Abstraction

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How do we negotiate the relationship between the familiar, or the seemingly familiar, and the process of abstraction and form making? This is a critical question we confront in teaching the beginning design student.

This paper and attendant exhibition of work illustrate the fall semester's work of a first year design studio which

consciously confronts the question of where we begin in teaching design. The projects are:

An Act of Specification – the introductory project in which the students designed and fabricated a lighting fixture using readily available “off the shelf” components. The exercise began in groups with the inventorying of available parts at the local hardware store. As individual solutions developed the students were required to identify and document the site condition, collage and draw the light components and assemblies at full scale, draw the light emitted from the fixture in its context, and finally build the light and an attendant working document. In addition to the graphic representations of the design that accrued over the course of the design process, a set of written evaluations were required in order that the students would be able to articulate the design experience.

An Introduction to Composing Form – the second project of the semester introduced the students to the basic compositional issues and strategies of two and three-dimensional form. These exercises are highly structured in order to restrict the formal vocabulary and to insure that the student develops a discipline that they are typically unfamiliar with. The project takes a composition of predetermined elements from paper, to shallow relief, to volumetric model in a series of stages that require abstraction, extrapolation, and the subsequent transformation. In the end the students see the way in which a complex three-dimensional matrix of form can be implicit in a seemingly simple two-dimensional composition.

The Tool Case – the third project of the semester begins with the gift of a measuring device. The students are given one of the following: a 12” combination square; a mason’s rule; a chalk line; or a vernier caliper. With the tool in hand a set of drawings of the measuring instrument are developed in which the action and geometrical properties of the tool are identified. From this analysis the students design a case for the tool that emphasizes the ritual use of the tool, and the engagement with the hand. With the design in hand the students are given an introduction to our shop facilities, where they build the case out of a selection of woods and metal.

The Tool Shed – the final project of the semester that extends the content of the Tool Case. The students are given the program of a modest tool shed located within an abstracted garden context. The charge of the project is to translate the concepts and strategies from the Tool Case and invest them into a modest building and landscape. The building is required to unfold into the landscape and to serve a narrative of ritual use.

Setting a Baby into the Grass: A Biological Model of Interactions Between Concrete and Abstract Learning Experiences

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Place a baby for the first time onto the grass. Learning takes place at the fingertips, making new connections to the physicality of the world and developing representations of that world. Each new contact becomes a test of those representations against each successive contact. Concrete experiences are thus impressed upon the structure of the mind, burning in synapses and altering the brain and nervous circuitry. Educator Robert Leamson believes that basic structures of neural processing are formed in the primary experiences in which students first engage, inevitably patterning successive learning experiences according to "hard wired" pathways. Pedagogy of basic design courses that seeks introduction of design processes as a universal foundation for architectural education must recognize these biological mechanisms of learning as basic to first year curriculum. In question is: what initial learning experiences may form patterns more ideally related to architectural experience?

The intent of this paper is to model first year design pedagogy on relationships between concrete and abstract processes of learning as a basis for the continued development of design process and maturation beyond first year. Leamson's theory is that learning, at the basic level of the brain, involves self-initiated brain changes. If primary experience is biologically formative, initial learning experiences should be those that best enable self-initiated decision-making consistent with the biological interactivity between body and mind, between, respectively, the concrete and the abstract. Architecture is grounded in the development of abstract content experientially based in concrete material physicality. Education psychology identifies concrete and abstract learning as fundamental poles for acquiring and acting on knowledge. Concrete learning involves direct experiential engagement through heuristic discovery and reflection. Abstract learning involves indirect representational cues in acts of conceptualization, synthesis, and experimentation. An interactive cycling of concrete and abstract learning processes is a structural approach that holistically defines between them a transformational interdependence.

INDEX

Geoffrey Adams	10
Eduardo Aquino	24
Karen Wilson Baptist	36
William R Benedict	57
Lori Brown	38
Shenglin Chang	58
Patrick Louis Carrico	59
Alice MinSoo Chun	46
Nathaniel Coleman	40
Richard Dagenhart	52
Christian Dagg	52
Rebecca O'Neal Dagg	30
Jeffrey L Day	36
Esther Dudley	18
Marcella Eaton	36
Michael E Gamble	52
Melissa Weese Goodill	41
Valerie S Goodwin	62
Jonathan A. Hale	33
Gregory Herman	24
Peter Hind	40
Jeffrey Hou	53
Chris Jarrett	52
Karen King	10
Kevin R Klinger	10
Hector LaSala	20
Alex Maller	14
John Maze	37, 54
Jay McClure	62
Elijah Mirochnik	21
Mary Nixon	48
Jill B Pable	31
Karl Puljak	19
Ayad Rahmani	14
Brian T Rex	11, 36
Scott Ruff	56
Corey Saft	12
Albert C Smith	48
Kendra Schank Smith	48
Scott Smith	25
Greg Snyder	63
Marc Swackhamer	10
Aron Temkin	25
Stephen Temple	64
Laura M Terry	32
Simon Tomkinson	15
Pamela Unwin-Barkley	26
Mo Zell	49