

studia | studio

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In any case I hate everything that merely instructs me without augmenting or directly invigorating my activity.

Goethe, as quoted by Nietzsche

ABSTRACT

This paper sets out to propose that the use of history in a design studio may help to overcome some latent difficulties of the studio as a model of education. I will first discuss the role and nature of studio within the education of the architect and will reference my analysis to the findings of the Boyer Report and the research into “reflective practice” by the educator Donald Schön. While I do support the studio as described by the Boyer Report and Schön’s research, it is a model that has disadvantages. As an alternate proposal, I will then describe the learning objectives and assessment strategies for a third-year design studio entitled, *studia | studio*.

STUDIO CONTEXT

Published over ten years ago, the Boyer Report had two intentions. The first was to examine the problems and possibilities of architecture education as it has evolved through the twentieth century. The second was to study the separation between education and practice as well as between architecture and other disciplines. The Boyer Report suggested the following.

The education of students about the scientific, social, aesthetic, political, and environmental foundations of architecture, should not be about teaching disembodied skills and facts. The standards should stress active inquiry and *learning by doing*, rather than the accumulation of facts from texts, required lectures, or design problems handed ready-made to students. Further, students should be partners in extending the knowledge base of the profession through *reflective practice*. Learning to define problems, asking the right questions, and weighing alternative approaches must be at the heart of architecture study.¹

We are all very aware of the phrase “learning by doing,” but what does it really mean and how does it relate to teaching studio? The Boyer Report makes a diagnosis but does not offer a cure. It offers “the what,” but not “the how.” To find the “how” not mentioned in the Report, one needs to look to Donald Schön’s writings from the early 1980’s. The allusions to “learning by doing” and “reflective practice” in the Boyer Report quote were surely provided by Schön, the Ford Professor of Urban Studies and Education at MIT and later chair of that university’s Department of Urban Studies and Planning. Schön’s major study was presented in two works. The first part, *The Reflective Practitioner* (1983), questions the foundations of discipline-based practice. It is a critique of the prevailing epistemology of practice that recognizes professional competence as the

application of privileged knowledge to instrumental problems of practice.

Schön's critique of professional knowledge addresses two concerns: technical rationality and specificity. "Technical rationality," he explains, "holds that practitioners are instrumental problem solvers who select technical means best suited to particular purposes. Rigorous professional practitioners solve well-formed instrumental problems by applying theory and technique derived from systematic, preferably scientific knowledge."² In this way—Medicine, Law, Business, and Engineering—are exemplars of professional practice. It also follows, according to Schön, that successful professionals construct their own problems to be solved. Homelessness, for example, may be seen by many different professions to be a problem, as Schön defines it, of different domains: economic, social, educational, architectural, political, etc. Each profession may support their domain with data, facts, and figures appropriate to their argument. A problematic situation is named, framed and therefore becomes solvable according to the domain appropriate to the particular profession. Schön is critical of this type of professional specificity, as he understands the issues that these fields purport to solve are never so simple as to be reduced to instrumental problems. Homelessness, for example, is an issue that relates equally to politics, education, economics, and even architecture. Regardless, professional specificity is given precedence and authority to act. Ironically, this specificity often reduces the role of the architect to a conductor of building trades and consultants. Architects have, on many levels, lost our claim to professional specificity and by extension, any authority to act. But for Schön, this can be a good thing and not a critique. He, and now many others, have used the model of architectural education as a guide for other professions.

In the second part of his study, *Educating the Reflective Practitioner* (1987), Schön suggests that the architecture studio is an ideal model of education for professional "reflective practices" in which students, in partnership with their

coach/professor, learn-by-doing. Schön describes what he perceives as a typical studio desk critique and then analyzes the interaction between student and professor. He believed that the interaction demonstrated in a desk review develops a tacit knowledge that he refers to as "professional artistry." It is a type of knowledge that is similar perhaps to musical improvisation or cooking in that one is able to continually re-frame the issue at hand and to imaginatively respond to changing conditions. The knowledge gained is not deductive or analytic, but rather demonstrative. This is accomplished through tactics similar to coaching in which the professor/coach demonstrates, through drawing and dialogue, how he (the professor is always "he," the student, "she") would approach problems relating to site, program, form, scale, etc.

Schön's version of studio, however, is problematic in that he sees it only as a mirror of practice in which the professor is the more experienced and advanced designer. There is the illusion of a "real" project, though the reality could not be further from the truth. A studio project rarely, if ever, goes beyond very initial planning phases and almost never is a project able to be built from final drawings. Indeed, there are many differences between the studio and an office environment to include at least: lack of client participations and negotiations, funding issues, consultant relationships, time constraints, as well as the economic reality of running an office. To assume then that the same parameters exist and that the professor is able to act as both client and lead designer is dubious at best. Schön's description of the relationship between the docile student and all-knowing professor is fraught with old-fashioned, if not at least politically incorrect, power and gender biases. It is easy to imagine the studio described by Schön as producing disciples who do and say as the professor did. Schön's characterization of "reflective practice," however seems to merit further inquiry.

At issue is not the process of thinking through a design problem, but who sets the criteria by which a project develops. Further, how might such a project be assessed? What, for

example, are demonstrably good tenets of design? In Schön's characterization, how does the professor assess the work of the student and the design? Assessment for Schön is not discussed and in studio is always problematic. In other disciplines, a lab experiment, a written exam, or even case study analysis offer much more "objective" rubrics for the determination of success or failure. Architectural education does have such rubrics as outlined by NAAB, but how such guidelines apply to specific courses has proven to be much more problematic. Though we all agree that "critical thinking" is important, how do you judge if one student has been more or less critical than another in their thinking? Clearly defined "learning objectives" often help, but rarely is this discussed in reviews. More often than not reviews tend towards fashion shows where critics judge work.

I am sure we have all been at reviews where the critics commented, "This work is beautiful" or "I don't like this!" Or even reviews where the critic actually tells the student what their work is *really* about. While it is important to have a position, this posturing by the critic tends on one hand to further the imbalanced dialectic between student and teacher and on another lead to architecture akin to fashion. The physical organization of most reviews places the student nervously standing next to their projects while critics, usually and more comfortably are sitting down in front of the student offering anything from words of advice to words of despair. In this way, critics become vanguards of style, avatars of taste. Not only does this perform a dis-service to the student, it lets the critic off the hook far too easily. Worse still is the affect on students: either elation from a good review or misery from negative review. In the worst instances, studio reviews begin to resemble the hurried last five minutes of shows like *Project Runway*, or *Top Design*. While I enjoy watching such shows as entertainment, it seems that a professional degree in architecture may merit a bit more serious review.

This situation is worsened by the advice of critics for students to look at pictures of projects in either magazines or on line without

a basis for how or why a student might make such an inquiry. The relative dearth of recent critical architectural writing has reduced most architectural publications to magazines that promote the new fall line of architectural pornography for students to consume in masturbatory exercises of architectural imitation, not unlike fashion designers who are free to absorb and reference at will. This simplifies the process of making and thinking about architecture into a stylistic game of form manipulation under the guise of "inspiration." It isn't difficult to look around studios at many schools and see which students Morphosis, Steven Holl, or Zaha Hadid, is influencing. One result of this is the reduction of architecture to a series of style tribes who are known by and hired for the look of their work. (For those of you who are interested, the architecture critic from the Times of London declared last season that shiny metallics are out and we should look for big bold prints in this season's architecture. I am afraid I am not joking.) Another result of this mimicry is often a bland commonality across studio projects and worse the illusion that one is making "good" architecture as it looks like a project that has been published. While I would never argue against an understanding and knowledge of recently built work, the leering student learns nothing about the process of making architecture from seeing finely photographed and airbrushed work. This situation is akin to learning to cook by only eating desert. So this raises a few questions. In the context of a studio project, how does a student make decisions regarding their work? On what grounds does one a student decide that 'x' is better than 'z'? Further, how should a critic judge such work? With these issues in mind, I would like to build upon Schön's work and even *Project Runway*, to propose a more nuanced approach to the objectives and assessment of studio. I will now describe the studio as proposed.

studia | studio: Learning Objectives

The ten-week studio is in the third year of a five-year B.Arch program. The students have taken one year of beginning design and one year of studio that deals with small-scale

design problems. The third-year studio is paired with an E.C.S. (Environmental Control Systems) lecture and laboratory and students will have completed a year-long survey of history. Each Instructor is free to develop his or her own project though there does exist a set of loosely managed learning objectives across all studios in the third year. They are as follows:

- Students should recognize buildings systems as a three-dimensional design problem; they should begin to develop an integrated design process.
- Students should begin to understand the relationship of architecture to allied disciplines; they should be able to work in interdisciplinary teams.
- Students should have a rudimentary understand the phenomenon of building at all scales; from detail to city.
- Students should be able to begin to understand the practice of architecture within an emerging global context.

Further, the studio is expected to contribute to ten NAAB criteria.³ As stated, the objectives are quite broad and allow for a broad range of project types and pedagogical strategies.

I proposed a studio to design a building that will house a school of architecture. This was chosen partly for my interest in architectural education, but also, because each student is engaged in the process already; each has a stake in the project. The studio was organized into three general categories: collection, analysis, and judgment. During the first two weeks of the studio students were asked to collect and present research regarding a school of architecture.⁴ The schools, selected prior to the studio and chosen at random by the students, offered a wide range of approaches to architectural education and were also varied in their physical, social, and historical context. Students orally presented a history of each school along with a written mission statement and a one-page "curriculum snapshot." The intention of this exercise was to open up to the range of teaching architecture. At this point in the studio, a large group site model was

constructed. The site was the existing architecture school on campus that, for the duration of the quarter, had recently been destroyed by a freak natural disaster. Only random pieces of the building remained and each student was given a portion of the building to work from.

During the second phase, the analysis, each student developed a contemporary translation of the school they had researched: curriculum, mission statement, and finally, program. In this way, students did not need to construct their own philosophy, but rather could ground their own position on the stated intentions of others. For example, the relation between craft and industry so key to the Bauhaus means something entirely different in a contemporary context. The students' work, then, became much more a dialogue with a historical context than a personal and ungrounded musing on architectural education. One of the objectives of the studio was to transfer the notion of "concept" from the student to a historical case study. Further, the ever-present desire for novelty in the studio shifted to a discussion that was based in the case studies. Students were not overwhelmed with the need for determining their "concept," rather the depth of the project was found in the translation from one context to our own. Throughout the quarter, short weekly readings and small group discussions on architectural education supplemented the discussion. This improved the level of discussion throughout the quarter as students had a frame of reference beyond their own, and sometimes limited, experience.

Concurrent to the studio I taught an upper-level seminar in which students make a broad study of the buildings that house departments and schools of architecture. The students compiled information on each school of architecture in the United States and Canada to include, images, drawings, as well as primary and secondary source textual materials. Students shared all of their findings on a wiki site and then each was tasked with developing an analytical taxonomy. Finally, a short term paper on one particular building was written in lieu of a final exam. The import to the discussion of my studio is that over the

course of the quarter, the fourth and fifth year students from the seminar made a series of presentations to the studio regarding the buildings that they had researched. The presentations stressed the precedents in which one could find interesting connections between the built form and curricular intentions. This allowed for a few things to happen. First, an amazing array of a projects, similar to those being worked on in studio, were presented in a much more manageable context. The wiki site was made accessible to the studio and students had access to all of the buildings and references contained therein. Secondly, the upper division students became more engaged in the studio because they now became the "experts" of the type of buildings being worked on in studio. They participated in reviews through the quarter and were able to offer specific critique based on their own research.

The final phase of the studio, roughly framed as judgment, was the development of an individual school building to house three hundred students. This was clearly the longest phase of the studio and developed in a somewhat traditional manner. The difference however, was that the student work was based on pedagogic and curricular precedent rather than architectural reference. Students certainly developed their own approaches to the work, but it was always in conversation with the historical approaches. Reviews for the studio occurred in a range of formats to include one-on-one reviews, small groups, to full group reviews. The intention was to develop and encourage interaction in the design and review process and to make each student responsible for the development of his or her own work. As stated earlier however, this development is not simply about one's "concept" or personal vision, but rather about how the work develops from very real historical evidence.

studia | studio: Assessment

Assessment for the studio was based upon and developed from two sources: Bloom's Taxonomy and Nietzsche's three types of history. Developed in the mid 1950's by a group of educational researchers led by

Benjamin Bloom, the taxonomy was the result of an interest to develop a common framework for classifying intended student outcomes. The objective was to be able to use common multiple choice (and other) questions across a range of undergraduate courses. Bloom, one of the original authors had hoped that each field of study would develop their own framework or taxonomy. More recent interest in the Taxonomy relates to the influence and presence of standardized testing. Architectural education does not have such structured learning outcomes (such as standardized testing), but accredited schools do need to comply with the NAAB performance criteria. This matrix, however, acts only as a checklist of objectives to be met through either as an "awareness" or "understanding," the instruction and assessment of such performance is not standardized. The means of instruction and the form of assessment is to be determined by intentions of the institution as well as individual professors.

The taxonomy was organized into three domains: affective, psychomotor, and cognitive. The final domain, cognitive, was separated into six categories or types of knowledge. Each can be tested and each builds upon the previous. Though the taxonomy originally classified assessment across six types, I simplified the organization to include three types of assessment: collection, analysis, and judgment. The initial phase of the studio – the research and presentation of various architecture schools' curricula – responds to the initial phase of assessment. Students were evaluated on the facticity of their research. The second level of assessment, analysis, related to the ability of the student to make a meaningful translation. The more levels of translation, the higher the assessment. The final phase, judgment, implies the ability to distinguish carefully and to choose well. Again, this judgment was based on the previous findings and not on personal taste.

In his seminal essay "The Uses and Disadvantages of History for Life," Nietzsche outlined a relationship to history that will lead to a life lived in the fullest sense.⁵ The main focus of the essay is to demonstrate that the

past is not to be seen and studied as an immutable object of knowledge, but to be experienced as a living thing. He discusses this, and other issues, through a delineation of three types of history: Monumental, Antiquarian, and Critical. A Monumental history, according to Nietzsche, is a sympathetic study of a nation's heroes so as to provide the present with encouragement. He gives the example of a series of mountain ranges. Though encouraging, this type of history often only studies the peaks of the mountaintops at the expense of all that supports them. While this perspective teaches us, to our benefit, that the greatness achieved in the past may be attainable again in the future and that it is possible to change the human condition, it dangerously insinuates that historical events may be repeated without an understanding of their causes. An Antiquarian history involves a look back to uncover and preserve cultural conditions that previously existed. This is positive in that it gives people an identity. There is also a danger, however, that Nietzsche represents by describing a tree that judges the size of its roots despite being unable to see them. Like one who estimates how big a tree's roots are by regard to the strength and size of its branches, the Antiquarian view of history can be seen as quite restrictive for most of what exists, one does not perceive at all. The little that the antiquarian historian does see, he sees too close up and therefore loses perspective. Antiquarian history degenerates from the moment it is no longer animated and inspired by, what Nietzsche terms, the fresh life of the present. The Critical view attempts to free oneself of the past, but not to ignore or make a complete split from it. Here Nietzsche proposes to break up the past, scrupulously examine it, and finally condemn it so as to release oneself from the past and live fully in the present. This can be dangerous when one attempts to name, a posteriori, a past in which one would like to originate as opposed to one in which one did originate. Each of these three views – the Monumental, Antiquarian, and Critical – is important when realized in certain degrees and not individually. They each may contribute towards a history for life.

Conclusion

Though I may be unique, or simply wrong, in my evaluation of Nietzsche's essay, it seems to correspond well with Bloom's categories of assessment. To return then to the Boyer Report, the study of history in the studio was not about "facts and figures" but was also not simply about the intuition of the students. The way in which the students framed the problem at hand was enriched by what Nietzsche referred to in his description of the monumental and antiquarian histories. And, while I cannot claim that each of the projects was able to be fully self-aware and critical, I do believe the studio was successful in the integration of history and theory with making. In this way, students' decision regarding making moved beyond intuition into grounded judgment.

¹ Ernest L. Boyer and Lee D. Mitgang, *Building Community: a new Future for Architecture Education and Practice*. (Princeton: Carnegie Foundation for the Advancement of Teaching, 1996): 72.

² Donald Schon, *Educating the Reflective Practitioner*. (San Francisco: Jossey-Bass, 1987): 3.

³ 1 Speaking and Writing Skills, 2 Critical Thinking Skills, 3 Graphic Skills, 6 Fundamental Design Skills, 11 Uses of Precedents, 14 Accessibility, 17 Site Conditions, 18 Structural Systems, 26 Technical Documentation, 28 Comprehensive Design.

⁴ The schools included were: Archeworks, Chicago, IL, Architectural Association, London, England, Armour Institute, Chicago, IL (now IIT, under Mies van der Rohe), Bauhaus, Dessau, Germany (under Walter Gropius, others) (2 Students), Black Mountain College, North Carolina (1933-56), Catholic University – Open City, Valparaiso, Chile, Cooper Union, New York, NY (under John Hejduk), Cornell University, Ithaca, NY (under Colin Rowe), Cranbrook Academy of Art, Bloomfield Hills, MI, École Nationale Supérieure des Beaux-arts, Paris, France (1818-1914) (2 students), École Polytechnique, Paris, France (2 students), Institute for Architecture and Urban Studies, New York, NY, Rural Studio, Auburn University, Alabama (under Mockbee), Southern California Institute of Architecture, Los Angeles, CA, Taliesin West, Scottsdale, AZ (under Frank Lloyd Wright).

⁵ Friedrich Nietzsche "On the Uses and Disadvantages of History for Life." *Untimely Meditations*. (Cambridge: Cambridge University Press, 1983): 59-123.