

ARCHITECTURE

A101

*A Guide to the
Design Studio*



Andy Pressman, AIA

Architecture 101

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Andy Pressman, A.I.A.



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*To my brother Peter;
To Elie K. Mangoubi, M.D., a true professional role model;
and
To architecture students, who deserve as much support as
possible*

Foreword

There's little in a normal primary and secondary education, or even in a prior college degree, that prepares a student for the singular experience of the architectural design studio. My own story is similar to many others. I came to architecture school with two years of university under my belt and a record of solid academic achievement that stretched all the way back to first grade. I *knew* I was going to do well. But my first studio almost undid me. On the first of an initial string of two-week design projects, I got a C. Not nearly good enough. I resolved to try harder. My second project brought a B. Aha! I was catching on! My third project fetched an A-minus. Almost back on track, I told myself. Just try a little harder yet. The fourth project? F. Failure. Desolation! Obviously I had no idea what my studio teachers expected of me. Should I give up architecture and return to my engineering studies? I yearned for those physics and math exercises where every problem had a right answer. Studio problems didn't seem to have right answers. There were eighty others in my class, most of them as clueless as I. Later I realized that the beginning students in a hundred other schools were also suffering the same self-doubt at the same time, puzzled about what was expected of them, uncertain how to go about achieving it. And each new class of students, generation after generation, have had to work their individual ways through the same agonies.

Finally, help has arrived. Andy Pressman has created the book that everybody has always known we need but that nobody thought could be done: A guide to the uniquely provocative and often puzzling culture of the design studio in architectural education. It's a book to be read, re-read, and read again; a book whose pages will gradually become dog-eared and graphite-smudged; a comforting companion both in times of trouble and times of success. For the student it is an indispensable source of information on how to interpret what is going on in the studio, how to react to it, and what to do next. For the seasoned practitioner it refreshes the memory, helps sharpen one's tools, puts temporary troubles in perspective, and assists in recalling the worthy dream that we all began studio with, that of designing wonderful, even magical buildings.

Wisely, Pressman has not attempted his task alone. Dozens of architects, teachers, and students have contributed valuable insights into their particular specialties and the studio experience in general. Despite the diversity of their backgrounds and opinions, there is an impressive unanimity regarding the underlying principles of successful performance in studio. Students, listen up: This is an authoritative volume. You can believe what it tells you. Keep it by your side. Read it well and understand it. It will spare you much pain, and it will help you get much more out of your design education.

The design studio is a miraculous educational device. Looking back on my experiences as a student, and contemplating the many studios I have taught since that time, I marvel at its power and audacity. It attempts nothing less than to teach what would seem to be unteachable: How to use the mind, eye, and hand in concert to create useful and beautiful objects of the most complex kind. By the time of graduation every student of architecture has come to realize that the design studios comprise a gift of inestimable value. Now I regret only that the studio concept has not permeated more deeply into our educational system in general, teaching kids from kindergarten through every kind of graduate school to be creative—not just to throw out bright ideas, but to do the hard work and critical analysis necessary to develop them and bring them to fruition.

Thoreau observed that education often makes a straight-cut ditch of a free meandering brook. Today the most obvious and joyous exception to this observation is the architectural design studio, a place where students learn once again to be spontaneous and creative. This book makes it easier to overcome the inhibitions that one has acquired involuntarily during a dozen or more years of prior education, and to go on to a successful career in architecture.

EDWARD ALLEN, A.I.A.

Preface

Architecture 101 is a design primer for beginning- and intermediate-level students. It is intended to help with the sometimes epic struggle through early design studios. The design process, from programming to presenting, is clarified, perhaps caricatured, and analyzed. Approaches to various aspects of the entire process are illuminated in “Supplements” (contributed by prominent professionals and educators) and summarized in “Take-Home Messages” that appear throughout the text. In short, there is explicit guidance on how to view, attack, or accomplish particular tasks.

Successfully completing design projects and maximizing learning in the studio are the fundamental objectives of this book. In light of the overall challenge of architectural education, *Architecture 101* is designed to be easy to read, accessible, and entertaining. Immediate personal meaning for the student reader is paramount.

More specifically, *Architecture 101* seeks to promote activation of talent by (1) addressing basics, thus lowering anxiety, and (2) providing insights from professional practice. Relevancy to professional practice is a recurring theme throughout the book. Apart from the interest intrinsic to an “applications” format, there is an effort at preparation for professional life. An understanding of the roles of the various players and the bigger forces involved in the planning and design of the built environment can only inform and enrich design projects. Anecdotes from actual situations focusing on clients, engineering consultants, contractors, and others exemplify selected ideas and issues, and provide windows on achieving design excellence.

Among the special Supplements from a wide range of guest experts are mini-consultations on the values that are important in the design of buildings; the impact of structural and mechanical engineering on preliminary design; acoustics; daylighting; computers; landscape architecture; color; the role of history; graphic communication; accessibility; building codes; interviewing clients; and landing a first job in an architect’s office.

Finally, *Architecture 101* implicitly tries to suggest something about a life in architecture. It will be apparent that, at its most grand, architecture may have rich and enduring effects on society. At its most mundane, architecture may have an influence on the quality of a day—and to paraphrase Thoreau, that may be the highest of arts. Since a life in architecture begins in the design studio, it seems a natural place to explore, not only routinized and objective methods, but the more abstract images of people and the world that fire the imaginations and inspirations that transform the student into a designer.

Architecture 101 attempts to unravel some of the mystery of creating beautiful, responsive, and responsible architectural design.

ANDY PRESSMAN, A.I.A.

Chicago, Illinois
November 1992

To the Student

Among my chief concerns was the need to make this book concise and portable. You should be able to read it in departure lounges, on airplanes, and on trains, as well as in the studio. Coverage of topics strives to be **comprehensive but digestible**, and contributed Supplements are varied and lively. My hope is that even with little or no background, and not much time, you will pick up *Architecture 101: A Guide to the Design Studio* and acquire a framework for learning and doing design. I expect that at least a few of the contributions will serve to tease, tantalize, or otherwise provoke more in-depth exploration of a particular area. Chapters are intended to be read in sequence, but you should not hesitate to consult them as self-contained units.

While this book is a primer and a reference, it certainly does not represent the *only* way to approach projects in the studio. It does try to capture what helped *me* most in developing as a student, and more recently as a practicing architect and teacher.

Acknowledgments

This book is a direct result of my teaching experiences in the School of Architecture and Urban Planning at the University of Wisconsin–Milwaukee from 1987 through 1991. I would like to express appreciation to all my students and my colleagues for providing a stimulating and enjoyable environment.

Tom Hubka is due special thanks for his valuable insight and support.

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Credits

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CHAPTER 6: Subtitle quote by Sir Winston S. Churchill, from a speech at the Lord Mayor’s Day Luncheon, London, November 10, 1942.

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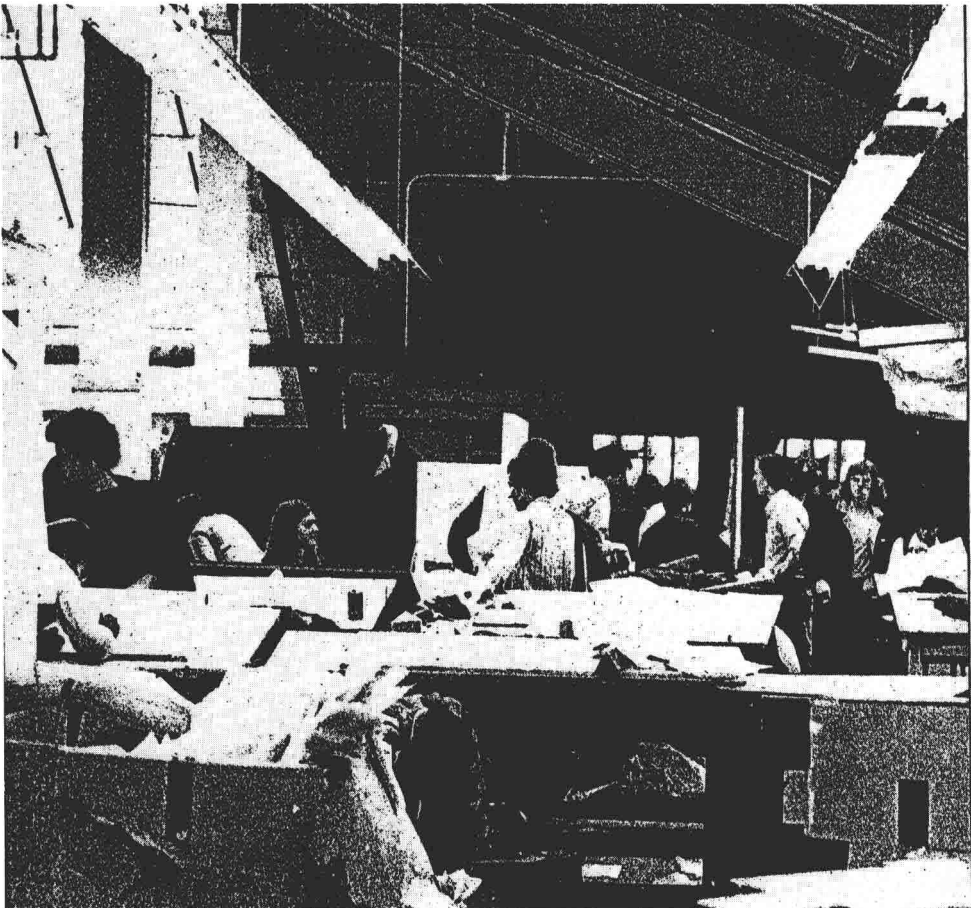
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1

The Initiation

*"A journey of a thousand miles must
begin with a single step."—Lao-tzu*



A second-year design studio at Rensselaer Polytechnic Institute.
Photo credit: *The Transit* (The Rensselaer Yearbook).

Catherine G. (senior): Just starting is the worst thing. And fear of failure. You just have to jump in, just do it.

Bryan S. (third-year student): Having seen the lights on *all* the time in the architecture building, and hearing the rumors about no sleep, I expected it to require a big time commitment. And it *is* all encompassing, everything else gets shoved away—I mean everything. One of the hardest things is to be able to turn that off and say, “Okay, I’m not going to do that, I’m going to relax . . . I’m going to sleep. . . .”

WELCOME TO THE STUDIO

Educational traditions such as basic training in the military, gross anatomy lab in medical school, and moot court in law school have an importance far beyond that of simply learning course material. The design studio in the school of architecture is no different; it is perhaps the most intense and multidimensional “classroom” experience in all of higher education. In what is really a very short span of time, the studio becomes the matrix within which a student develops the habit of thinking and talking both as a design professional and as a member of a team. The routines, the beliefs, and the standards associated with the studio all help to form a professional self-image. This occurs at personal and collective levels: How the individual sees him/herself as a distinctive member of a profession, and how the emerging group begins to see the nature and value of the profession in which they are being trained. Thus, in the studio, a student will begin to absorb and respond to the culture of the architectural profession.

Then, of course, there is the manifest content: The more obvious and concrete things you do in studio. Through assigned projects, you develop considerable skill in identifying and solving problems. Your prowess in assessing a creative challenge, integrating and synthesizing available data, conducting your own research, applying material from other courses, and responding to an array of forces and constraints with a three-dimensional solution will be quite amazing. Your ability to communicate verbally as well as graphically will grow enormously. Your capacity to listen and observe will grow in equally profound fashion. Like the Eskimo who is said to visually discriminate many grades of snow where most of us see only a few, you will actually *see* more; a new world of awareness is a heady place. And your resources for absorbing and reacting to the inevitable criticism you will receive from colleagues, teachers, critics, and above all, from clients, will mature.

Design studio is probably the only common element among the one hundred or so diverse NAAB accredited programs in architecture in the country. As such, it is not as important *where* you are as it is *what* you personally make of the studio experience. Understand that at this stage of development, you will have to begin to discern good pedagogical content and style from bad. I believe that in architecture perhaps more than in any other field, students must become progressively independent and responsible for their own education at an extremely early phase.

You will come to know the architecture building intimately, but you will know it with eyes sensitive to such concepts as form, space, proportion, and plan. The architecture building will serve as a kind of daily (and often nightly) field trip to a new world. The building comprises the framework for a culture so rich and full of creative potential that it leaves little doubt about its association with one of the great