

Internship Education Proposal

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1. THE SETTING

How big is the gap between architectural practice and the schools of architecture? Is it a crack or a chasm? The answer, of course, depends on whom you ask.

A study "...sponsored by the Association of Collegiate Schools of Architecture (ACSA) and funded by the Carnegie Corporation, criticized the dominance of design faculty over those specializing in 'construction.' Design projects at many schools, it said, resulted in 'paper architecture' whose real purposes and functions are often unclear. The report noted the scarcity of 'real research' in architectural schools, and described the difficulty architecture schools often have fitting into the university culture..."¹

Does the above quotation echo familiar complaints? It describes the results in "A Study of Architecture Schools, 1929-1932". We are not in new territory here, but rather a continuing dialogue between the schools and the profession about the proper role of each in the education and training of future architects. In more recent times a number of studies have looked at the perceived gap between practice and the schools. By way of framing the discussion to follow, I am citing a few of their comments or results. In a 1989 survey, conducted by *Progressive Architecture* magazine², 81% of the respondents (mostly practitioners) felt that architecture schools didn't properly prepare students for practice. The National Institute for Architectural Education, in a report issued in 1992³, succinctly summarizes the broader issues, "There is serious dissatisfaction in architecture over the widening gap between theoretical and practical knowledge and the conflicting objectives of academic preparation and professional practice. Practitioners complain that recently gradu-

ated architects are not well prepared to function in today's office environment. New intern architects are said to lack skills as well as sensibility to the real world environment of professional practice. Educators complain that architectural offices are so immersed in the pragmatics of practice that they do not grasp the connection between architecture and cultural evolution, connections that could increase architecture's influence as a creative force in society."

One survey⁴ listed the 10 most important categories of knowledge needed by a newly licensed architect as rated by practitioners. Eight of the ten were highly practical, the other two being ethics and written communication. Recent graduates, in the same survey, listed all ten of their most important missing knowledge/skill areas in practice-based topics such as specifications, contracts, and codes. The National Council of Architectural Registration Boards (NCARB) conducted a study involving more than 1700 participants in 1999-2000⁵. It was intended to be a "...comprehensive analysis of the profession of architecture as it is practiced today that addresses the current and future needs of the profession." There was broad agreement among architects, educators, and interns that the extensive lists of tasks (82) and knowledge/skills (86) were comprehensive and no important content areas were being excluded. The most interesting result relative to this discussion was the difference between educators and architects in when they thought that professional skills were learned. "Architects rated many knowledge/skills on the survey as acquired during internship. In contrast, educators rated more knowledge/skills as acquired by completion of the first professional architectural degree."

"According to a report of the European Roundtable of Industrialists, the overall inertia of education in reaction to changes in society has produced a considerable gap between the schooling professionals need in today's complex world and the schooling they receive effectively." The previous quote from an article by Belgian educator Ann Heylighen⁶ shows that concerns about architectural education are certainly not limited to the US. She goes on to say "The so-called educational gap just keeps growing due to phenomena like globalization, the increasing impact of Information and Communication Technology (ICT) and the exponential growth of knowledge, which expands these days in leaps and bounds." When combined with additional factors such as economic and financing issues, technological change in building construction and materials, contracted delivery systems, and social and cultural factors, the pressures on the architectural profession and its educational institutions are extraordinary.

2. THE SCHOOLS

Boyer and Mitgang state, "The profound and permanent impact of the architectural profession demands an education not only highly technical, but broad and intellectually liberating as well."⁷

In the US, professional schools of architecture are almost always located within universities, though a handful of programs are independent institutions among the programs accredited by the National Architectural Accrediting Board (NAAB). The move from the tradition of apprenticeship, first within the atelier and then the professional's office, is still searching for status within the academy. Architecture programs have proliferated from 9 schools in 1900 with 400 students to 113 accredited schools with more than 36,000 students today. But they often function uncomfortably in the university's hierarchy due to their emphasis on preparation for a profession rather than scholarly pursuits, their general paucity of research funding and publications, and their need for large facilities for relatively few students.

In discussing the view from the profession, Robert Gutman⁸, states that "The schools carry tremendous prestige, and with this prestige, the expectation has developed that they constitute the principal source through which the knowledge necessary for practice will be transmitted. This certainly was not the

supposition when the schools were inaugurated. On the contrary, it was generally assumed that formal education would elevate the position and enlarge the competence of the profession, but that a great deal of the learning would still require on-the-job training, as was also evident in the professions architecture was attempting to emulate." The schools are caught in a conflict that few have successfully resolved – being too oriented toward *training* the professional in the eyes of the academy and, according to the profession, not producing graduates that are immediately useful in practice.

In defense of the schools, teaching design in the studio setting is a time consuming process that has an extensive history and a unique role in education with its emphasis on learning by doing. At its' best, the studio exemplifies the reflective practicum extolled by Donald Schon in several influential books. However, studio teaching is now criticized by practitioners for ignoring or giving incomplete coverage of complex building programs, new systems, innovative materials, and construction processes. These are among the factors that others cite as being poorly taught by the schools and contribute to that expanding gap between education and practice. But the studio has also been expanded and enriched by new digital technology and software and by the expanding range of esthetic and theoretical positions. To solidify their position within the academy, the schools should be most interested in the essential questions about creating the built environment. What should be done? Why should it be done? How should it be done? An understanding of the larger cultural setting and the historical and theoretical basis for design are the strength of the schools – and should be as they address the *what* and *why*. The crux of the educational gap seems to be the lack of a comprehensive approach to *how* student designs are expressed or developed.

In discussing architectural design ideas, Louis Kahn is credited with the aphorism, "The idea is not an idea unless you know how to make it." As much as I agree with that position, how far can you go in school to live by that ideology? It has been pointed out by Dana Cuff⁹ that attempts to simulate many types of professional conflicts and issues in school "...will not only fall short in some quantitative sense, but in a fundamental qualitative way." For many types of knowledge and skills there may be no substitute for the training provided in a practice setting. Trying to make professional skills such as

bid negotiations or value engineering relevant in an academic setting may be difficult– or even impossible. For all subjects, there is an appropriate time and setting for its' teaching and its' consequent appreciation by the student. Our best approach as academics may be as simple as consistently teaching design within a framework that emphasizes the incorporation of the full range of technical as well as formal, theoretical, and social issues as integral to the conception of comprehensive design solutions. This, of itself, won't bridge the gap to practice, but will go a long way toward making the next phase of the new intern architects' education and training a seamless continuum rather than an abrupt discontinuity.

3. LICENSING AND ARCHITECTURAL INTERNSHIP IN THE US

Registration laws for architects vary from state to state, but all state regulatory boards mandate an education requirement, a professional training requirement, and satisfactory completion of the Architectural Registration Examination (ARE). This standardized national examination, plus relatively equivalent standards for professional experience and education, allows for architects to gain reciprocity between states without taking a new examination. For about 30 years after WWII, the norm was to complete a five year Bachelor of Architecture degree and three years of practice experience or, alternatively, to have eight years of practice experience before being able to sit for the licensing exam. Thus, aspiring architects could achieve the experience necessary to sit for the licensing exam as quickly by going through an apprenticeship process as by attending an accredited school of architecture. The move to near-universal requirements among the states for a nationally accredited professional degree as the principal qualifier for taking the ARE occurred less than 30 years ago. (In thirteen states, one may still gain access to the profession without a professional degree, but it is a difficult and seldom pursued path these days.) Shortly after formalizing higher education as the preferred entree to the profession of architecture, the move to develop a more organized and accountable process for internship resulted in the Intern Development Program (IDP). Co-developed by the AIA and NCARB it was first introduced in 1978 and is currently required in all but three states as the *sole* process by which

the training component is satisfied.

In brief, the IDP requires that the intern architect complete specific training hours (often referred to as "seat time") in four general areas: design and construction documents, construction contract administration, management, and professional and community service¹⁰. A minimum of 700 training *units* are needed to satisfy the IDP training requirements with each training unit equal to 8 hours of acceptable experience. Minimum numbers of training units are specified in sixteen sub-categories. Each individual intern architect must keep track of his or her own training record with the assistance of forms provided and recorded by NCARB.

The system was developed in response to the increasing complexity of modern architectural practice and a perceived decline in the mentorship tradition that had its basis in the historic training of architects as apprentices. It was also responding to the complaints of interns who were limited in job assignments and were not being prepared for the full range and complexity of architectural practice. The IDP has, nonetheless, been criticized for its extensive record keeping and for the lack of real verification of ability – just the completion of "seat time". In 2003 Beth A. Quinn¹¹ published the first-ever empirical study of the IDP since its inception. Her team reported the experiences of 934 current and former intern architects who were divided into two groups. One group compared the experiences of interns enrolled in IDP and those in unstructured internships (non-IDP) in California and New York, states that don't currently require IDP. (California will initiate its' own version of the IDP in 2005 that will require certification of skills.) The other survey compared the experiences of those who had already completed their internship in either setting. In summarizing the experience of internship, Quinn writes "... three out of five interns rate their experience as 'good' or 'exceptional', that 75% of interns feel they are gaining significant knowledge or experience from their firms, and that the majority of those enrolled in IDP find it helpful, could be considered a success. The glass is however, also partially empty. Should we not question the success of an educational program in which 43% of the participants feel their experience is 'adequate' at best and 'very poor' at worst, and one out of four feel they are learning little or nothing? Can a program be justified when more than one-third of participants feel it does not help or even detracts from the work experience? "

Quinn, in a discussion of findings states, "When asked to assess their internship, few differences were observed between IDP and non-IDP interns." And "Perhaps most significantly, practitioners who completed IDP ('former interns') reported feeling competent in more areas of practice after their internship than did their counterparts who completed non-IDP internships." Quinn concludes with suggestions for modifying the internship experience, several of which are relevant to this discussion. First, reconsider the set of skills that are best learned in the period of the internship. Second, fulfilling the IDP system of experience for internship should not be mandatory.

4. VALUE OF PRACTITIONER/EDUCATORS

It seems clear that a considerable gap exists between the academy and practice and that the IDP is not fully addressing the complex issues involved. It would seem that those with a foot in both worlds should be critical in bridging the difference. The teaching faculty at architecture schools falls into a continuum from those who teach, reflect, and do research; to those who mix teaching and practice; to those who primarily practice, but occasionally teach. With such a variety of backgrounds, knowledge, and skills on most architectural faculties one would think that "the gap" would be small. It would appear that the demands of the academy, the enticement of dealing with "pure" design problems (often devoid of issues related to the materiality of the project), the absolute difficulty of teaching design, and the reality of teaching numerous practical issues when it's the "right" time and can be seen as relevant and important by the student have all led to a greater distance between the two camps.

What are some of the advantages of having practitioners as educators – either as full time, tenure track professors or as part-time instructors? A short list follows below:

- Importing theoretical and practical lessons from practice to the classroom. Professional offices are often at the forefront of building research due to specialized commissions and client needs.
- Testing of ideas and concepts generated in the academy in the real world. Design commissions may be developed as applied research projects.
- Validation of professional skills in practice. Do you really

know what you are talking about?

- A perception of educational needs as seen from the profession is valuable input in developing curriculum. Architecture schools seem to be in perpetual curricular evolutionary mode.
- Students and fellow faculty are excellent critics and can usefully inform professional design projects. Rigor of academic approach can positively impact design process.
- Professional recognition/design awards can improve image of related academic institution.

However, there are also some factors that complicate this relationship. Again, a short list is presented.

- Is the professional or practical viewpoint respected in the academy? This goes to the critical issue of the difference between training and education. (I don't mean to imply that the professional view is always that of the practical. Also, training is a word or concept that is generally antithetical to the aims of the university)
- Is practice valued in determining promotions – or more critically, in tenure decisions? Practice is often thought to be just an outside job, not an intellectual challenge.
- When professional design work is reviewed or evaluated, is it "just competent" or is it "cutting edge"? (I would maintain that a professionally competent piece of architecture is a major accomplishment)
- Conflicts at the academy regarding time commitment and conflicts in priorities. Do you go to faculty meeting or a job site crisis? Is your input welcomed by the academics? Can you afford the time commitment for committee work?
- Conflicts at the professional office. Design commissions don't only come during summer vacations so work load may become onerous during the academic year.

5. BRIDGING THE GAP-EDUCATING THE INTERN

I believe that reconsidering the role of Practitioner/Educators could be instrumental in addressing the gap between practice and the academy, strengthen the continuum of the architectural education process, and transform the *training* of interns into the *education* of interns. I propose that a series of *professional-level* courses supplement or even replace much of the required training for IDP. These courses would cover the topic areas that are generally considered to be the most critical in the gap between the academy and practice. A preliminary

list might include:

- Building Codes & Standards – Architectural Impact
- Construction Administration & Processes
- Advanced Construction Documentation & Detailing
- Specifications, Product Selection, & System Comparison
- Contracts, Liability, & Resolving Conflicts of Responsibility
- Bidding & Negotiation Processes
- Professional Written Communications & Proposals
- Materials & Envelope Systems
- Sustainability & Energy Conscious Design
- Professional Leadership & Ethics

Why would formal courses be better than in-office training? In comparison with a strong mentoring and training program in a large office, there may be little or no advantage. However, the vast majority of architectural offices are small, with over half having 5 employees or less. How can a principal of a small office take the time to really educate her employees in all the subtleties of critical topics? Are all architects good teachers or mentors? The proposed classes would be taught by local experts in the various topics and recruited from local offices. Teaching examples would be drawn from immediately accessible projects, giving them a richness and immediacy that is difficult to duplicate in abstract or distant projects. The classes also have great potential for meeting a growing market of licensed practitioners looking to expand or update their skills – or meet the national AIA or state registration board requirements for Continuing Education. By offering them at the schools of architecture, or through their sponsorship via distance learning classes or on the internet, the profession would be more strongly tied to the academy – and vice versa. The schools could assist in the development of teaching pedagogy and techniques and support research initiatives in a joint effort with Practitioner/Educators to continually advance the *practice* of architecture. Almost all of the suggested topics would be further enriched if they utilized a comprehensive case study methodology that places each topic in the full continuum of practice and makes clear the relationship to the design process that is the core of studio teaching. Individual topics could

be taught in a variety of formats and durations based upon the specific needs of the information whether it is in the computer pod, seminar room, or on a construction site. These classes would hold the students accountable and evaluate actual performance and learning – not just “seat time”. The offices could pay for their interns’ tuition and give them time off for classes and still benefit by having the best possible education and training for their employees while spending their time on what they do best – practice architecture.

This proposal could incorporate and expand upon the work of the Advisory Committee on Professional Development for Emerging Architects. This joint effort by the AIA and NCARB, is currently preparing study guides with associated examinations to supplement or replace training units defined in the IDP. Most importantly, this proposal could bridge the gap between practice and the academy and is in the spirit of the following statement: “The Collateral Internship Task Force believes the profession is best served by a continuum of learning, where the lines defining education, experience, and examination converge. In this model, knowledge and skills are acquired throughout the continuum, thus enhancing the development and stature of emerging architects.”¹²

REFERENCES

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ENDNOTES

¹ Ernest L. Boyer and Lee Mitgang, Building Community: A New Future for Architecture Education and Practice, Princeton: The Carnegie Foundation, 1996) p.20

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³ The Teaching Office: A proposal for a New Education Program, National Institute of Architectural Education, 1992

⁵ Architecture Practice Analysis Study: Executive Summary, National Council of Architectural Boards, January 2001, pp 3- 10

⁶ Ann Heylighen, A Maintenance Contract for the Architect’s Degree, Writings in Architectural Education, EAEE, 2003

⁷ Boyer and Mitgang, Building Community, p.4

⁸ Robert Gutman, Redesigning Architecture Schools, Architecture, August, 1996, pp 88-89

⁹ Dana Cuff, Celebrate the Gap Between Education and Practice, *Architecture*, August, 1996, p. 94

¹⁰ All IDP requirements from the Intern Development Program Guidelines, National Council of Architectural Registration Boards, Washington, DC, 2003

¹¹ Beth A. Quinn, Building a Profession,: A Sociological

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¹² Collateral Internship Task Force, Final Report, April 2001, p. 3, Introduction to final report of task force that sought to develop a framework for improving the architectural internship experience.