If the student of architecture could master the mathematical and scientific branches taught in modern polytechnic schools, make himself proficient in drawing, attend an academy of architecture, and then become in succession a good carpenter, mason, stone-cutter, painter, sculptor, and decorator—no doubt such a student would be eminently well prepared for professional life, and produce marvels of architectural art; but as human life is too short to enable one man to master practically so many arts, the question to be answered is reduced to this: Shall the pupil of architecture be educated in some mechanical workshop, in an art studio, or in a polytechnical school?

— Leopold Eidlitz, 1881

The practice of architecture has, for centuries, occupied a contested ground between craft-based practices and a discipline rooted in art, history, and cultural production. While defined literally as “master carpenter,” the Greek architekton was used to refer to both those skilled in building and artists, with backgrounds in sculpture and metalwork. After largely falling out of use during the Middle Ages, the word “architect” was revived in fifteenth-century Italy, but with a different usage. During the Renaissance, “architect” was used principally to refer to those familiar with the forms of antiquity, especially those skilled in painting and sculpture. We see in this era the emergence of a fissure between the architect-as-scholar and master builder: “Because they were not building craftsmen and did not belong to the construction guilds, these men were called architects rather than master builders. As the cult of the artist developed during the Renaissance, some commentators carefully distinguished architects from master builders and craftsmen.”

In the nineteenth and twentieth centuries, universities developed similarly parallel models of education based on liberal or mechanical arts, drawing at times sharp lines between competing educational models. While these differing science- and art-based curricular models were being developed, the study of architecture also became more firmly institutionalized within the university. This was reinforced by a certain professionalization of the discipline, growing out of genuine concerns for the public’s health, safety, and welfare as well as advocacy from professional organizations. University programs were charged with delivering a rigorous education in preparation for professional practice in architecture. While legal frameworks vary from country to country (and also from one local jurisdiction to another), completion of an accredited professional course of study is typically required for practice today.

Professional programs, however, do not fit easily within the structures of either liberal arts colleges or major research universities. In either case, professional programs transgress boundaries, either positively cross-polliinating or negatively diluting the integrity of deep silos of academic knowledge. With few exceptions, the faculty of schools of architecture are diverse, representing a range of intellectual positions and roles: the humanist, the scientist, the historian, the writer, the mentor, the researcher, the practitioner, the artist, the draftsman, the inventor, the craftsman, the teacher, the friend, the technician, and the artisan, to name a few. Most research universities value the individual expertise developed within these separate roles. The roles, separately identified, form a faculty; considered together, they form an architect.

Disciplinary Bounds

Fertilior seges est alienis semper in agris, Vicinumque pecus grandius uber habet (“The seed’s often more fertile in foreign fields, and a neighbour’s herd always has richer milk”) – Ovid

The lines between faculty and between areas of expertise can be sharply or loosely drawn, depending on the nature of the institution and the personalities of the faculty. But one of the most common fault lines is one that emerges between practitioners and those who are principally engaged in work of the academy, whether it is teaching, writing, or other research work. Those on one side or the other usually either believe passionately in their own approach or long to crossover and switch places with those on the other side.

Practice is valued largely because of its connection to materials and productive, synthetic cultures outside the university. Believers advocate for the power of constraints imposed by “the real world,” and the need to prepare students for this work. For those who advocate strongly for practice-based education, the academy can be seen as disconnected and/or aloof to the realities of practice, including regulatory issues, client management, teamwork, budget, and schedule. Those not involved in practice often have little
appreciation for the tremendous amount of work involved in even modest built projects.

Those most rooted in the academy will, at times, eschew practice as a corruption and/or distraction from more rigorous educational pedagogies. Learning to do something, it can be argued, is not the same as doing the thing itself. Conventional practices, responsive to disparate local concerns but not critical of themselves cause concern for many educators. As Stan Allen writes, “too often, contemporary practice oscillates between mechanical repetition and shallow novelty. Conventional practice renounces theory, but in so doing, it simply reiterates unstated theoretical assumptions. It works according to a series of enabling codes, which themselves comprise a random sampling of the dictates of professional practice and the learned habits of normal design culture. It is these unexamined codes that give practice a bad name.” 6 In their worst incarnations, educational models that emulate conventional practice can prove diluted and/or devoid of opportunities for deep and meaningful learning. Worse yet, students can come away with an incomplete understanding of the opportunities of practice, hobbling them for many years to come.

Transgressive Models: Live Projects

Recent educational experiments in design-build and community-based design strive to address the broad professional requirements of practice while also training students through direct, hands-on work with materials, users, and/or community organizations. The “live project,” as it is most commonly known, “comprises the negotiation of a brief, timescale, budget and product between an educational organisation and an external collaborator for their mutual benefit. The project must be structured to ensure that students gain learning that is relevant to their educational development.” 7 This is an important turn in education, one that embraces the responsibilities of practice in a direct way. The live project opens the path for students to bring together aspects of practical experience while also being a part of an academic community.

As articulated by the University of Sheffield, “Live Projects set real constraints, responding to budget, brief and time. In each project there is regular contact with the client and a defined end result, normally a presentation, report and sometimes physical building work. The projects place a large responsibility on the groups to deliver; as opposed to most student projects these are public and accountable.” 8 Students learn to work within serious and typically unyielding constraints, whether they are physical, material, formal, or political in nature. The validation of the work comes principally through the ability of students to meet the goals of the project, solving thorny problems in creative ways. Teamwork, collaboration, and communication are highly-valued; the need to be accountable to schedule, budget, and program requires clear decision-making processes and organizational structures.

The merits of the live project are largely self-evident, and the projects are typically affirmational in their structure, providing the students and faculty with positive tangible products (buildings, reports, plans, etc.) that serve as physical evidence of their work.

Disciplining Practices: Dead Projects

To speak of “live” projects is also to acknowledge the presence of “dead” projects, those for whom there is no client and at the end of which there is no plan to implement or full-scale project to occupy. The dead project is severed from implementation and/or actualization, disconnected from productive processes, and often lands in the architectural dead letter office, a place of unbuilt or unbuildable ruminations that cannot quite find a way into the world of built things.

The dead project gives us a way to frame a reconsideration of live projects by reflecting on the role of speculation and incompleteness in architectural education as contrasted with similarly fertile possibilities of the specific and determinate. This is not to suggest that these two aspects of practice work in opposition to one another, but rather it is to say that each approach can serve as a vehicle through which it is possible to better understand the possibilities of the other. By intertwining these processes, we have an opportunity to allow more projects to come alive, to unfold into or across productive streams, and to inform our discipline in inventive and unanticipated ways.

Both types of projects are included in some manner within the “practicum,” as defined by Donald A. Schön. He writes that “a practicum is a setting design for the task of learning a practice. In a context that approximates a practice world, students learn by doing, although their doing usually falls short of real-world work. They learn by undertaking projects that simulate and simplify practice; or they take on real-world projects under close supervision. The practicum is a virtual world, relatively free of the pressures, distractions, and risks of the real one, to which, nevertheless, it refers. It stands in an intermediate space between the practice world, the ‘lay’ world of ordinary life, and the esoteric world of the academy. It also a collective world in its own right, with its own mix of materials, tools, languages, and appreciations. It embodies particular ways of seeing, thinking, and doing that tend, over time, as far as the student is concerned, to assert themselves with increasing authority.” 9

Both types of educational projects rely on a process of learning through doing, typically based on a direct engagement with matter and materiality. There is an important process of reflective “self-education” at work in both kinds of projects, where the student’s iterative design efforts gradually close the gap between
an idea or intention and the thing that he or she makes. Both live and dead projects can develop within a studio-based environment, where students learn from one another as much as they learn from precedent or studio faculty or tutors.

The parallels between the structures are so close and overlaps so many, that the lines that define and divide live and dead projects are actually quite fine. That said, it may be useful to consider the particularities of dead projects as vehicles for understanding their unique attributes, and also for informing future incarnations of live projects.

Spaces for failure

A central hallmark of the dead project is that it occupies a “safe space,” where failure is allowed and encouraged. This safe space allows for open-ended speculation and experimentation, without the obligations of protecting the public’s health, safety, and welfare. Risks to others are minimized or often non-existent, and cost, budget, and schedule are typically non-issues. To develop this kind of space requires the careful construction of student/faculty relationships, where both recognize that neither of them are fully in charge of the work, and that the work itself has a certain autonomous existence.

Spaces for failure are critical for development of design processes that do not have a fixed or known endpoint. Students can allow the design process itself to direct and shape subsequent studies, such that even a “failed” attempt actually provides useful seeds for the next study. Work can proceed in a fluid manner, allowing the students to recognize the value of design processes, developing along the way strategies for interrogating both themselves and their work.

When the studio becomes this kind of “safe space,” we also find that students produce more work with greater enthusiasm and enjoyment. Students are encouraged to make without over-thinking, and this is reinforced by discussions that celebrate the possibilities of the tentative, incomplete, and even the naïve.

It is, in many ways, the failure that allows for critical learning to occur. Mistakes, missteps, and dramatic failures of construction or intent are accepted as a part of the learning process. They are not always pretty and are rarely appreciated by the student at the time, but they are the moments that often define a project or even a student’s overall trajectory.

Disciplining

More often than not, the dead project is one that operates at the scale of the drawing board or cutting mat. Even if the project is contemplating the future of a vast urban territory or the full-scale details of a wall assembly, the fact that it is often studied at the scale of the author’s body through drawings and model constructions is important. The bodily scale of drawings and models allows the student to work in a rapid manner, making and re-making the project. This allows for an iterative process to be developed, especially one with short cycles of production, testing, measurement, and evaluation. Students benefit from this disciplining as a means of learning through a continual process of making.

Fig. 1. Disciplining. Associate Professor Martin Gundersen during studio reviews of work in progress. Architectural Design Four, Spring 2014. Photo: Mark McGlothlin.

The manageable scale of work products means that students can efficiently complete them and gain useful feedback quickly, which allows for numerous cycles within the course of a project’s development. With multiple iterations, students gain a tacit understanding of how to work critically, allowing them to become both more precise and more efficient over time.

Lumpy pedagogies

Viewed from a certain distance, many professional projects share a similar structure: beginning, middle, end. Nothing to something. Ideas to buildings. Vague to specific. General to particular. While live projects do not portend to be “professional” in the same way, it is common for them to adopt some of the same delivery structures and often even the same nomenclature for phases of design and/or construction. This is a certain strength for the live project, as it helps introduce students to the professional structures and languages that will be expected of them in practice.

The dead project, however, does not have to respect the linearity of this process nor does it need to follow predetermined professional sequences. There is the opportunity for the project to be structured in alternative ways that allow for targeted learning to occur at particular moments within the project’s development. The process can be intentionally weighted in uneven and lumpy ways to develop certain skills or sensitivities in our students.
This requires careful construction, and often the work of numerous faculty members working in concert across a student’s educational curriculum. There are many possible approaches to create this kind of lumpiness: shifts and oscillations in scale, changing project parameters, alternative methods of inquiry, and shifts in media, to name but a few. This can be a part of a curricular dialogue between students and faculty, one that requires “thinking on your feet” and that encourages a nimbleness in critical thought. It reinforces the notion that there is not one solution, approach, or process, but in fact many. When faculty remain nimble, they can adjust sequences such that exercises occur at precisely the moments when students may be most receptive to the particular skills, concepts, or subject matter at hand.

The difficulties of lumpy pedagogies are two-fold. Firstly, the faculty must be willing to recognize the need for lumpiness, and that there is value in uneven learning. Secondly, there is greater emphasis on the school’s overall curricular structure to provide balance. The shifting of emphasis from the course to the curriculum is not in fashion today, but it affords much greater educational value than is possible with singular, isolated courses or projects. We would suggest that this is both the limitation of lumpy pedagogies and its power, as it necessitates faculty collaborations, communication, and consensus.

Full-scale and real-time

One of the aspects of the live project that is most celebrated is the fact that many of these projects involve full-scale project work, built by students or produced as a result of the design work prepared by students. It is one of the most meaningful results of design-build projects, as everyone involved grows through a direct engagement with matter, materiality, and space. Drawings and models are typically used as interim studies, representations, and approximations, operating as placeholders for the building that arrives at a certain point in the process.

The dead project gives us the opportunity to challenge this representational aspect of drawing and model constructions. It is possible to create an environment in which the drawing is not representative but is rather the thing itself. In other words, a physical or drawing construction can be the end and not the means, allowing students to participate in shaping and occupying it in real-time.

This follows the educational structure promoted by Maria Montessori, one that proceeds from concrete towards the abstract. For Montessori, the bodily engagement with space and matter is primary and allows for the creation of deep knowledge. By approaching the architectural design process in the same way, the drawing and model can serve as the center of the educational process and need not refer to something else that is absent and largely not understood by students.

In his review of the 1983 exhibition of Daniel Libeskind’s Chamber Works, Robin Evans recognized precisely this point: “Architecture, which has always involved drawing before building, can be split into prior and subsequent activities: design and construction. The building can be discarded as an unfortunate aftermath, and all the properties, values, and attributes that are worth keeping can be held in the drawing; perhaps a better way of putting it would be to say that they retract back into the drawing.” When architecture “retracts” in this way and resides solely in drawings and models, students have an opportunity to become more directly and intimately involved in its making. They can fully know and own their work process, and can grow through direct, full-scale and real-time experimentation. The immediacy of cause and effect allows for a rapid and immensely rewarding learning process.

Alternative paths

One of the most important outcomes of the live project is its preparation for practice. Students often develop skills that are carefully honed to allow them to move into positions of responsibility in planning, design, and construction firms.

The dead project can similarly be structured to predetermined outcomes. However, it can also be structured to provoke students to pursue a wide range of individually-determined paths. The dead project can embed within it questions that allow students to respond in divergent and expansive ways, which may at times result in “ architectural” projects that are not buildings or urban plans. The dead project can, in this way, become an entrée into art, graphic design, fashion, film, and/or writing. It can be a lens with many foci, allowing students to find different possibilities.
within it depending on their particular approach. Within our own field, the dead project can provoke different design approaches and material resolutions, possibly suggesting alternative methods of practice. Many young design practices find their voices through this kind of exploratory thinking.

To expect that an architectural education serves solely as a preface for practice, however defined, is somewhat myopic and limiting. It is important that students are afforded the opportunity to seek out or created paths that may suit them better than a single predetermined mold.

Conclusions

As educators who are intensely interested in issues of both live and dead projects, the real questions do not center on which approach is better or worse in the abstract, but rather how to structure either kind of project as a component of an architectural education.

If the question was simply “how should we teach our students to do ‘X’,” our job would be simple. The structure of this mandate suggests a certain clarity of intention and of outcomes, with a performative measure based on the ability of students and faculty to meet predetermined objectives and goals. There might still be some discussion around best practices, about sequencing and order, or about the relative importance of certain steps in the process. But in the end, our job would be manageable.

Fig. 3. Training or education? Image excerpted from advertisement for American School, Chicago IL, as printed in Popular Mechanics Magazine, published by Hearst Magazines, March 1938, Special Advertising Section, page 11a.

The difficulty we face is that the intention and outcomes are not uniformly known. As Donald Schōn wrote in Educating the Reflective Practitioner, “the problems of real-world practice do not present themselves to practitioners as well-formed structures. Indeed, they tend not to present themselves as problems at all but as messy, indeterminate situations.” Curricular discussions sometimes find comfort in the simplistic breaking down of complexity into manageable tasks. And similarly, enthusiasts of design-build and live projects sometimes rally lovingly around the building or refined, singular plan. In either case, we see an over-simplification of the discipline, a conscious editing of the complex, a reduction and streamlining of process to both create end points and to reach them.

This is admittedly an important part of what we do as educators. It is, after all, our job to structure the educational process, to formulate strategies for building competency and knowledge in our students. But what and how we edit to structure the learning process is of critical concern. As Schōn has written, “the most important areas of professional practice now lie beyond the conventional boundaries of professional competence.” If we recognize the truth in this statement, the education of architects must be always inventive, projective, forward-looking, and adaptive. It can benefit from the lessons of both live and dead projects, as well as a blurring of the distinctions between life and death.

Acknowledgements

At the University of Florida, the curriculum is a shared project of the entire faculty. The present work is developed within the context of a thoughtful curriculum that benefits from the work of many hands over many years. The curriculum continues to evolve, and it is hoped that this document furthers that mission. Thanks to the many students and faculty who contribute every day to the vibrancy of the discourse at the University of Florida School of Architecture.

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