

Editorial

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At many architecture schools, the primary interest lies in education, and most importantly, in educating future architects. Most of the focus is on learning how to design, the dominant pedagogical model being the design studio. *Designing* is seen as a skill that can be obtained through repeated attempts to create architectural designs. Research and *becoming a researcher* is a second priority at best, if it is considered at all. Although it is clearly documented by various schools of architecture with a well-developed body of research (such as ETH Zürich, UCL London, TU Eindhoven, and TU Delft) that a research career in architecture is another option, many schools have a rather low scientific track record – notably in Central and Eastern Europe. To encourage young researchers to build their future career in architecture, I would like to briefly outline some strategies that can help them in following this path.

For most young architecture students, a research career starts with the PhD research position. As early as the master's phase allows students to learn if the school offers a research master, or whether the diploma work can feature a portion of research work. This gives a first idea of how to do a research project. It is also a good occasion to find out which teachers could be potential PhD supervisors.

A PhD project is quite unlike anything in the bachelor or master program. It means intensively investigating a problem for a period of 3 to 5 years. Therefore, the topic and the supervisor should be chosen carefully. Before entering a PhD track, it is good to talk with a number of supervisors and get their advice on the work and the topic. Looking at the works of previous PhD students gives an idea of the topics interesting to a supervisor, as does looking at the supervisor's own research publications. Another important question is whether there will be more people working on the same subject area, which is very helpful at the early stage.

Research builds on research. The critical aspect to a successful PhD track is reading and writing. Initially, investigating the actual state of affairs and learning the methodologies takes up most of the time. It is tempting to think that every information is available online, but do not forget about the good old university library. It features collections of books and journals that may not always be available online. It is good practice to build up a consistent collection of sources that cover the research topic: specialised researchers on the topic, journals that are devoted to the same problem area, conferences covering the topic, and so on. Reading also helps to see which literature references are frequently used, and points to further valuable resources. Finally, it also gives examples of a good writing style.

Publications are the most important output and a method of communicating results to the outside world. The conclusion of a PhD thesis is a summary of the entire work, but before that it is necessary to write about the steps leading up to the thesis. At first, most of these publications will be conference publications, later on they can become journal publications. It goes without saying that these publications should be composed in English as the most widely used international research language. Learning to write scientifically takes some effort: taking writing courses, consulting the supervisor, peer PhD students, and so on.

Publications intended for a conference or journal go through a review process before a decision is made whether they are accepted or not. The reviewers assess the quality and appropriateness of the submission. Frequently, reviews can be quite harsh, especially when the work is rejected. However, reviewer's

comments and questions are always useful to consider: is the problem unclear; is the method right; are the results consistent with the problem; is the literature adequate; and so on. Even when accepted, a submission often goes through some additional editing before it is finally published.

There is a lot of pressure today on publishing in high-ranking journals. These are difficult to get published in, since they have very selective high standards. It is best to target them at the later phases of the PhD research, or after the PhD itself. For someone at the earlier stage of their research career, it might be more important to target indexed conferences (Clarivate's so-called CPCI: Conference Proceedings Citation Index or Elsevier's Scopus) or journals that are indexed but not necessarily in the highest rank (known as Q1 or in the first quarter of the ranking). Any conference or journal that is indexed has the advantage that citations will be automatically tracked. Getting citations and building a so-called h-index (a metric for the number of citations) at the start is more productive than trying to appear in the best journals only.

It is crucially important for PhD students and early-stage researchers to build their network of peers. The best place for achieving this objective is conferences. They provide an opportunity to present work in person, which is the best method of popularising your work among others in the early stage. Additionally, getting to know people personally makes it easy to reach out to them later on with questions and advice. Usually, it is better to focus on one or two conference series rather than spreading out over multiple conferences. This improves the chances to get to know your network better and vice versa – the people getting to know you.

Doing good research is not a matter of big budgets and expensive laboratories. It can be achieved by modest means as well: what is important, the research contributes to pertinent questions in the field. Very often, the question is, what specific methodology, investigation method, inquiry, examining a prototype, conducting an experiment, and so on, yields new insights. This is closely connected with the methodology, which should be discussed with the supervisor and communicated with the research community.

After the PhD defence, many young graduates opt to stay at their alma mater. It is wise, however, to build (at least short-term) experience at other research institutes in your own country or abroad. This will make you much more attractive later on if you want to obtain tenure at a school. Post-doc positions are very helpful, but they are almost always for a limited time, after which it is necessary to find a new position somewhere else. Another option is architectural practice, usually at a large international firm. Companies like Foster and Partners, Skidmore, Owings & Merrill, Perkins & Will, UN Studio, and so on have research sections where it is possible to gain valuable experience.

Building a research career in architecture is not a traditional option for most students of architecture, but an increasing amount of them choose this path. Dedicated research careers are increasing, but it is also possible to become a successful architect combining practice with research. As with everything, all depends on personal determination, having a good network, and of course, luck.

Good luck with your future research career!