

## INTRODUCING DESIGN STUDIO LEARNING IN ARCHITECTURE TO NEW STUDENTS

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### **Abstract**

The design studio is central to architectural education. It is the forum in which students can apply and test their developing architectural knowledge-base and staff can evaluate the students understanding and competence in formulating an architectural proposition. The studio also has a direct relationship to the professional working environment of the architect and therefore simulates the creative workplace environment that many of the students aspire towards. Therefore one of the most significant challenges for architectural education is the development of methods that are effective in introducing studio-based learning to new entrants to courses in architecture. Most new students will have had no or very little experience of this method of learning. The process is of even greater importance when the course itself is new. Established courses will have an existing and evolving studio culture for new students to draw on in a process of 'passive induction'. For a new course there needs to be a more conscious and structured mechanism to both induct new students into the process of studio-based learning and encourage the appreciation of the benefits of a lively studio culture.

**Keywords:** Studio-Based Learning, Induction Process, New Course, Taster Day.

## **Introduction**

The special importance of sketching in the design process as long been recognised by design researchers. Lundequist (1992) exemplified this position when he observed that,

*It is virtually a truism to say the core of professional knowledge of an architect lies in his ability to create solutions to design problems. This ability to sketch is concerned less with being able to draw and more with his ability to handle the ambiguous and indeterminate in the problems he faces.*

Also, Wahlstrom (1992) explored the relationship between the process of sketching in design and professional knowledge before making the connection between tacit knowledge<sup>1</sup>, or the knowledge acquired through experience and reflection, rather than through structured learning, and the essentially personal means of design exploration through sketching. The role of sketching in the process of generating, testing and developing a design solution is self evident to a practitioner. And their relationship to a collaborative process of design and construction is also implicit in architectural practice. However, this is not the case with new students entering courses in architecture who are unfamiliar with the relationship between drawing, making and design methodology, especially in the educational and professional context of studio practise. The introductory student exercises discussed here are an attempt to address these issues.

In order to focus attention on the work of architecture as a material, made thing, it is beneficial to introduce students to architectural design through the use of models as representation rather than drawing. By engaging with the spatial location of material, its form, texture and issues of scale, students are then able to explore suitable methods of drawing to abstract and re-present the material model in two dimensions.

Their unfamiliarity with studio-based learning may initially cause them to fall back to the more traditional class-room based learning mentality of which most new students are familiar. In the classroom the teacher is “master” and directs the course of learning through very narrowly prescribed curriculum directives, usually with pre-determined outcomes.

Unlike the classroom teaching experience, the studio requires a radical adjustment in the student-tutor relationship. The tutor is no longer the initiator of the learning process, but more of an enabler, who explores design opportunities and possibilities with a group of students, within a framework of limitations and possibilities. In effect a collective investigation of architectural ideas is formed by the whole group and centred on the studio. For the studio to become a forum and laboratory for design exploration and debate it is important that students adjust to a learning culture where they make the decisions about what and how they investigate. The sooner the student is able to adjust to the studio, the earlier their design decision making abilities will benefit.

Also, it is important that the students enjoy the experience of studio based learning. It calls for a more open and collaborative working process than is normally encountered before Higher Education. The student will not only expect to receive critical assessment and advice from their tutors, but must be prepared to present their work and allow their developing design approach to be constantly tested together with their fellow students and tutors. This can be daunting to many new students when confronted with the prospect of exposing their work to this type of peer review process. However, such exposure to a wider audience, each with a different design perspective, is highly beneficial to the student.

One other important aspect of studio based learning that should not be overlooked is that it reflects the professional working environment that many of the students will find themselves in after they have completed their architectural studies. The modern practice of architecture is now very much of a collaborative affair. The increasing complexity of modern buildings requires the input of many different specialists working together to realise a building design. The designer as individual enabler, as opposed to individual creative contributor to the architectural design and realisation process, is becoming less relevant in an era of highly complex delivery mechanisms for buildings. From this perspective, one can appreciate the role that studio working can play in getting students to develop a collective response to a design problem and forming a consensus on possible development strategies. There are benefits in working collectively as a group, as Lawson (1993) illustrated when he quoted the following:

*The group has a distinct advantage over the individual, because ideas can become personal property or one's own intellectual*

*territory. The strength of that territory is considerable, and the difficulty of working alone is often in the breaking of the bonds caused by it. With a group the bonds are broken more easily, because the critical faculty is depersonalized.*<sup>2</sup>

The studio has a central role to play in developing the unique character of architectural design education. The students are central to that emerging character so it is vital that attention is given to developing suitable means of inducing new students to this pattern of education.

### **The Studio Introduction Workshop Exercise**

The Arts Institute at Bournemouth (AIB) is currently developing a process of induction that begins at the interview stage, before a student is offered a place on the new course in architecture (commenced 2007). During a 'Taster Day' a short studio exercise is used to introduce the studio-working environment to potential new students. The tasks involve object arrangement and discussion, drawing and scale appreciation. The materials which the students are given are very basic and limited in variety, while the results are not formally assessed. The atmosphere is deliberately kept informal and relaxed to encourage social interaction between students. The students are given guidance and assistance during the tasks but directed tutoring is avoided. The resulting drawings and photographs of the students' structures form the basis of the project 'data' and the outcomes are compared with the developing direction given to the students at the start of each successive session.

Although the 'Taster Day' exercises are not considered to be part of a formal process of induction to the first year course, they do assist in preparing new entrants to the first year to think about architecture in a tangible way through the direct manipulation and arrangement of objects (in this case wood blocks) and their representation in drawings. Design through making is a key element of the course and at the heart of the course philosophy (2007).

*The architectural design course is clearly focused on introducing architectural design as a specific field of design practice, with a particular emphasis on the **work of architecture** as a tangible, built (measurable) representation of human ideas (immeasurable).*

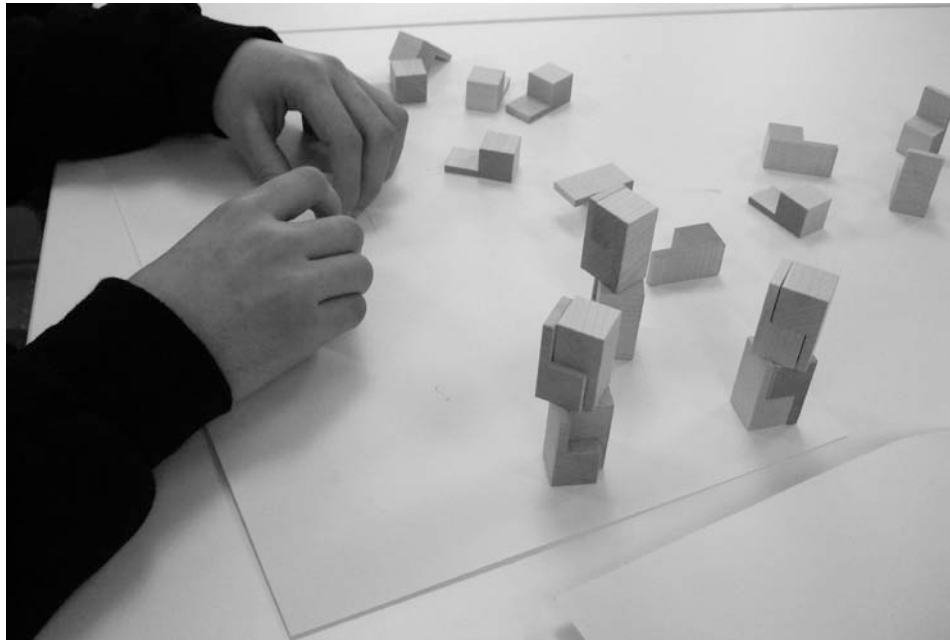
This process will be introduced in first year (and developed through the succeeding years of the course) where the making and use of models representations of ground, wall, frame and canopy is the basis to understanding origins of architectural form and design methodology. The process of developing a suitable studio induction mechanism will continue. As students progress through the course an evaluation of the evolving mechanism is made. This paper can be viewed as describing a work-in-progress. The nature of the findings will necessarily be qualitative and heavily value based.

Any investigation of this nature is necessarily qualitative in that it seeks to explore the potential of pre-course studio introduction workshop type programmes to potential students at interview stage. The effectiveness of the programme in helping students to adjust to the studio environment and establish a vibrant studio culture can only be assessed after the new intake have completed a full years study. However, small adjustments in programme delivery can be made and assessed on the basis of short term outcomes over the three month period that the programme ran for. The exercises themselves were flexibly structured within a standard pattern, but delivered fairly intensively.

The single session was piloted in April 2007. A series of eight taster sessions were conducted between January and April 2008. The participants were all candidates for entry to the first year of the BA (Hons) degree course in architecture. They were all invited to the department for an interview and an opportunity to experience the Institute and its facilities over a full working day. The participants were sent a programme outlining the activities for the day, but apart from advice on their portfolios, no other information about the studio exercise was forwarded.

Each session consisted of between six and twelve students and lasted for about three hours. The venue for the workshop session was initially a seminar room and the afternoon was chosen as it was hoped that by that time a minimum level of group culture may have developed among the students. (The morning includes a general introduction to the course and tour of facilities). The exercise was divided into three stages. Firstly, each student was given twelve blocks – wooden block models of seats at 1:20 scale (see *figure 1*). They were then asked to form an arrangement of chairs in whatever pattern they preferred before discussing their chosen arrangement. Secondly, they were then asked to consider the blocks not

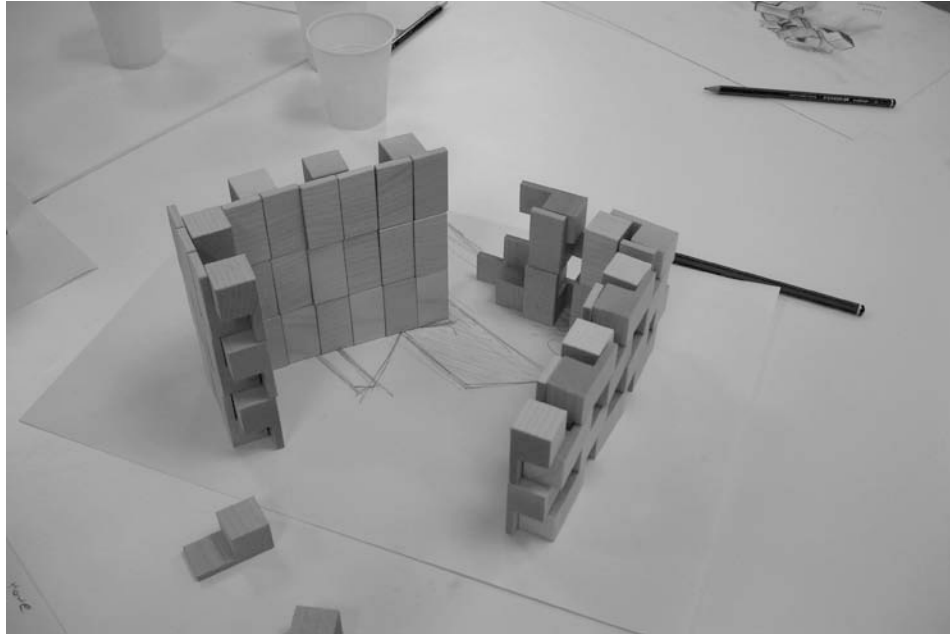
as chairs but as components to be combined in a way to construct a wall. No limit was set on the height or number of blocks available. Once they had constructed a wall they were then asked to build a right angle corner to their wall, making sure that they tried to interlock the blocks in some way rather than merely butting one plane of blocks up against another (see *figure 2*). Fourthly, they were then asked to draw both the internal angle and then the external angle of the wall (see *figure 3*). During the drawing exercise small plastic models of people at 1:100 scale and 1:50 scale were positioned next to, within or on top of the students constructions and they were asked to consider the likely scale of their walls. Questions that arose included whether their wall constructions were at the scale of part of a large building or at the scale of a sculpture or small enclosure.



*Figure 1 – Block Models (13 March 2008)*

The chair blocks themselves originated from a series of workshops undertaken with school children starting in 1999 undertaken by Simon Beeson. They are used to raise issues of arrangement and social relationships, usually in parallel with public art propositions. Their broader application as a play-block is currently under development. With architectural students the potential to explore how a fixed block can be

arranged and combined has become a fruitful and thought provoking application.



*Figure 2 – Making a Wall (31 January 2008)*

### **Summary of the Workshop Tasks**

#### **Phase 1:**

- Arrange twelve “chairs”.
- Group discuss of the arrangements.

#### **Phase 2:**

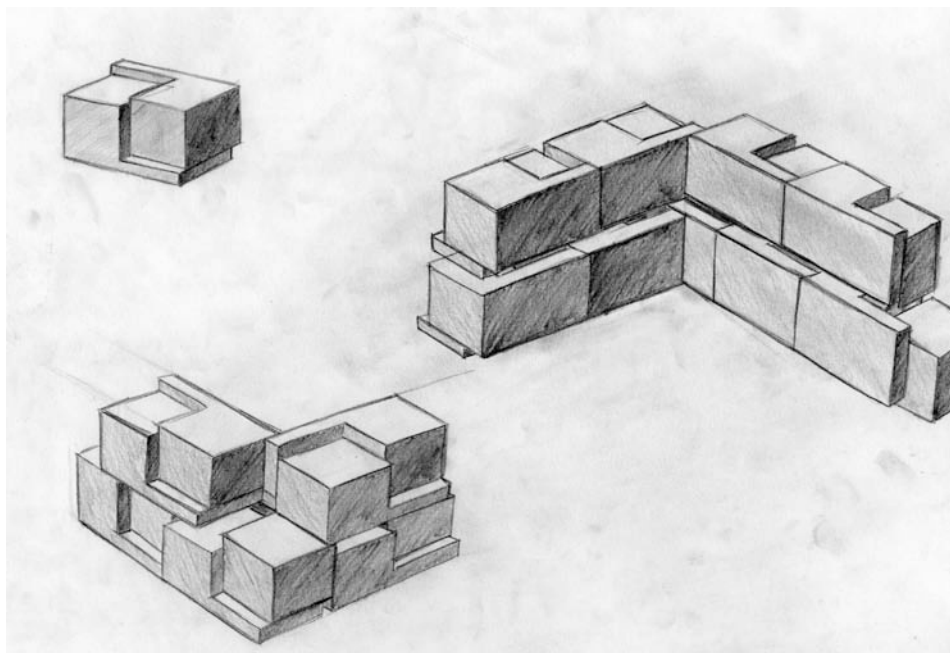
- Combine two blocks.
- Study the ensemble visually before drawing the blocks.

#### **Phase 3:**

- Construct a “wall” (number of blocks not specified).
- Introduce a corner by “locking” in another wall at right angles to the first.
- Draw the internal and external angles of the corner.

### **Observation and Lessons from the first Workshop sessions**

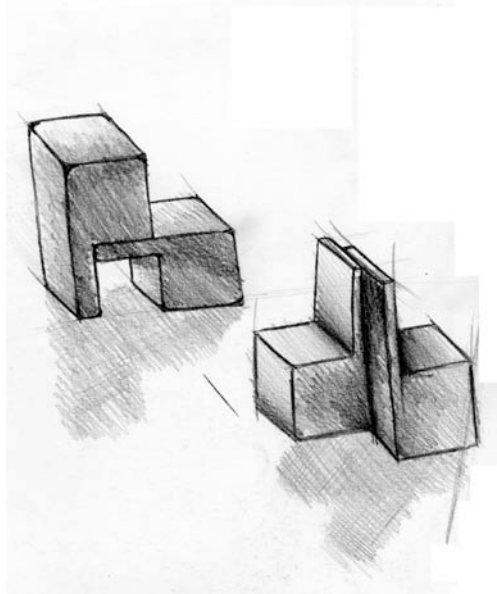
When the first workshop exercise was run, each task was introduced separately so that the students did not know what the next stage of the task would be. This was not a conscious decision and was definitely not prompted by a desire to prevent the students tailoring their output to preempt the following task. However, this limited information release did lead to a certain amount of apprehension and confusion on the part of the students. The discussion about the arrangement of chairs did suffer somewhat as a result. It was apparent that a follow-up discussion was not something that the first group of students had contemplated and as a result the discussion was rather superficial. In the subsequent running of the workshop both the chair arranging task and the follow-up discussion were introduced to the students at the outset. This allowed the students to be more adventurous in the arrangements they formulated for the chairs. They also generated interesting social scenarios to explain the rationale behind the arrangements that they had generated.



*Figure 3 – Internal & External Wall Studies.*

The blocks were designed and made in such a manner that their shape and size allows them to fit together in a very specific way. The first exercise asked the students to regard the blocks as “chairs”. The second wall-

building exercise asked the students to regard the blocks as components to be combined to construct a wall. Again, the jump from perceiving the blocks as the single and complete object “chair” to a “component” to be physically combined to create a more complex whole was something that proved unexpectedly problematic at first. However, after they had made a few attempts to test the possibilities of combining the blocks, a series of different walls were constructed. Again, after evaluating this, an additional sub-exercise was introduced between the chair and wall sections of the workshop to help link the two. The jump from the scale of a chair to the scale of a wall may have been rather more than the students were able to assimilate in a studio introduction exercise. However, this is precisely the type of alternation between scales that occurs during design exploration, and the testing of possible solutions. The transition exercise required the students to take two blocks and put them together in any way they chose before taking a few minutes to look at them. After a few minutes of studying the block “couple”, they then spent a few moments drawing them (see *figure 4*). This intermediate exercise proved useful in the final exercise to create a wall. The students appeared to appreciate the possibilities of combining the blocks more readily and may also have appreciated more easily that the more solid the wall construction was the less interesting the wall turned out to be. The pattern of void and solid helped to produce interesting forms and allowed the students to articulate their structures (see *figure 5*). This resulted in more interesting drawings.



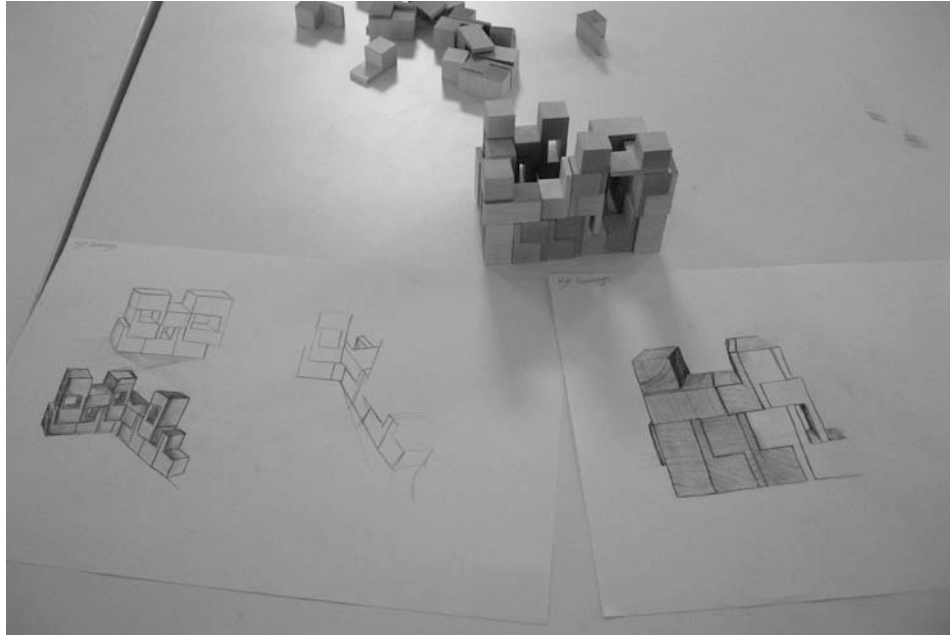
*Figure 4 – Study of Two Chairs.*

In addition to the overt role of getting the students to carry out simple analytical and evaluative tasks in the construction and drawing of the blocks, there was the covert role of attempting to reduce the learning inhibitions that have been built up over the previous years of formal education, and it was this latter task that any introduction workshop programme has to address. It was extremely difficult to generate any kind of group dynamic over the time available and against the background of individual learning that pre-university education strongly adheres to. The previous events during the Taster day were all aimed at encouraging the students to form the type of short-term bonds with each other that groups who are placed in unfamiliar situation resort to during intensive problem solving exercises and find strength through their common ignorance. However, this failed to happen, perhaps partly due to the absence of truly collaborative tasks. As an experiment during the final running of the workshop for this academic year the wall-building exercise was amended to introduce an element of team working. After each student had built their wall, but before they constructed the corner, they were grouped into pairs and asked to form a corner by bringing each of their wall elements together. They had to work together to devise a way of locking both elements together rather than just butting one wall element up against the other. This proved to be very successful and encouraged a high level of team working and cooperation in attempting to solve the problem. This additional task provides an opportunity to expand this element of the workshop to develop team-working exercises.

One other aspect of the workshop which proved to be rather more important than was appreciated at the first instance was the choice of venue. The first three sessions were conducted in a seminar room. The room is normally used by many other courses and so cannot exhibit the particularities of any one course that uses this room. However, once the venue was moved to the studio itself, the value of being surrounded by the products and processes of the studio (models, drawings, CAD stations, drawing boards, and students) enhanced the experience for the students. On reflection, it may now seem that the studio was an obvious choice for the venue, but it is precisely these types of issues that evaluating the first set of workshops is intended to address.

### **Implications for Future Workshop Exercises**

The workshop was very much focused on the process of design and not the product or solution. The drawings and models were vehicles which



*Figure 5 – Final Study (14 February 2008)*

allowed the students to gain a limited sense of learning how to explore design issues as an architectural student (and architect) might within the particularity of the studio. The workshop allowed perspective students to assess their suitability and reaction to studio-based learning by providing them with some basic first-hand experience. It also initiated a process that can be built upon during the early stages of the first year course. However, if suitable group-based tasks can be included within the programme then the group dynamic that is crucial to developing a studio culture can be generated in the workshop and its value more readily appreciated by the participants. This first series of workshops must be considered as a further pilot study with the aim of developing a more rigorous approach to the workshop's design and evaluation for pre-course entrants to courses in architecture. The possibility of developing a useful general framework for constructing specific architectural design orientated induction/introduction courses for pre-course applicants should be a longer term aim of this study.

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<sup>1</sup> See Polanyi (1964) for more details.

<sup>2</sup> Quoting Richard Burton of ABK Architects, London.