

# Challenging Orthodoxies: Re-evaluating Architecture Education for the 21st Century

Desafío a las ortodoxias: reevaluación de la educación en arquitectura para el siglo XXI

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## Resumen

En todo el mundo, la educación en el campo de la arquitectura se ha caracterizado por su ubicuidad y la naturaleza monolítica de sus premisas, métodos y prácticas. Transcurrida la primera década del siglo XXI, esto representa tanto una fortaleza como una fuente de vulnerabilidad, ya que si bien los intereses básicos de la arquitectura se mantienen constantes, la profesión está cambiando rápidamente y ya no se le puede considerar como una entidad singular, ni una que necesariamente hubiéramos reconocido o anticipado hace algunas décadas. Con el telón de fondo de un contexto profesional que evoluciona con rapidez, este artículo presentará un panorama de la enseñanza contemporánea de la arquitectura en el Reino Unido, concentrándose en tres factores que son los agentes primordiales de la reevaluación y el cambio y que tienen pertinencia internacional.

## Abstract

Around the world, architecture education has been characterised by its ubiquity, and the monolithic nature of its assumptions, methods, and practices. One decade into the 21st century, this is both a strength and a source of vulnerability, for whilst the core interests of architecture retain a constancy, the profession is changing rapidly and can no longer be regarded as a singular entity, nor one that necessarily would have been recognised or anticipated a few decades ago. Against the background of a rapidly changing professional context, this paper will present a picture of contemporary UK architecture education, focusing on three factors that represent key agents of re-evaluation and change that have a relevance internationally.

17

**Palabra clave:** Enseñanza de la Arquitectura / prácticas pedagógicas / taller de diseño.

**Key words:** Architecture education / pedagogic practices / design studio.

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The first relates to a paradigm shift that has occurred within the UK university sector over the last two decades: namely the implementation of a fundamental shift in ethos from the university as provider of teaching to producer of learning. This has been underpinned by a parallel shift from a supply-driven to a demand-driven model in which students expect to develop ways of learning that acknowledge and accommodate individual needs.

The impetus to make architecture education more inclusive, offering opportunities to a wider section of society, represents the second driver of change. This agenda has led to an increasing diversity of students in terms of social and cultural background, perceptions and preconceptions of the profession and of architecture education, expectations, educational background, learning styles etc. This phenomenon poses considerable challenges for an educational process that was established historically ostensibly to serve narrower groupings.

The third driver, and arguably the most important with strong links to the two preceding factors, relates to pedagogic practices, particularly with respect to design studio. The 21st century is characterised by pluralism, diversity, and the individual, yet by contrast many of architecture education's pedagogic practices stem from the didactic, prescriptive methods of the Ecole des Beaux Arts that subverted the individual in favour of the pattern book and strict dogma. Over the past 20 years, a growing body of research into studio-based teaching has developed, challenging assumptions and orthodoxies and revealing a number of teaching and learning practices which, in contrast to their theoretical intent, appear contradictory and counter-productive to educational theory. This includes challenges to the work of Schön from the early 1980s. This is stimulating a more fundamental re-appraisal of teaching practices in some quarters, and the progressive development of new inclusive pedagogic methods and strategies that aim to accommodate the individual in the studio-based learning process, and address identified shortcomings in existing studio-based teaching practices.

The three factors above represent a crossroads for architecture education, and the paper will seek to explore challenges and determine potential future direction.

### Introduction

Across the globe, design studio is underpinned by universal assumptions, beliefs and mythologies. It represents a constant, a continuum that defines architecture education, and a model that enables the perpetuation of professional cultures, values and behaviours.<sup>1</sup> Typically, where fundamental difference exists, it tends to reside in the areas of curriculum content, ideology and ethos rather than in the learning processes adopted. Thus the formal education of architects from Peru to Poland to Papua New Guinea reveals a replication of studio-based learning practices derived from a common historic root.

Since its inception at the Ecole des Beaux-Arts, there is much about design studio, and its complex conventions deeply rooted in historic practices, that has remained relatively unchanged (indeed unchallenged). Yet the context within which it sits has altered radically. As with the profession historically, studio represents a self-replicating model in which the tutors teach as they were taught themselves, and in which the process of teaching has become tacit. It is observed and inculcated, but seldom discussed.<sup>2</sup> Indeed it is argued that the root of design studio has become so distant in history that today's educator has no connection with its original rationale. Prior to Donald Schön's work in the 1980s, little literature existed regarding the theoretical basis of design studio,<sup>3</sup> and the pedagogies involved remain relatively unexplored.<sup>4</sup> However, over the last 20 years, a growing body of research into studio-based teaching has developed internationally, that challenges assumptions and orthodoxies. It reveals a number of teaching and learning practices that, in contrast to the theoretical intent of design studio, appear contradictory and in opposition to it. In the UK, as in some other countries, there is a groundswell of interest amongst architecture educators in a more fundamental re-appraisal of teaching practices, and the progressive development of new inclusive pedagogies that aim to address identified

shortcomings in existing studio teaching practices. However, it would be misleading to suggest that this work is without controversy. At the heart of this lies the tension between the vocational dimension of architecture education, and the desire to develop the subject as a discrete intellectual discipline within the academy.<sup>5</sup> Critically of course, the ubiquity of design studio is also testament to its success as a learning vehicle, and its adaptability as demonstrated over the past 350 years. The historical and ideological lineage from the Ecole des Beaux-Arts also serves to fuel resistance to the idea of any challenge to the methods that for so long have defined the practices of so many within the profession.

The paradigm has arguably shifted, and this shift requires a re-appraisal of design studio for it to retain its potency. Whilst the 21st century is characterised by pluralism, diversity, and emphasis on the individual, by contrast many of architecture education's core pedagogic practices stem from the doctrinal, prescriptive methods of the Beaux-Arts. These subverted the individual in favour of the pattern book and strict dogma.<sup>6</sup> Today, the spectre of the master and apprentice still looms large over contemporary education. Yet while the core interests of architecture retain a constancy, the profession is changing rapidly and can no longer be regarded as a singular entity, nor one that we would have necessarily recognised or anticipated a few decades ago.

### 1. The UK Context

At a fundamental level, most national educational systems are beholden to the prevailing political landscape that determines forms and levels of support, and which defines the underpinning ideology, vision, and agenda. In the UK the principal drivers of change over the past two decades have been political, with far reaching implications for education generally, and for architecture education specifically. Coincidentally, however, government's education agenda relating to diversity, the individual, and the development of independent life-long learners, have borne a close correlation to aspects of the critique of studio-based pedagogy.

Since the mid-1990s the UK university sector has experienced change that has been the most rapid, multi-

dimensional and significant in western Europe.<sup>7</sup> From a social standpoint, UK government targets for the participation of school-leavers in university education of 50% by 2010 (Abramson and Jones [12]) created a greater emphasis on the inclusion of previously minority sectors of society. The accommodation and performance of students from these backgrounds has therefore become an issue that universities are increasingly required to address. Additionally, the government has established a national agenda with respect to teaching quality, public information relating to learning processes, standards and expectations, and subject specific benchmarks. The consequences of political policy, such as diminishing state funding, are therefore applying greater focus to matters of pedagogy itself. Thus in education widely, and architecture education specifically, a more active debate exists on how learning takes place.

Returning to the key areas of student diversity, the individual, and the development of independent life-long learners, each of these themes will be briefly considered in the context of design studio. Thus the theoretical base will be presented for ongoing developmental work and experimentation.

### 2. Diversity

The drive to increase the percentage and diversity of school leavers entering university, is imposing new conditions on a form of professional education that has until now been designed to replicate its profile socially, culturally, and economically. Indeed the Australian sociologist Garry Stevens<sup>8</sup> argues that architectural education has until now systematically operated in a way that ensures the replication and preservation of professional models. What Bourdieu termed 'habitus'<sup>9</sup> is cultivated through exposure, attitude, imbued aspiration and confidence, and perhaps lineage. It acts as a tool through which the student understands the educational process, its underlying value system, and the rules of engagement with the course of study. Thus, it is argued that students from backgrounds in which cultural or artistic interest has been high, are already predisposed to the primary concerns of an architecture course.

Regardless of the pace of change, there is an imperative for the education process to understand and respond to difference amongst students in terms of cultural and social background, but also from the viewpoint of their previous learning culture and individual learning preferences. However, the fact that the student profile has, until recently, been relatively homogenous in these terms, has arguably denied recognition of the fact that students as individuals have specific learning needs and styles. Ironically, the very notion of the tutor as learning facilitator or ‘coach’, as advocated by Schön,<sup>10</sup> is based on the premise that the tutor is able to understand and engage with the student as a unique learner.<sup>11</sup> From this perspective it is thus argued that architecture education has paid scant regard to the concepts that lie at the heart of its underpinning educational theory (e.g. Personal Construct Theory). Equally, it has not sufficiently considered the changes implicit in the evolution of tutor from traditional teacher to facilitator.<sup>12</sup>

However, in common with generic trends in UK university education, the profile of the contemporary student cohort in architecture demonstrates greater diversity than was traditionally found. In their influential work ‘Building Community’,<sup>13</sup> Boyer and Mitgang<sup>14</sup> advocate the ‘celebration’ of diverse student backgrounds and cultures and, critically, representation of these differences in the curriculum and learning environment itself. The agenda of diversification brings with it a burgeoning variety of perspectives, learning styles, and cultural standpoints, and any development of the educational process requires to address these facets. In other words, the whole learning experience should be both socially and culturally inclusive. The globalisation of today’s profession, and hence client base, presents another powerful argument for greater inclusion.

Boyer and Mitgang argue that architecture education, like practice, should have both public and private ends. Every student has personal motivations and aspirations, yet architects in both education and practice also provide a public service. Hence architecture education should address the current and future issues

of concern to society, and in doing so, develop a clearer social relevance and purpose. Crucial to this is the removal of some of the perceptions and preconceptions of elitism and exclusivity that architecture attracts, and the cultivation of a broader social spectrum of interest and engagement. Generic reference to the student body as if it were a homogenous group can tend to conceal the fact that different life experiences, cultural perspectives, and preconceptions, expectations, and aspirations, impact significantly on the educational experience, and how one acclimatises to and engages with it. Such differences emanate from both social groupings and from cultural and ethnic groupings and, as society becomes ever more multi-cultural as in the case of the United Kingdom, there is increasing demand for the different perspectives embodied in society at large to be represented and embraced by the education process. This is a matter of both academic content and process.

### 3. The Individual

Historically, architecture education has offered little recognition of the individual or of the diversity within the student body. Indeed, the original methods of the Ecole des Beaux-Arts actively subverted the individual in favour of a collective understanding of the prevailing style, enforced through dogma. Although emerging from contemporary educational values, the greater emphasis placed on diversity in recent years in terms of gender, ethnicity and socio-economic background, coincides with the liberalism and multiplicity of the modern world. Yet, thus far, in architecture this shift in conditions has arguably been embraced more by the consideration of ideology and philosophy than to pedagogy.

The argument has been made that in order to achieve significant improvements in student learning, there requires to be a greater level of understanding of the cognitive processes affecting individuals.<sup>15</sup> At this point it is contended that discussion of pedagogy commonly centres on issues which are shared by all learners, whereas the ways by which the individual learner’s needs, or learning style, might be better accommodated and addressed are debated less, and are less well understood. In accordance with Robotham’s

assertion it is argued that pedagogies designed to promote independent learning must embrace the individual and, necessarily, aspects of diversity. This is especially so where the underpinning theoretical premise is that knowledge is personally constructed, as with constructivism, the theoretical base of design studio. Constructivist learning theory is inextricably linked with the concept of the independent learner and the development of knowledge that is personally meaningful and which builds on individual experiences, background and attitudes.<sup>16</sup>

In terms of the individual and learning it is argued that further 'hidden' diversities exist; those of learning disposition, motivation and expectation. Based on the learning theories of Carl Jung and Howard Gardner, and building on the work of Demirbas and Demirkan<sup>17</sup> and Roberts<sup>18</sup> which explored issues of learning style in relation to architecture specifically, it is contended that understanding of learning styles offers a means by which the individual can begin to be more explicitly accommodated through the design of inclusive learning processes. Similarly, D'Souza<sup>19</sup> contends that Gardner's Multiple Intelligences have a bearing on individual learning, and reinforced the need for architecture educators to value and accommodate diversity, and to place the student at the heart of the learning process. The case is therefore made that the challenge for educators lies in the design of learning materials and support structures that accommodate the individual learner.

#### 4. The Life-Long Learner

Over the last two decades the UK university sector has sought to implement a paradigm shift from being a provider of teaching to a producer of learning.<sup>20</sup> Along with the drive to make teaching more effective, consideration of this in business terms portrays a shift from a 'supply-driven' to a demand-driven' model in which the student expects to develop learning in ways that acknowledge and accommodate their individual condition.<sup>21</sup> Whilst this shift has placed a general emphasis on means of overtly developing independent learner cultures, many of the pedagogies adopted in architecture schools remain unchanged from the days

of didactically oriented, more selective university education.<sup>22</sup> However, it would be inappropriate to suggest that the prominence of the independent learner agenda inevitably renders more traditional teaching methods as redundant. On the contrary, many of these methods continue to have relevance, but require use alongside new methods that develop essential skills such as reflection and meta-cognition, these being central to the independent or autonomous<sup>23</sup> learner.<sup>24</sup> Consistent with the familiar concept of 'lifelong learning', it is argued that the notion of learner independence is particularly important for the continued well-being, relevance, and perceived value of the architecture profession in a period of rampant change.

Critically, at a time when lifelong learning is increasingly important, constructivism, if facilitated appropriately, instils skills of enquiry, independent learning, reflection, and a commitment to learning. Indeed, the very process of constructing knowledge innate to architectural design should imbue an enthusiasm for the expansion of knowledge, and for the application of ideas. It is the nature of the relationship between tutor and student that fundamentally defines the degree to which the facilitation of individual learning is effective. Although the historical root of architecture education lies in the concepts of the apprentice and the atelier, which were founded on principles of pupillage and knowledge transmission, today's emphasis on individual knowledge construction is markedly different to these original precepts. Yet typically the dynamic enacted between tutor and student remains fundamentally unchanged.

The nature of student-tutor contact typically found in design studio has an intensity and specificity rarely replicated in the teaching of other professional areas. This is intended to facilitate the contextualisation of learning to the individual and, in a learning process that is inherently complex and 'mysterious', allows the tutor to gain a more intimate understanding of the development of the individual. Whilst the studio-based experience appears to be essentially student-centred, Yanar<sup>25</sup> observes that the role of the students is

frequently merely 'adaptive, passive and reproductive'. In other words, rather than generating new knowledge and meaning, the student primarily replicates that of the tutor. Similarly, Dutton<sup>26</sup> argues that studio represents a 'teacher-centred' experience, where learning is often only successful where students have understood and accepted the language and frames of reference of the staff involved. Once again, these views refer to the legacy of studio's apprenticeship origins, and to a process of transmission, albeit one in which the student actively participates in the process.

Despite the intention of design studio as a discursive environment founded on open dialogue, inadvertently its operation commonly acts in opposition to this, particularly in the initial stages of learning. The relationship that exists between tutor and tutee requires to be better understood, and carefully handled to counter implicit 'power asymmetries'.<sup>27</sup> The influence of the tutor on the tutee that derives from the imbalance of expert knowledge can be easily under-estimated. It is further contended that the underpinning assumptions and values of staff are seldom questioned, particularly during the early years of study where the student has a greater dependency on the views of tutors. This in turn recalls Schön's<sup>28</sup> illustration of the 'mastery / mystery game' of design studio, where mystery is seen as a symptom of mastery, and where the dominant and predetermined view of architectural reality emanates from the tutor.<sup>29</sup> This altogether describes an environment in which there is a high student dependency on teaching staff, and where students constantly seek legitimacy of their work through establishing connections between their ideas and those of the tutor. It is proposed that central to the development of studio is the need to reconstruct the tutor role, incorporating the development of a new dynamic between tutor and student that minimises dependencies and lays the foundations for truly open dialogue.

Architecture education may be viewed as being characterised by tensions and contradictions. For example, at its heart reside the fundamental differences and divergences between the desires of academia and the demands of the profession. More specifically,

contradictions exists between the universal teaching methods whose roots are in the historic apprenticeship model, and notions of contemporary educational practice.

### 5. Tentative Steps Forward

The confluence of many conditions at this point in time provides the opportunity for the positive development and enhancement of design studio pedagogy, including the positioning of the student at the centre of the learning process. Indeed it is argued that it is necessary to address the need for change in order to ensure the continued relevance of studio-based learning for the students of tomorrow, to align learning practices with current educational thinking, and to provide clarity of process, purpose and meaning to them individually and collectively. Paradoxically, the importance of the pedagogical perspective outlined above has in part been prompted by factors in the UK education environment that were initially regarded as threats to its very essence. Latterly, the schism between theory and practice is becoming a rich territory for exploration and experimentation for a number of educators, supported by an increasing attention being applied to issues of pedagogy and the deepening of our collective understanding of how students of architecture learn.

The UK enjoys a strong sense of community between its 42 professionally recognised, supported by active networks and a number of formalised forums. For over a decade the government sponsored 'Centre for Education in the Built Environment' has hosted an annual conference specifically looking at all aspects of studio culture, this acting as a forum for debate and the exchange of ideas. As in many other countries, educators are taking the first tentative steps in developing new models of studio-based practice. That this process is measured and slow is somewhat inevitable due to the dominance of the historic model, the desire to implement change without destroying the undeniable enduring qualities of studio culture. In reality there are numerous projects emerging, but in addressing the issues discussed above, the areas of particular interest include:

- The development of early learning methods that build on personal experience, and encourage dialogue, debate and challenge.
- The development of project structures that make the processes of reflection more conscious and explicit.
- The reconstruction of the review / critique process.
- Enhancement of student feedback.
- The strategic introduction of peer learning as a formalised component of the learning process.

Other ongoing work includes the reconsideration of studio space, including ideas ranging from hot-desking and flexible learning space, to ideas of the virtual studio, and the architecture of the review. However, the deeper agenda relates to how we cast ourselves as educators, and how the community of educators transforms itself from being directors to facilitators of learning. That is a challenge for us all if studio, the core of our educational process, is to retain its vitality and relevance in the future.

### Notes

- 1.- Inter alia Rapoport (1984); Dutton (1991); Salama and Wilkinson (2007).
- 2.- McClean (2009).
- 3.- Webster (2004).
- 4.- Salama and Wilkinson (2007).
- 5.- Stansfield Smith (1999).
- 6.- Broadbent (1995).
- 7.- Inter alia Smith and Webster (1999); Kogan and Hanney (2000); Shaw et al (2007).
- 8.- Stevens (1998)
- 9.- Bourdieu defined 'habitus' as the process by which the individual becomes predisposed to an institution or subject by a combination of 'perception, appreciation, and action' (Stevens, p.43).
- 10.- Schon (1985).
- 11.- Brockbank and McGill (1999).
- 12.- Webster (2004).
- 13.- Building Community: A New Future for Architecture Education and Practice' is a special US-based report published in 1996 by Ernest Boyer and Lee Mitgang for the

Carnegie Foundation for the Advancement of Teaching.

- 14.- Boyer (1996).
- 15.- Robotham (1999).
- 16.- Inter alia Ledowitz (1985).
- 17.- Demirbas; Demikan (2003).
- 18.- Roberts (2001).
- 19.- D'Souza (2007).
- 20.- Skolnik (1998).
- 21.- Cormack (1999).
- 22.- Parnell [25]; Bailey and Brannen [26]; Webster [27])
- 23.- 'Autonomy' or 'autonomous learning' is defined by Holec (1979) as 'the capacity or ability to take charge of one's learning'
- 24.- Webster [28].
- 25.- Yanar (2007).
- 26.- Dutton (1991).
- 27.- Ibid.
- 28.- Schön (1983).
- 29.- Yanar (2007), op.cit.

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