

The UNESCO-UIA Validation System [managed by the RIBA]

UNESCO-UIA VALIDATION SYSTEM

STUDY PROGRAMME FULL VISIT REPORT

Escola Tecnica Superior d'Arquitectura de Barcelona

Universidad Politecnica de Catalunya, Spain

11-14th June 2017

Name of Institution

Escola Tecnica Superior d'Arquitectura de Barcelona Universidad Politecnica de Catalunya
Avinguda Diagonal 649-651, 08028 Barcelona, Espana

Name of study programmes and awards:

GArqEtsaB: Grau en Estudis d'Arquitectura
[Degree in architecture: 5 years full time]

MArqEtsaB: Master Habilitante Arquitectura
[Masters in architecture: 1year full time]

UNESCO-UIA FULL VISIT TO THE:

Escola Tecnica Superior d'Arquitectura de Barcelona Universidad Politecnica de Catalunya, Spain

This report is written for the purpose of summarising recommendations to the UNESCO-UIA Validation Council for Architectural Education and relevant UNESCO-UIA Regional Validation Committee. The Report is to be read with reference to the following documents:

- the UNESCO-UIA Charter for Architectural Education (current edition)
- the UNESCO-UIA Validation System for Architectural Education Document (current edition) with particular reference to:
 - section V: analysis of criteria
 - section IX: recognition/validation protocol
 - appendix a: assessment procedures

Background to visit

Via the UIA co-director of the UNESCO-UIA Validation Council for Architectural Education Professor Fernando Ramos, the Escola Tecnica Superior d'Arquitectura de Barcelona (ETSAB) made a request for validation to the UNESCO-UIA Validation Council for Architectural Education at their meetings in Paris on 24-25 October 2016. This was subsequently supported by a formal letter from ETSAB Dean Professor Jordi Ros dated 9 November 2016 inviting UNESCO-UIA to consider the school for validation. The VCAE agreed it was appropriate for UNESCO-UIA to convene a preliminary report group visit to the school which took place on 16-18th January 2017.

Introduction

The UNESCO-UIA report group wishes to thank the Rector of the Universitat Politecnica de Catalunya, and the Escola Technica Superior d'Arquitectura de Barcelona - and all the architecture staff - for their invitation to consider the Grau and Masters programmes in architecture for validation. The report group is appreciative of the patience, professionalism, and enthusiastic cooperation of the staff and students of ETSAB during the visit. The report group thanks the School, the Dean, and the head of architecture for the kindness and hospitality shown to them throughout their time in Barcelona; all members of the report group are aware of the energy the academic community of ETSAB had devoted to preparing for this visit. They were pleased with the insights afforded by the documentation, the presentation by the Dean and senior academic staff, the content of the exhibition, and the academic portfolios provided on the base room PCs.

Information received in advance of the visit:

The full documentation relating the visit will be included below:

In carrying out this visit, the report group considered the following points:

- **item A** *rigour in the operation and structure of the programme, ensuring quality across all areas of the curriculum covered by the 16 points of the UNESCO-UIA validation criteria*
- **item B** *student outputs showing evidence of the integration of intellectual ability and practical understanding in both design projects, and written submissions for taught courses*
- **item C** *compatibility of the threshold standards for students' achievement with those referenced by UNESCO-UIA in their key documents on architectural education*
- **item D** *review of the graduate attributes demonstrated through students' academic portfolios in terms of their facilitating entry to other major international schools of architecture*
- **item E** *review of the professional skills demonstrated through students' academic portfolios in terms of matching (and exceeding) international standards for employability in professional practice.*

Recommendation:

Escola Tecnica Superior d'Arquitectura de Barcelona Universidad Politecnica de Catalunya is recommended to the UIA Validation Council for Architectural Education for the award of, 'UNESCO-UIA Validation'.

- UNESCO-UIA validation means that the study programme meets all the requirements of the UNESCO-UIA Charter for Architectural Education
- UNESCO-UIA validation be valid for a period of five years after the date of the full report group visit

Commendations

1. *The documentation for the visit was very clear and the careful preparation of these documents enabled the Board to discharge its duties. The staff were very helpful and cooperative during the course of the visit in providing a clear explanation of the programme and in answering the Board's questions.*
2. *The exhibition gave a thorough overview of student work and great care had been taken by all of the staff to ensure that the Board had a comprehensive exposition of the full educational programme.*
3. *This is a well-established school committed to providing a high quality and integrated pattern of architectural education.*
4. *The link between the city and the school are exemplary and in many respects the City is the written history of the school and vice versa. The Board congratulates the school on the celebration this year of its bicentennial and this affords the opportunity to celebrate the considerable success of the programme and the manifest and tangible benefits that the highest standards of architectural design have afforded to the making of this unique place that is the city of Barcelona.*
5. *This is a large school that benefits from the critical mass of students and staff that enables a broad range of educational opportunities, resources and activities both within the curricula and through the many relationship that the school has with practices both regionally, nationally and worldwide.*
6. *The school has an excellent internship programme that partners the school with architectural practice. The structure, and processes of this programme are both rigorous and effective. Whilst economic circumstance reduced the number of students in placement this remained relatively high and as circumstances improve the board noted that the number of placements is showing a steady increase.*
7. *In the light of the recent economic crisis and the commensurate pressures of student number, funding and resources imposed on the school it is commendable that this period has been grasped as an opportunity to appoint new professors, devise creative strategies and maintain the creative momentum of the School.*

8. *It is clear that the school engages in a permanent critical discourse about the teaching of architecture. There is a strength in seeking external voices to inform this debate and here the continued strength of the school is contingent on its ability to draw on external critics and architects of international renown into this debate.*
9. *The schools has some exceptional assets in the form of its Gaudi archive and the link through its trustee board with the Fundació Mies van der Rohe, Barcelona. The opportunities presented by these exceptional resources continue to offer the potential to further enhance the international reputation of the school.*

Recommendations

1. *Whilst the documentation for the visit was very clear and the careful preparation of these documents enabled the Board to discharge its duties however the Board noted that preliminary request for the course documents to be in English had only been partially met and for subsequent board this should be fully consistent.*
2.
3. *There is an exceptional level of loyalty and pride on the part of the staff and students at the school. There is clear sense of collective endeavour and collegiality which whilst accepting differences in approach seeks to foster high quality civic design and buildings. The ability of the school to make appointments with levels of commensurate remuneration is essential to this continued success. The field of architecture whilst not unique in the professional disciplines is founded on the strong links between practice and academia and here the schools strength and unique character is contingent on the ability to integrate practice and academic study through part time associate professors. The board supports the school's stated aim attracting new staff to enhance the contemporary trends in architectural education and ensure an innovative student learning experiences.*
4. *The current structure of a 5 Gradu + 1 year Masters Course is derived as a legislative expedient to meet the demands of governmental funding and local professional registration requirements. Whilst this structure is clear there is the potential for the Masters to offer a higher level of specialism meeting the requirements of ever more specialised market. In this respect the board welcomed the development of new Masters course streams, and the stated ambition of offering these courses in parallel English language delivery can only serve to enhance the attractiveness of these postgraduate offers through internationalisation..*
5. *The school should consider reassessing the structure and methods of student representation to ensure that all student voices are represented in the decisions to be made about the future of the school.*
6. *In respect of UNESCO-UIA Criteria points 9 and 13, the teaching of sustainability and its integration with the design projects should be further strengthened. Whilst there is good practice in considering environmental factors and issues of sustainability in the projects, along with the traditional methods of understanding building analysis, there is greater potential to develop more advanced methods of modelling and testing building performance to develop solutions in response to climate and matters of sustainability.*

7. *The introduction of the nature of architectural practice from the initial stages of the course would benefit students in understanding the relevance and application of their learning. There is a lack of evidence and assessment for the professional competencies required by the UNESCO-UIA Criteria points 15 in respect of the conduct and appointment of the architect along with the matters of requirements for professional insurance and matters that are intended to protect the rights and interests of the architect, client and building user.*
8. *The Board were impressed by the scale and range of projects covered in the course both in respect of the number of projects in each year and their progressive complexity throughout the course. These seemed to present a strong orchestrated pattern of learning vehicle for the student. As the preliminary, the full board however noted that the distinction between L5 and L6 was not as clearly differentiated as it might. Here the board felt that the new Masters courses which are envisaged, along with potential revisions to the timing and duration of the 5+1 model might offer the opportunity to enhance the Masters level offer to provide greater level of specialisms.*
9. *In respect of UNESCO-UIA Criteria points 7 and 16 the School needs to ensure that all development and process work that supports the design decisions and rationale involved in the preparation of the final design is recorded and represented.*
10. *The values and ethos of the school are consistent and rigorous throughout all aspect of the programme. However higher education is undergoing rapid and radical changes in the light of new digital technologies and communication tools and methods. In this respect the school might consider how, whilst maintaining its core values the opportunities that new technologies afford might be embraced to ensure that graduates are well equipped to creatively engage in the rapidly changing nature of architectural practice. The school is uniquely placed to engage such technologies and innovations in a way that complements and reinforce its established architectural values and beliefs.*
11. *The School might consider in respect of item above how to shape the space of the school to reflect the teaching and learning environment and practices of the 21st century. Reappraisal of studio space/and additional space to make a more inclusive environment in which student might work together and share their learning experience within the school. The board was pleased to hear that more space might come into the use of the school through the acquisition and redevelopment of an adjoining building.*
12. *The board commended the work being undertaken in the respect of enhancing the global reputation of the school through International promotion of the courses. The tension between the unique character and strengths of the school and the demands a distinctive offer in a global market place are considerable. In this respect the board recommends that the school continues to identify its unique raison d'être founded in a belief in the City and an architecture that is civic, responsible, modest yet effective and innovative.*

Detailed commentary on recommendations:

Notes from the meetings in accordance with the timetable form Annex G to the Full report. In carrying out this visit, the report group was required to consider points A-E of the UNESCO-UIA Validation Manual. Commentary against these points is as follows:

Commentary on work related to objectives described in UNESCO-UIA Charter for Architectural Education.

Where no extended comment against an objective is offered, the report group considered that, on the evidence of the work seen, the criterion was being met. In each case where commentary is offered, this is followed by a proposal for the action/s the programme team should actively consider undertaking to further enhance standards.

1 *An ability to create architectural designs that satisfy both aesthetic and technical requirements*

The School structure at undergraduate level is clear in that it balances 5 main streams of education organized as departments; Architectural Design, Urbanism, Technology History/Theory and Graphic Representation. The school has a clear strength in the teaching of these skills. The school has a strong pedagogic approach based on a clear set of values founded on architecture as the unity of technology and humanism and a belief in urban values of the City and in particular Barcelona as a vital human artefact in which architectural intervention carries particular, and unique responsibilities. The programme of study in respect of designs is ambitious and there is clearly high expectations of the level and amount of design challenges.

The school adopts a particular approach to design founded on the unity of the building and context in the urban environment. The pedagogic method and design approach is consistent throughout the school and the results are thorough and well-resolved within the parameters of the requirements. Whilst acknowledging that school is pluralistic and accepting of more radical design approaches to the more normative solutions the board felt that given the educational framework supported this strong design approach the school might consider affording greater freedom to the students in developing their own speculative design proposals. In making this measured observation the board were conscious of the history of the school and the city of Barcelona that sought to break the boundaries of conventional and normative design paradigms. The inspiration of Antoni Gaudi and Enric Miralles bear testament to the unique Catalanian culture that has become synonymous with freedom of creative spirit and has dared to venture beyond the realms of accepted wisdom.

2. *An adequate knowledge of the history and theories of architecture and the related arts, technologies and human sciences*

The School might consider ensuring that there is an adequate balance of the teaching of history relative to other subjects. In many respect the teaching and assessment of these subjects was exemplary. With a strong skills set in the analysis of modern building of the 20th century and the web site. The teaching of premodern architecture was satisfactory but might have had more time afforded to its study. The board noted the balance of the humanities to the technological teaching in the course and felt that accepting the statutory obligation the teaching of structures and calculations absorbed much of the student's learning in comparison to the time devoted to the teaching of history and

theory. The school might wish reassessing the relative balance of these subjects of technology to the humanities.

Value the understanding of the historic context and the ability to read and interpret these setting is of significant importance.

3. A knowledge of the fine arts as an influence on the quality of architectural design

The board noted the schools response to the preliminary board's comments in respect of this criteria. However the intention of the previous comment was to indicate how the fine arts influence the work and not how the work manifests itself as fine art. In this respect processes of abstraction that commences from the understanding and re-presentation of art as a reflection of the cultural values and social ideas that architecture can express/represents. Within this the confines of the way in which the arts are used to inform the architectural concept is relatively narrowly defined in the school as a formal compositional concern. Contemporary artistic practice and current debate that the arts generate might serve to enhance this discourse within the school.

The stated ambition of the school as the coming together of technology and humanism is somewhat imbalanced towards the technological agenda. In this respect the humanities as represented in the cultural social context in which architecture is made might be further developed.

This is significant in the regional culture of Catalonia and here the unique identity of place and culture might be further enhanced. The search for an authentic regional identity and the unique genius loci, landscape and culture has been a significant driving force in the making of Barcelona and the board found this connection to hold great potential in the work of the school.

The school has a strong sense of autonomy and there are an exceptional range of talents and diversity of knowledge amongst the staff in the department. However the potential still exists for interdisciplinary working across the University departments, as for example might be the case in respect of the fine arts.

4. An adequate knowledge of urban design, planning and the skills involved in the planning process

The School has an exceptional strength in the understanding and belief in the City and context as driving design factor. The teaching of urban design theory and matters of urban planning are thoroughly and extensively covered. The projects are predominantly set in the city of Barcelona and in many respect the city and the school are interlinked to such an extent as to be synonymous. The city reflects the school and the school reflects the city. The school in this respect makes a positive contribution to the life of the city and its future.

The board felt that the different departments divided between urban design and architectural design was useful but somewhat of an artificial distinction when in reality the school saw these various scales of consideration as one and the same, as part of a design continuity as part of a Gesamtkunstwerk.

5. An understanding of the relationship between people and buildings, and between buildings and their environment, and of the need to relate buildings and the spaces between them to human needs and scale

The school has a great strength in considering the relationship of building to their surrounding context including the social context in which the projects are proposed. The spaces around building and there interrelationship with each other and to their immediate context is well considered in all of the work presented to the Board.

The use of live – real life - projects and competitions based on existing conditions and real needs offers is very strong educational paradigm within the school and this form a key link between the school and the City.

6. An understanding of the profession of architecture and the role of the architect in society, in particular in preparing briefs that take account of social factors

Level progression is largely governed by the design project structure which sees an increasing level of scale and complexity in building type. At the Gradu level the user requirements are largely given to the students, although the board noted that as many of the projects were set in the City of Barcelona the students had much opportunity to talk to local residents and potential building users so as to understand the impact of their proposal in the context of the society for which they were intended.

At the Masters level there was a greater emphasis on brief development. The board noted the potential to further develop of anthropological and psychological skills of analysis and research as to user requirements at this level.

7. An understanding of the methods of investigation and preparation of the brief for a design project.

As item 6 above. There is the potential to make these methodologies, particularly in respect of research approaches and the recording and assessment preliminary and developmental work more explicit as within the projects.

In respect of UNESCO-UIA Criteria points the School needs to ensure that all development and process work that supports the design decisions and rationale involved in the preparation of the final design is recorded and represented.

8. An understanding of the structural design, construction and engineering problems associated with building design

The School has a great strength in educating graduates who see the materials, construction and structure of a building as an integral part of the design process and final design solution. In respect of the level of the understanding of structural systems the board felt that accepting the requirements of the registration requirements in Spain the emphasis on structural calculation was significantly beyond the expectations of the UIA/UNESCO criteria. In this matter and accepting the legislative restriction the board felt that a greater understanding of structural principles rather than detailed calculation would satisfy the criteria in this respect.

The students demonstrated an excellent understanding of the materials, their construction and the refinement of detailed building considerations evident throughout the work from the early stages.

9. An adequate knowledge of physical problems and technologies and of the function of buildings so as to provide them with internal conditions of comfort and protection against the climate.

The buildings project produced in the School have an elegant pragmatic necessity and in this respect the school is exemplary in respect of understanding how to plan and organize architectural space with efficiency and economy. The technologies relating to the construction and structure of the buildings are well described and integrated into the project work.

The board noted the response provided by the school to the preliminary board's report. The matter of sustainability is broad and the school sought to embed these ideas as what might be seen as a 'cultural' aspect throughout all aspect of the course. The ideas of social and urban sustainability along with the creative reuse of existing buildings were evident in the work.

The detailed considerations of the pragmatic and scientific concerns of sustainability were evident in the Year 4 design and taught programme in Year 5 and Masters course. In general the level of testing and questioning building performance in respect of sustainable and passive design was less apparent. For example the teaching of EcoTech or IES or matters of passive environmental design methods as applied to the design projects were not clearly evident. There was little evidence of student being familiar with the relevant codes as for example: BREEAM (Building Research Establishment Environmental Assessment Method) Leadership in Energy and Environmental Design (LEED). Whilst there was evidence in the portfolio of knowledge of the use of renewable energy sources such as, PV, Solar thermal, etc. the board felt that this should be further integrated into the design of buildings as a central and demonstrable consideration.

There are aspects of environmental design in its modelling and testing the environmental performance of the building that require further development.

There are clear strengths in the teaching of structures and building construction and these are fully integrated in the design project

10. The design skills necessary to meet building users' requirements within the constraints imposed by cost factors and building regulations

The School has strengths in the teaching of current building legislation and codes and the students seem aware of the real world parameters that apply to the realization of building in response to these criteria and user requirements and an understanding of cost.

11. An adequate knowledge of the industries, organizations, regulations and procedures involved in translating design concepts into buildings and integrating plans into overall planning

There is a strong sense of pragmatic buildability within the design projects. There is a clear sense of the students being required to organize space and function with great economy and elegance. This is a considerable strength and the board commends the school for its focus on this key discipline of architecture that is often overlooked in the face of ever increasing demands and responsibilities upon the architect.

The use of physical models was very strong and the school is developing its digital representation skills along with the resources on the Fabrication Lab. This resource will become increasingly important as the digital to physical interface of manufacture and representation increases at pace. The school is encouraged to continue to seek to be at the forefront of new digital technologies in respect of architectural practice and using the new communication digital media to inform the pedagogic practices. The development of parametric modelling for example along with the use of big data can, if embraced within the strong design values of the school only serve to enhance the already excellent practice rather than to challenge and overturn the core values of the school.

12. Awareness of responsibilities toward human, social, cultural, urban, architectural, and environmental values, as well as architectural heritage.

The school has a strong sense of building in historic context and there is clear ability of the students to understand the historic, social and cultural values that go to make the contextual field in which the students are working as an integral whole.

13. Adequate knowledge of the means of achieving ecologically sustainable design and environmental conservation and rehabilitation

In conjunction with criteria Item 9.

The board noted the response provided by the school in reply to this point. The matter of sustainability is broad and the school sought to embed these ideas as what might be seen as a 'cultural' aspect throughout all aspects of the course. The ideas of social and urban sustainability along with the creative reuse of existing buildings were evident in the work.

The detailed considerations of the pragmatic and scientific concerns of sustainability were evident in the Year 4 design and taught programme in Year 5 and Masters Course. In general the level of testing and questioning building performance in respect of sustainable and passive design was less apparent. For example the teaching of EcoTech or IES or matters of passive environmental design methods as applied to the design projects were not clearly evident. There was little evidence of student being familiar with the relevant codes as for example: BREEAM (Building Research Establishment Environmental Assessment Method) Leadership in Energy and Environmental Design (LEED) or Spanish Green Building Council. Whilst there was evidence in the portfolio of knowledge of the use of renewable energy sources such as, PV, Solar thermal, etc. the board felt that this should be further integrated into the design of buildings as a central and demonstrable consideration.

Whilst there was considerable teaching of building mechanics, heating and ventilation, lighting and acoustics the issues of sustainable design should be further demonstrated as having been taught and integrated into the design work across the years.

The board noted that the school offered electives in the third year but the structure could not at present guarantee that all graduating students meet this criteria through this process.

14. Development of a creative competence in building techniques, founded on a comprehensive understanding of the disciplines and construction methods related to architecture

The board felt that students adequately met this criteria as the commentary related to Criteria 8.

15. Adequate knowledge of project financing, project management, cost control, and methods of project delivery

The board found evidence in the portfolios of consideration of cost, and financing of projects. The board noted the Spanish qualification system and the requirements by the governing authorities ANECA and the regional AQU. However in this respect the matters of contract administration and matters of appointment and the legislation relating to the responsibilities of the architect could have been more thoroughly addressed throughout the course. The view that the COAC were providing a 'gap filling' approach to these absences in the graduates abilities seemed to indicate that in adhering only to the current national requirements the school could enhance this obligation upon its graduates.

There is limited evidence and assessment for the professional competencies required by the UNESCO-UIA Criteria points 15 in respect of the conduct and appointment of the architect along with the matters of requirements for professional insurance and matters that are intended to protect the rights and interests of the architect, client and building user.

The school might consider a greater formal relationship with the COAC's CPD programme in order to ensure that this criteria is able to be met.

16. Training in research techniques as an inherent part of architectural learning, for both students and teachers

The students seemed well prepared in respect of the methodologies of research and the school has a very strong post graduate research and PhD programme. The board felt that this provided a strong basis for a continuous critical discourse founded on academic research.

The report group also recommends to the UNESCO-UIA Validation Council for Architectural Education that **the points presented in this report are to be considered by the Escola Tecnica Superior d'Arquitectura de Barcelona Universidad Politecnica de Catalunya in a strategic plan submitted to and approved by UNESCO-UIA VCAE within two years of this full report group visit.** This should include a strategy for amending the programme structure and delivery to reflect the full report group's observations.

Recognition status

Full	[X]	Conditional	[]
Provisional	[]	No Recognition	[]

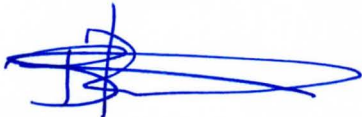
Signatures of Report Group Members for the Full 14th June 2017.



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