

“Training the Architect”: Modern Architectural Education Experiences

By Gonalo Canto Moniz

In 1937, Walter Gropius wrote “Training the Architect”¹ for his presentation as Chairman of the Department of Architecture of Harvard University. It reinvented his experience in the Bauhaus, between 1919 and 1928, and became the pedagogical program for the new Modern paradigm of an architectural education. At that moment, the *Beaux-Arts* system was being reevaluated and the American schools of architecture intended to approach the university through a scientific and technological curriculum.²

Harvard played a leading role in this process by inviting one of the Modern masters to teach architecture and to reform the school. Gropius was chosen by Joseph Hudnut, professor of Architecture History, who was close to the ideas of the American pedagogue John Dewey, who was fighting for a democratic education, well known for his “Learning by Doing” based on students’ experience. This dictum is still present in every school of architecture.

The manifesto “Training the Architect” integrated the Bauhaus education in the American university system by seeking a relation between Art and Science. It also understood the architectural education starting from nursery up to higher education, granting it a cultural dimension. This continuous education focused on the methods rather than only on knowledge and skills.

This programmatic text was first published in 1939, in the cultural magazine *Twice a Year*. But it was the *Architectural Record* that stated its importance through an interview by Gropius in May 1937. Later, *L’Architecture d’Aujourd’hui* (AA) published it in English and French³ in the context of an issue dedicated to “Gropius et son École” or, in English, “The spread of an idea” AA n° 28 (1950) was edited by Paul Rudolph with texts by Siegfried Giedion, Serge Chermayeff, Michel Aime, a statement of a former student, Chester Nagel, some students’ works, and professional projects by Gropius, The Architects Collaborative and Harvard trained architects. With this diverse material, AA explored Gropius’ main ideas and methods and its consequences in the Harvard architectural education and in American architecture. This relation between theory and practice put the tonic in design and educational methodologies, refusing the creation of a “Gropius Architecture.”

It would be an absolute horror for me if my appointment would result in the multiplication of a fixed idea of “Gropius architecture. [...] My interest was in handing on my basic experiences and underlying methods.”⁴

< *L’Architecture d’Aujourd’hui*, “Walter Gropius et son École”, 28, 1950.



Between 1937 and 1952, Gropius carried out an architect's education based on the cooperation of three departments of the Harvard Graduate School of Design (GSD)—Architecture, City Planning, Landscape Architecture—aiming to bring closer the student's projects to the real problems of society, thus endowing the architect's education with the ambitioned technical ability and tools to integrate the various specialties in the project. In order to accomplish this ambitious program, Gropius was counting not only on the professor of Architecture History, Joseph Hudnut, but also on Marcel Breuer, George Holmes Perkins, City Planning professor, Bremer Pond, professor of Landscape Architecture, and guest professors like Sigfried Giedion, who in 1943 taught several lectures that resulted in the publication of the famous book *Space, Time and Architecture*. Specific lecturers as Frank Lloyd Wright, who in 1941 managed to enthuse the students with the *Organic Architecture*, as did Bruno Zevi.

The Modern curriculum and the methodology of collaboration, not between arts and crafts as in the Bauhaus, but between landscaping and planning received international acknowledgement with *L'Architecture d'Aujourd'hui*. Like the Bauhaus, Gropius managed to make GSD international with students from all around the globe through a nuclear curriculum and a *collaborative studio*, founded in teamwork and in "methods more than skills", therefore generating "the greatest innovations of the century in project teaching."²

When the CIAM congresses restarted in 1947, Gropius created the Education Commission to debate the training of the Modern architect. This commission was first developed by Giedion, Jane Drew (MARS) and Jaromir Krejcar (Czechoslovakia) taking Gropius' manifesto as reference, with the title "In search of a better architectural education."⁵ In this text, Gropius underlines ten principles for a new architectural education:

1. In an age of specialization, method is more important than information;
2. Three-dimension conception is the basic architectural discipline;
3. In the first year, basic design-and-shop practice combined should introduce the students to the elements of design—surface, volume, space and color—and simultaneously the elements of construction and building;
4. In the second and third year, the design-and-construction studio, supplemented by field experience during summer vacations and by activities in a laboratory
5. Construction should be taught as a part and parcel of design;
6. Students should be trained to work in teams;

7. History studies should begin in the third year rather than in the first, to avoid intimidation and imitation;
8. Teachers should be appointed after sufficient practical experience;
9. Schools of architecture of small size are more efficient than large size ones (100 to 150);
10. The efficiency of teaching [...] depends on the number of students per teacher (12 to 16)."

This commission proposed that the education discussion was based on the importance of the project method and on the three-dimensional conception, including Gropius' ground ideas in the group's collective speech. However, more than a school program, this debate would fall upon three themes: recruitment, early training and scholarships; school training and work; further training and specialization. In this debate, Giedion played an important role by presenting three texts on architect's education⁶ and inviting Julian Huxley, president of UNESCO, who was trying to form a "Board for Architecture and Planning". Nevertheless, it was Gropius's text that established the commission themes to be followed in the next congress. In the CIAM 7 at Bergamo, 1949, Ernesto Nathan Rogers, Cornelius van Estereen (TU Delft), Serge Chermayeff (Institute of Design, Chicago) and Jaqueline Tyrwhitt (MARS) joined the commission and tried to build a Charter of Education. Serena Maffioletti's contribution to this Journal, "Ernesto N. Rogers and the CIAM: Teaching for Democracy", stresses the relevance of Rogers to this debate, tracing his ideas on a more humanistic and democratic education.

Although Walter Gropius did not attend the congress, he sent a new text "Topics for the discussion on architectural education", read by Jane Drew. This text was simply about his principles, already presented in the previous congresses, now adding two new items: "the architect had to be a coordinator"; "knowledge would come to life only by individual experience", which appear to equate with the former congress concerns, as seen in the previous note. The text was published by Bruno Zevi's *Metron* magazine, in 1949 with the title "*Un message de Walter Gropius au Congrès*" and in the Portuguese *Arquitetura*.⁷ The text was already known by the professors of both schools of architecture,⁸ Porto and Lisbon, through *L'Architecture d'Aujourd'hui* of 1950, but the Portuguese edition allowed a real impact on the architect's training as we can follow in Eduardo Fernandes' approach "Critical Eclecticism. The Way(s) of the Porto School", especially throughout the action of a young member of CIAM, Fernando Távora.

In Bergamo the debate received contribution from members such as Pierre Winter approaches to several



Figure 1. **Walter Gropius** with master students, Harvard, 1946. Source: Alofsin, Anthony, *The Struggle for Modernism. Architecture, Landscape Architecture, and City Planning at Harvard*, New York, London, W.W. Norton & Company, 2002, 210.

themes focusing aspects concerning the curriculum, like the relationship between architecture and medicine/biology (air, light, sound, water, climate); Alfred Roth stating the importance of the theoretical teaching and history (understand and interpret the present); Hugo Weber referring the schools organization (Mies' individual school or the Bauhaus's collective school); Lomacci, an Architecture student from Venice, hoping for "his school transformation within the Modern architecture guidance" and presents the collaboration between students and professors. In the end, Hugo Weber, from the *Institute of Design* of Chicago, suggested that CIAM members should start to implement the commission proposals, namely the Charter of Education, in their own schools. Although the commission did not produce a Charter, Gropius presented a new text "Architectural Education"⁹ in the CIAM 8 where he spreads Harvard pedagogy, associating his educational idea to the tree rings. This perspective, as he himself quoted, of continuous learning and growing complexity rests in the theorists of the modern American pedagogy, like John

Dewey, already referred, and Earl Kelly, who had just published the book *Education for What is Real* (1947).

Other texts were presented at Hoddesdon, such as the one from the Commission 3A, by Norberg-Schulz, student at Zurich,¹⁰ focused on Giedion's pedagogical experience in that school with a collaboration process with students. Also, Ove Arup (1895–1988), British engineer of the MARS group, presented the text "Architectural Education"¹¹ stating the idea of cooperation between the Architect, the Engineer and the Constructor.

The presentation of the texts and the report started a debate involving professors of several schools: Arne Korsmo described the Bauhaus teaching implemented in his school in Oslo, the Norwegian Arts and Crafts School (SHKS) between 1936 and 1941; Franco Albini, IUAV professor, announced a CIAM summer course in Venice, in 1952; Tyrwhitt raised the question of the coordination of disciplines; Enrico Peressuti, professor in Milan, conveyed the Architectural Association students' attitude in working collectively in order to better find the contempo-

raneous society expression; Lönberg-Holm, professor at the Michigan School, revealed the need of connecting education to the industrial process.

The reflection on education was consolidated at Hoddesdon, allowing to reinforce the participation in the CIAM 9, in Aix-en-Provence, 1953, with 45 participants and 6 workshops. The president of the commission, Ernesto N. Rogers, integrated Jim Cadbury Brown and Erno Goldfinger, professors at the Architectural Association, to promote a debate focused on two questions: "What to teach?", "How to teach?"¹² The answers were systematized in a scheme that stressed out the humanistic approach, also claimed in all the CIAM commissions, through an educational methodology combining analyses with synthesis.

Although this would be the last debate in the commissions, the consequences in the schools were already alive, as the research presented in this issue addresses. In fact, after transforming the educational paradigm in America, the spread of Gropius idea leads to a debate in the architects training from Europe to Asia in parallel with the debate on Modern architecture.

Rogers was one of the main propagators of Gropius pedagogy, as Serena Maffioletti well explains, integrating a new democratic perspective that will be absorbed by many of the Italian schools. If the IUAV of Samona had a special role in this debate by organizing the CIAM Summer School, the Rome school developed an interesting dialogue with Modern education, by emphasizing the relation with urban history. Alessandra Capuano approaches the School of Rome, with a text titled "Unity of Architectural Organism and Urban Form. The teachings of Muratori and Quaroni in the School of Rome," where she explores the contamination by Severio Muratori in architectural design courses (Composition 4) and Ludovico Quaroni in the urban design ones. Both texts reveal important reviews to Modern education and architecture through history and social aims. The interchange of professors between schools also reflect the ideological character of education in Italy, if we consider that Bruno Zevi and Luigi Piccinato came from Venice and Adalberto Libera and Ludovico Quaroni from Florence.

In America, Mies van der Rohe promoted another pole of debate on architect's training at the Illinois Institute of Technology (IIT). Although he was criticized by building an individual school focused on his theory and practice, other architects played an important role in the school. Hilberseimer was the one who made a bigger impact in the school by teaching Urban Planning. "Ludwig Hilberseimer at the Illinois Institute of Technology: Architectural Education, Organic Democracy and Colonization", is the proposal of Plácido González Martínez to

trace his steps on the transformation of the American educational system, in parallel with Gropius. With a rigorous educational methodology supported by his *Settlement Unit*, he built the roles to promote the individual approach of each student. If the IIT disputed the Harvard protagonism, Pennsylvania took Gropius legacy and reinvented it through Louis Kahn. In "The Beginning of the Beginning: Kahn and Architectural Education in Philadelphia", David Letherbarrow looks to the transformations in Penn education through a continuous search for what architecture is about: the relation between theory and practice; the integration of the *beaux-arts* system in the modern methodologies and aims; the presence of the History and simultaneously the attention to social needs. The path that links Paul Cret and Walter Gropius to Louis Kahn is part of his attitude towards students.

If Gropius's and Mies' experience in Bauhaus travels towards West and transfers the educational debate to America, we can't forget the Russian experience around VUKTEMAS, as Elena Ovsyannikova and Vladimir Shukhov underline in the text "Phenomenon of the Russian *Avant-garde*. Moscow Architectural School of the 1920s". In some way, the Russian context emphasizes that the modern masters are the responsible for this transformation on education. The same happened in Brazil with Lúcio Costa's leadership in Rio de Janeiro's *Beaux-Arts* school. The incredible construction of Modern Brazil and its dialogue with the training of professionals that were able to understand that utopia is developed by Ana Goes Monteiro in "The teaching of architecture and urbanism in Brazil: 1930-1970."

One of the main topics of Gropius manifesto was the need to develop in schools the research on architecture, "in correlation with crafts-training in the schools of architecture, a laboratory-workshop should be established, where experiments and investigations could be carried on by teachers and students".¹³ Cambridge, by the hand of Leslie Martin, transformed the *atelier* in a laboratory, moving architecture into science. In "Architectural Practice, Education and Research: on Learning from Cambridge", Mário Krüger relates, on the one hand, Martin's proposal to implement a university architectural education in the 50s and 60s and, on the other hand, Cambridge's recent attitude towards the school pedagogy, ignoring their legacy and their impact on European schools, as they did in Portugal.

The experiences developed in the Modern period built the identity of many schools of architecture. This identity was grounded in educational methods more than in a curriculum or an ideological perspective. "Notes on Education and Research around Architecture" is a reflection by Allen Cunningham on the challenges



Figure 2. Walter Gropius with Sigfried Giedion at CIAM 6, 1947. Source: Giedion, Sigfried, ed., *CIAM, A Decade of New Architecture*, Zurich, 1951.

that architecture has to face in the globalization system, and the pertinence of **docomomo** aim in the training of the architect.

Herman Hertzberger is a live example of this debate. Not only was he educated inside this fight for Modern methods, but he also reinvented them to build an education that integrates a social and historical dimension in design. His approach, founded in structuralism, is still operative to deal with the transformation of the territory, as he confirmed in the renovation of the Utrecht Music Centre (1973–78).

So, the manifesto “Training the Architect” and the Modern educational methodologies that, in some way, as we saw, follow its proposals are still the identity of most schools of architecture, from North America to Asia. We

are still trying to combine the artistic role of the architect with the technical and the social ones, as Gropius proposed:

*The architect of the future [...] should act as a coordinating organizer of broadest experience, who, starting out from social conceptions of life, succeeds in integrating all social, formal and technical problems of our time into organic relationships.*¹⁴

This review on the foundations of our education can help us debate new trends to train the architect today. To Document and Conserve the educational methodologies of the Modern Movement it is strategic to understand and to transform its architecture and urbanism, that are also the matrix of the contemporary city.

Notes

1. In Walter Gropius archives the first manuscript has the title: "Suggestions for the curriculum of an architect's training at Harvard." [n.p., 1937]. <http://oasis.lib.harvard.edu/oasis/deliver/~hou00397>
2. Turpin, Bannister, *The Architect at Mid-Century. 1—Evolution and Achievement*, New York, AIA, 1954, 107.
3. "Blueprint for an architect's training", "Plan pour un enseignement de l'architecture."
4. Gropius, Walter, "Architecture at Harvard University", *Architectural Record*, May 1937, 10.
5. Gropius, Walter, "In search of better architectural education", Giedion, Sigfried (ed.), *CIAM, A Decade of New Architecture*, Zurich, 1951.
6. Giedion, Sigfried, *Architektur und Gemeinschaft; Tagebucheiner Entwicklung*, Hamburg, Rowohlt, 1956 (translated to Portuguese, *Arquitetura e Comunidade*, Lisbon, LBL Enciclopédia).
7. Walter Gropius, "Mensagem de Walter Gropius ao Congresso. Tópicos para a discussão sobre o ensino da arquitetura", *Arquitetura*, 40, October 1951, 14-15.
8. Carlos Ramos, Dean of *Escola de Belas-Artes do Porto*, translated it in 1950, but didn't publish the manuscript.
9. Walter Gropius, "Architectural Education", Hoddesdon, 1951, GTA Archives, ETH Zurich, CIAM 8.
10. Norberg-Schulz, Commission 3 (young architects), "Architectural education", Hoddesdon, 195, GTA Archives, ETH Zurich, CIAM 8.
11. Ove Arup, "Architectural Education", Hoddesdon, 1951, GTA Archives, ETH Zurich, CIAM 8.
12. Commission III Formation d'Architects, "Final Report", Aix-en-Provence, 1953, GTA Archives, ETH Zurich, CIAM 9.
13. Gropius, Walter, "Training the Architect", *Twice a Year*, 2, Spring-Summer 1939, 150.
15. Ídem, 143.

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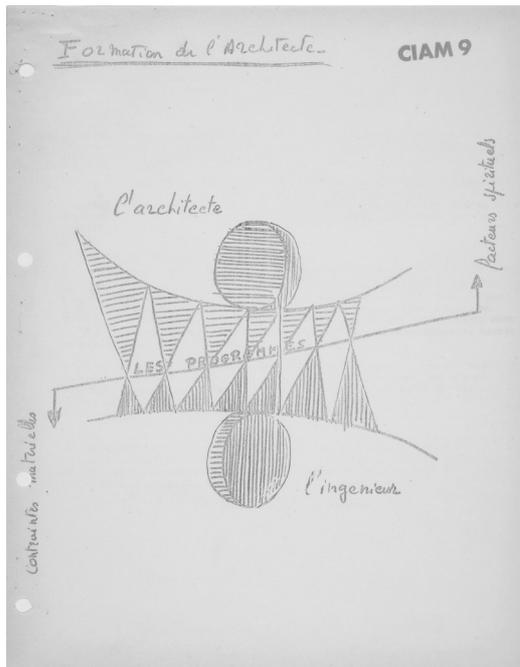


Figure 3. CIAM 9, "Formation d'Architects".
Source: GTA Archives—ETH Zurich

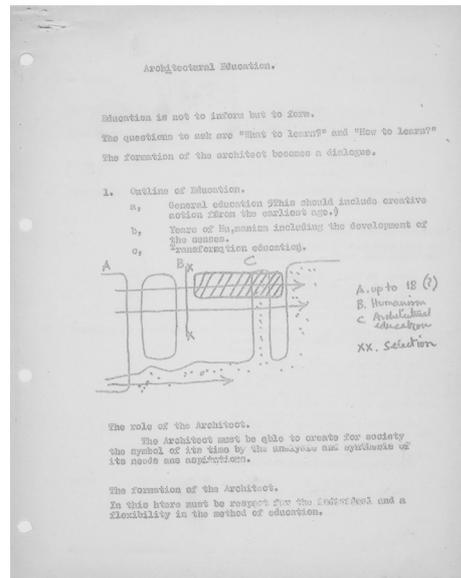


Figure 4. CIAM 9, "Architectural Education. Commission of Education and Training of the Architect. Subcommittee 2. 22 July 1953".
Source: GTA Archives—ETH Zurich.