Best Practices in Design Education Leads to a New Curriculum

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Abstract: Considering the need for curriculum reform of the Faculty of Fine Arts, University of Lisbon, as it is today, we look at the best practices of design schools around the world to produce a work tool to help in the creation of what could be the DESIGN FOR NEXT EDUCATION. This research builds on gathering information regarding: 1) the guiding principles of the faculties regarding their philosophy and practices; 2) the curricula of courses; 3) the permeability of multidisciplinary between programs and subjects of the curricula that colleges offer; 4) the degree of innovation from the perspective of design for sustainability; 5) the type of collaborative networks that operate within each institution, between institutions and civil society. This set of inputs analysed allows us to contribute to the creation of a macro view of design teaching, where it is possible to build innovative strategies for the DESIGN FOR NEXT EDUCATION.

Keywords: Design Education, Innovation Curriculum, College Networks

1. Introduction

The study here presented follows the need to reflect upon teaching in the School of Fine Arts. The Faculty of Fine Arts of the University of Lisbon (b.a) has grown dramatically in recent years, both in the provision of courses and in the number of students. It is dated from 1836, when the beginning of teaching of arts - Painting and Sculpture – took place, at the time at the Academy of Fine Arts, which gave origin to what is now the College of Fine Arts.

In the 1970s, the courses of Design Equipment and Communication Design were created, during the revolutionary period. Later, in the 2000s, other new departments emerged: Drawing, Multimedia Art and Art and Heritage Sciences. Nowadays, it is urgent to think about the faculty in order to reinforce its identity and, at the same time, to promote quality teaching of the Arts and Design with predominance in the national panorama. Based on the recognition that the faculty has knowledge to preserve, we must know how to create new teaching synergies. The grounds for reflection are based on the need for a greater educational framework to face the real world, in national and international contexts, and the need to prepare students for the challenges of design’s role in the future.
Our research group has previously carried out a study on the latest curricular reforms held in several Portuguese universities. This research enabled us to know what is most current in the national context, particularly, regarding the curricular structures of the courses and new teaching dynamics.

With the present study we intend to analyse what is best done at the level of design education worldwide, whenever integrated in the Faculty of Fine Arts and/ or Architecture.

2. Methodology, rankings and schools

The first research option was to base the analysis on the information available on the Internet, both at the level of rankings and schools.

2.1 Rankings

In a previous phase of the research it was concluded that there are several rankings with very different methodologies and the results are, of course, not coincident. The observed rankings have different study objects, namely, in the evaluation criteria, geographic areas and samples. In order to overcome the subjectivity associated to this fact, we base this analysis on the greatest number of rankings available: Top University, Business Insider, Red Dots and Domus (Domus Suplement No. 997, December 2015). The differences detected in the rankings are diverse in nature. On the one hand, we observed that the rankings value different aspects in their assessments, which means they use different approaches regarding who is investigated and the nature of the object of study. On the other hand, we observed that the universe of the study, with respect to geographic coverage and the number of selected schools, was quite disparate.

2.2 Schools

We first identified the best schools in the following regions: North America; Europe; Asia; and with very little focus on Latin America, Australia and New Zealand. The ambition of this study and the complexity of the information made available on the websites of each of the schools, led to the need of reducing the study universe to two North American and two European universities: MIT School of Architecture + Planning (MIT) Cambridge, Boston; The New School, Parsons School of Design, New York; Royal College of Art (RCA) England, London; and, Aalto University School of Art, Design and Architecture, Helsinki, Finland.

Within the top-ranked schools, we chose these four because they present significant differences from one another and, simultaneously, because they provide the necessary information for the elaboration of this study.
Comparing the best-classified schools in each of the rankings, we selected 42 schools divided into 4 groups: USA, Europe, Asia and Others (Latin America, New Zealand and Australia). Through this method, we identified the 11 best schools in North America, 16 in Europe, 13 in Asia, 1 in Brazil, and another in New Zealand.

3. School key elements

In order to summarize and compare the available information, we created a grid for the interpretation of the schools’ qualities.

3.1 MIT, School of Architecture + Planning USA, Massachusetts, Boston

SCHOOL GUIDING PRINCIPALS, VISION, STRATEGY AND GOALS

“The undergraduate program (...) interconnected relationship between architectural design, building technology, computation, history, theory and architecture and art criticism. The Department’s extensive offer reflects the program’s commitment to cultural, social, political, technological and ecological issues of the built environment. Committed to a strict and interdisciplinary approach throughout the program, our students are challenged to be creative, innovative, and responsible leaders in the field”.

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1 https://architecture.mit.edu/overview/undergraduate-degrees
PROGRAMS

- BSA (1): Bachelor of Science in Architecture;
- MA (4): Master of Architecture (MArch); Master of Science in Architecture Studies (SMArchS); Master of Science in Art, Culture, Technology (SMACT) Master of Science in Building Technology (SMBT);
- PhD: Doctor in Philosophy in Architecture.

CURRICULA ORGANIZATION

The course consists of 4 years: First-Year Exploratory Subjects, first year, exploring material relations, design and architecture, as well as communication; A Sophomore year (2nd year) working on the foundations of design, architecture, construction; A Junior (3rd year) and senior Year (4th year) with various levels of Architecture Design Studio and the senior thesis is optional. The History of Art and Architecture is a pillar in the curriculum, from the 1st to the 4th year. It should be noted that there are always elective subjects in the areas of Art, Culture and Technology (ACT) Building Technology (BT) Computation; And, History, Theory and Criticism of Architecture and Art.

DEGREE OF CURRICULAR INNOVATION

The curriculum of the degree combines design with Architecture, Technology, Building and Visualization, with a strong component of History and Theory. The curricula of both masters - System Design & Management and Integrated Design & Management -, are more interesting for intersecting areas of knowledge, such as Management, Engineering and Design. These courses were not analysed because they were outside the scope of the investigation. They were not based in the faculty of fine arts and design, but in the faculty of engineering and management.

3.2 The New School, Parsons School of Design USA, New York, New York

SCHOOL GUIDING PRINCIPALS, VISION, STRATEGY AND GOALS

“Mission: Parsons students are designers, artists, and scholars who learn to apply the transformative capacity of design responsibly, creatively, and purposefully. Our diverse community of students and faculty explore multiple sites and scales of engagement, from on-campus research initiatives to partnerships that bring about change in New York and in the world”.

“Vision: Parsons’ future will be shaped by the core values that have defined our past: curricular innovation, collaborative methods, pioneering use of technology, and experimentation. As part of The New School, Parsons shares an institutional vision that aligns with shifts in the global economy, society, and environment”.

Regarding the “Educational approach, The New School’s legacy views itself as a non-traditional academic community, nimble and responsive to change, that: Focuses on and engages in critical contemporary issues; Prioritizes humanity and culture in designing systems and environments to improve the human condition, an approach that draws on design thinking and the liberal, creative, and performing arts; Places project-based learning at the center of the educational experience; Takes full advantage of our New York City location and connectivity to global urban centers”.

2 http://www.newschool.edu/parsons/mission-vision/
Best Practices in Design Education Leads to a New Curriculum

PROGRAMS

- BFA (11): Architectural Design; BA/BFA Dual Degree; (1) Communication Design; (2) Design and Technology; Fashion Design; Fine Arts; Illustration; (3) Integrated Design; Interior Design; Photography; Product Design.
- MFA (10): Architecture; Architecture and Lighting Design; Design Technology; Fashion Design and Society; Fine Arts; Industrial Design; Interior Design; Lighting Design; Photography; Transdisciplinary Design.

CURRICULA ORGANIZATION

Degree of 4 years, consisting of 120 credits (15 per semester/ 30 per year), and Masters of Fine Art, 2 years, with 60 credits. The Undergraduate program is based on a clear and simple curricular structure, all with very challenging topics. The first year is common to all courses. The number of subjects per semester is, in most cases, of 5 subjects. In the 3rd year (1) and 4th year (1+2), students have only 4 subjects. The elective subjects have a percentage of around 32, 35 and 40%, (3+2). Most of the class consists of groups of 15 students, and students have between 20 hours lessons (in the first years) to 16 hours, in the Junior and Senior years (3rd and 4th). On the masters programs, there are 4 subjects each semester till the last one with just 3 subjects. Both masters have 20% of elective courses. The elective subjects, inside the school or not, are chosen with the tutor’s supervision. It is emphasized that the first year is common to the undergraduate courses, where the package of subjects offered is composed of modules, thus, allowing students to adjust their curriculum.

DEGREE OF CURRICULAR INNOVATION

Teaching with great concern towards meeting the challenges that today’s design poses. The Parson Mission clearly goes in the direction of promoting creativity, innovation, and a desire to challenge the status quo, and also, in the sense of guiding the students’ social engagement. The offer of design courses is quite complete, from the most classic to the most innovative. The dynamics of the classroom begins with the way the subjects are approached. Design is seen as a multidisciplinary area of action. The most innovative degree is Integrated Design, this program is part of Parsons' School of Design Strategies (SDS), in which preparing one to work in social, cultural, and ecological fields.

“Many graduates combine design and entrepreneurship in innovation-focused businesses”, and the Master of Transdisciplinary Design which “Emphasizes collaborative design-led research and a systems-oriented approach to social innovation and service design”.

3.3 RCA, Royal College of Art EU, England, London

SCHOOL GUIDING PRINCIPALS, VISION, STRATEGY AND GOALS

The School of Design engages with design on multiple levels: as a cultural and societal activity, and as an innovation process where design can deliver new products, new services and new ways of running or creating businesses – or even new ways of doing business.

Range of approaches to design through differing approaches and curricula, sharing a strong culture of experimentation, innovation and debate. Their aim is to provide a dynamic and vibrant

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http://www.newschool.edu/parsons/bfa-integrated-design/
http://www.newschool.edu/parsons/mfa-transdisciplinary-design/
Handbook: Royal College of Art, school of design 2017/2018
environment that encourages risk taking and originality, diversity in thinking, opinions and ideologies\(^6\).

**PROGRAMS**

- MA (6): Design Future (opens in 2017/18), Design Products, Global Innovation Design (GID), Innovation Design Engineering, Design Service, Vehicle Design.

**CURRICULA ORGANIZATION**

2-year, Full-time program 240 UK credits. The program has a matrix structure that comprises horizontal teaching units, called Platforms, and a set of vertical Thermes, which are cut across the Platforms. Each Platform is led by two Tutors (who are practising designers) and each Therme is led by either a Senior Tutor or the Head of Programme\(^7\).

**DEGREE OF CURRICULAR INNOVATION**

In the Service Design program, Term 1: A common platform for the School of Design, the Term 2 develops the topics of sustainability, social innovation, data drive innovation, digital and physical environment within the service landscape. Students also embark on the innovation, entrepreneurship and design course as part of the Imperial College Business School MBA Program. The 2\(^{nd}\) Term explores a different platform: Envision, Public Service and Policy innovation. The 3\(^{rd}\) Term focuses on the complexity of Service Design and, therefore, examines System Design by addressing deployment service, understanding business and organizations. The 3 Service Design Seminars focus on general System Theory, People in Service Business and Strategy. In Year Two, Term 4, the Collaborative Project culminates in the demonstration of service prototype. In Terms 5 and 6 students produce a major piece of individual work. With the aim of developing an integrated service experience, they can also choose to work with students from other schools, such as, for instance, School of Communication, Architecture and Interiors, IDE or Vehicle Design\(^8\).

3.4 Aalto University, School of Art, Design and Architecture EU, Finland, Helsinki

**SCHOOL GUIDING PRINCIPALS, VISION, STRATEGY AND GOALS**

The multidisciplinary experts at the School of Arts, Design and Architecture create better living environments and change the world through artistic means\(^9\).

The values of Aalto University are passion, freedom, courage, sense of responsibility and integrity. The School emphasizes the freedom to think independently and to take the initiative. Freedom is the cornerstone of academic thinking. Freedom means the permission, or even responsibility, to ask and question things – but also the willingness to respond and take a stand. (...) Art in the field of design cultivates creative problem-solving skills and generates new knowledge and solutions for creative industries and entrepreneurs. Art and creative practices challenge the faculty, and students, to boldly dive deeper into the foundational concept of design and to radically find new solutions to reshape our society and culture. The Department of Design promotes art-based activities across disciplinary boundaries, reaching beyond the traditions of design\(^10\).

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\(^6\) https://www.rca.ac.uk/schools/school-of-design/deans-welcome/
\(^7\) DOMUS, Europe’s top 100, School of Architecture and Design, 2016. In: Suplement Domus n° 997, December 2015, P.89
\(^8\) https://www.rca.ac.uk/schools/school-of-design/service-design/
\(^9\) http://arts.aalto.fi/en/about/
\(^10\) http://www.aalto.fi/en/studies/about/
PROGRAMS

- BA (3) Design; Fashion; and, Interior Architecture (the course information not available in English);
- MA (5): (1) Creative Sustainability; (2) Collaborative and Industrial Design; Fashion and Collection Design; International Design Business Management (IDBM); and, (3) Product and Spatial Design;
- PhD: Doctoral Program, Studies in the Research Field: Architecture; Art; Design; Film and Scenography; Media, Graphic Design and Photography.

DEGREE, CURRICULA ORGANIZATION

BA Programs 3 years/ MA Programs 2 years. The first-cycle University Degrees (bachelor's level) are of 180 ECTS credits, and the extent of the second-cycle university degrees (master’s level) is 120 ECTS credits. In common, the MA Program structure (1), (2) and (3) share: 20 ECTS in Studies of Department Design; 30 ECTS of the Master Thesis 30; 30 Elective Studies; and the other 40 ECTS varies from program to program. Note that each project course usually has 10 ECTS, the range of credits begins on 2 ECTS.

DEGREE OF CURRICULAR INNOVATION

The degree program already points to a framework of critical thinking and research that takes understanding of design as part of an international perspective, culture and sustainable development into account. At the same time, there is the understanding that students acquire skills to operate in various design tasks within experimental design, mass product and service design.

At the graduate level it is stressed that: Master’s Program in Collaborative and Industrial Design Master, deepens the knowledge of design in order to have an impact on human well-being, profitable business, sustainable innovation, and vivid cultural discourse. In a multidisciplinary framework, that brings together industrial production, new technologies, products’ architecture and systems. These directives are looked at through collaboration and human center design, to be applied to product design, interaction and services; and, Creative Sustainability Master of Arts, empower the characteristics of Aalto University to bring together various types of knowledge.

Design, Architecture, Building Environment and Business, in a program that brings together several schools: Architecture, Business and Engineering. And, students with various backgrounds. Innovative teaching based on 5 learning directives: 1) Multidisciplinary Approach; 2) Systems approach; 3) Design thinking; 4) Sustainability management; 5) Project management.

4. Outputs and Highlights for DESIGN FOR NEXT EDUCATION

The first note concerning the analysis of the four schools is that there are too many discrepancies in design teaching. One of the most evident common characteristics is that, coincidentally or not, all of them are “old” schools, whose origins date back to 1837, 1865, 1871, and 1904, referring to RCA, MIT, Aalto University, and Parsons, respectively.

Philosophy and practices

Let us analyse the strongest features of each of the schools regarding their guiding principles, as far as philosophy and practices go.
RCA motivates students to “share a strong culture of experimentation, innovation and debate, (...) providing a (...) environment that encourages risk and originality, diversity in thinking, opinions and ideologies”.

Parsons adds the need to “align with shifts in the global economy, society and environment”, thus, engaging students into responsible design, collaborative methods, social involvement in a perspective of giving priority to humanity and culture. The education experience is placed on Project-based learning, with special emphasis on local projects - New York City.

Aalto University highlights the stimulation of freedom to think independently and to take initiative, to cultivate creative problem-solving skills and solutions for creative industries and entrepreneurs. Lastly, MIT professes teaching based on multidisciplinary.

4.1 Curricula

Resulting from the offer of BA and MA programs, one can say that the degree is regarded as the basis, and the masters as a specialization. We found that there is a difference in the amount of offers of degree courses (1, 3 and 11), and of masters (6, 10, 6, and 5). If MIT has an only base training (BA), Parsons, by opposition, offers eleven BA courses. However, its first year is common to all BA programs. As far as masters are concerned, Aalto University invests on internationalization of MA’s. And, in general, it can be said that masters tend to have more appealing, multidisciplinary curricula with a great update of subjects and courses.

There is a significant difference between teaching in the United States, and in Europe. In the former, BA + MA programs are of 4 + 2 years. In the latter, they’re of 3 + 2 years.

Considering that the curricular structure of the courses are very different, we note the few common features: 1) in all BA and MA programs under study, and in all training years, there is the project subject, or an equivalent discipline; 2) the base curricular training does not include traditional UC. The most traditional curriculum is that of MIT, which maintains the theoretical component of Art History; 3) among the curricular structures made available, Parson and Aalto University, there is a considerable percentage of electives subjects, with respectively 32% to 40%, and 17% (30 ECTS).

4.2 Multidisciplinary

We highlight the fact that all schools offer multidisciplinary programs. The issue of multidisciplinary is related, on the one hand, with the stimulation of critical thinking and creativity, on the other hand, with the nature of work in design. Enhance this aspect, through the curricular structure, implies creating a flexible system that enables the student to make options based on solid scientific support. This assumption is at the heart of the MIT pedagogic project right at the core training of the Degree, whose transversal knowledge matching is established between Architecture, Design and Technology. Other master courses, invest on multidisciplinary, as is the case of Creative Sustainability, from Aalto University, which composes its curriculum by forming partnerships between the School of Arts, Design and Architecture, School of Business and School of Engineering; and Parsons, whose course Transdisciplinary Design, promotes students’ work in cross-disciplinary teams. Also worth mentioning is the association between schools, as is the case of the Service Design Master Program, delivered in association with Imperial College London (ICL).
4.3 Design & Sustainability

University teaching works in the sense of training students who will be design professionals, in the future. Under this light, one has to consider how design teaching at university level integrates the issue of sustainability. We can conclude that in all schools analysed there is one, or more than one course that dwells on these issues.

In the core degree training, only Parsons accomplishes sustainability challenges in the course of Integrated Design.

RCA is the School that most supports this tendency. 3 of its 6 master programs stimulate the thought of design applied to sustainability: Design Future, Global Innovation, Design Service. At Aalto University, two of its 5 masters are directly related to issues of design towards sustainability: Creative Sustainability, and Collaborative and Industrial Design.

4.4 Collaborative networks

In this study, it is also considered that teaching is a result of the atmosphere provided to students. This means that there is - with greater or smaller institutional focus - a natural permeability between the existing courses in each university. In that sense, there are two distinct core guidelines as far as positioning the teaching of design is concerned. One, in the inclusion of an art school, where Parsons and RCA stand out, and the other, a school more linked to the teaching of architecture and technologies - MIT and Aalto University.

In terms of collaborations, we still highlight:

1. all schools have partnerships and transversal programs with other schools inside their Universities. The program of Global Innovation Design of RCA / ICL London, in particular, gives its students the possibility of doing the first year at Parsons and Keio University in Tokyo;
2. and Aalto University, establishes a relation of proximity of masters programs with its research centres;
3. lastly, Parsons has the criterion of an educational approach focused on the relation with the city where it inserted: New York City and connectivity to the global urban centre11.

5. Impact b_a

5.1 Prospering based on a heritage to preserve

In the National context, the Faculty of Fine-Arts, the oldest artistic teaching institution in Portugal, has to know how to live with its own heritage. As a consequence, it becomes necessary to know how to objectively comprehend what has best been done at the College. Our identity should include the fundamental practices associated to the teaching we have been applying, year after year, in order to value, preserve and maximize them. Based on the presupposition of the richness of the past, it is important to know how to integrate current Design teaching guidelines.

11 http://www.newschool.edu/parsons/mission-vision/
5.2 Communication and Innovation
The previous reflection and current operation constraints should create a set of outputs, which clarify and consolidate the idea that the faculty wants for itself, and for the NEXT FUTURE. Therefore, it is necessary to know how to clearly enunciate the guiding principles of its mission and faculty vision. These guidelines should include the qualities of teaching, and training, the students are to be provided with, knowing that the final goal of teaching is to provide the students with excellent conditions to become Designers capable of producing positive impact on the world.

To the mission and vision of the faculty, a strategy of innovative teaching must be associated. A strategy grounded on the course curricular structures, and on the atmosphere surrounding them. The existence of a tendency of teaching that includes open and multidisciplinary curricula, based on a tutorial setting, seems consensual. As for the atmosphere, we consider there are two aspects: one is internal, originating from the need to continue investing on research; and the other is external and is accomplished through the relation with the faculty’s surroundings. It is, therefore, necessary to strengthen the relations between research and teaching, stimulating the construction of scientific and artistic productions, and of design courses. Conversely, it is necessary to know to invest on partnerships between the institution and local, international, public and private entities.

5.3 Macro view of design teaching
Finally, under the perspective of DESIGN FOR THE NEXT EDUCATION, it is important to try to reach some consensus about how Design is taught in a context of uncertainty.

We consider that there is an essential and constant aspect, which includes the teacher’s performance as a tutor. A tutor who leads students into reaching their objectives, promoting innovative strategies, stimulating students into developing their projects, thus, promoting a solution to the challenges of the present and of the future, in a context of flexibility, which includes multidisciplinary, critical thinking, ethics, environmental responsibility in a humanitarian vision of design that contributes towards the community.
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