TOTAL WORKSHOP — BACK TO THE FUTURE*

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GENERAL CONSIDERATIONS

Forty-five years ago, the School of Architecture, Universidad Nacional de Córdoba, launched the TOTAL WORKSHOP. This concept led to a reform of the Curriculum, the academic Structure, Faculty members career and Management style which aimed at the pursuit of knowledge from a social perspective thus breaking with the current methodologies back in.

OBJECTIVES

This paper aims at determining whether the important changes that have trans-formed human behavior and thinking in the last 40 years, are actually reflected in our current Curriculum.

The variety and extent of such changes require correlating changes in different fields of knowledge and pose new pro-fessional challenges to architects.

Urbanization and urban migration pro-cesses, among others, have required architects to wander into new disciplines and fields of knowledge. Architects today need rigorous interdisciplinary training in order to meet these new social demands

Therefore, it has become essential to revise the TOTAL WORKSHOP premis-es, paradigms, concepts and methodolo-gies so that they can contribute to enrich-ing the current Curriculum.

* This paper describes the witers experience and interpretation of the penod of implementation of the Total Workshop. This document is intended as a historical contribution whose aim will be achieved when this paper is used as a working document to improve teaching practices at University, and in particular, at the School of Architecture.

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CURRENT SITUATION

The boundaries separating the different fields of knowledge, once thought to be immovable, have given way to more flexible, fluid interactions among areas Scientific and technological advances have removed paradigms. Today, it would be unimaginable that Anatomy and Physiol¬ogy were studied separately by Medicine students, or that architects would conceive the design of complex spaces without considering their physical sup¬port. Likewise, we cannot envisage archi¬tectural design that is independent from Urbanism and its social implications.

Ideologically, back in the 1970s, it would have been impossible to think of a com-munist-capitalist system. We could not have imagined a Capitalist state providing subsidies to lower income workers, enforcing controlled rent housing or in-troducing social paradigms finto staunch liberal structures. However, today we can see France's social banners converging towards a Socio Liberalism.

Science will soon be able to restore sight to the blind, genetic manipulation offers seemingly limitless choices and space exploration drives us closer to infinity. Communication has broken barriers to knowledge and religions strive to find ecumenical agreement.

Modernism and its concepts and para-digms of permanent progress and re-newal, inexhaustible available resources and disregard for environmental damage is fortunately a thing of the past. We are moving towards the consolidation of a universal ecological conscience.

ACCESS TO KNOWLEDGE

In many schools, the way students access knowledge is changing from the traditional old pattern of verticality and clear-cut limits between disciplines, to a more interactive participation which challenges, motivates and encourages students' natural curiosity. These new patterns of participation, creativity and ingenuity free students from the paralyzing fear of failure or ridicule and release their immense ability to think without inhibitions.

Participation and feedback to and from teacher and learner has become a common occurrence. The once exclusive vertical relationship between Giver and Receiver of knowledge is evolving towards a horizontal, interactive participation along the lines of Socrates ' principle of teaching and learning; that is, a collaborative construction of knowledge. *Ken Robinson* in his TED Talks, also explores this

idea: *"the system must involve the students, their curiosity, individuality and creativity. That's how they learn"*

Likewise, Marta Souto describes "the learning environment and, in particular, the "LEARNING GROUP', as a ... "group of people who interact in a common space and time in order to acquire certain specific knowledge. Such learning will be accomplished by the individuals (students) through interaction with the group members".

Sheldon White in his Prologue to The Construction Zone: Working for Cognitive Change in School by Newman et al, refers to cooperative or social learning when he writes "Knowledge construction zone"..." Magical place where minds meet, where things do not look the same to everybody that looks at them, where meanings flow and knowledge can be constructed from different sources."... Later on White explains how this type of learning is particularly compatible with the idea of training Reflective Professionals.

Many of the 1970s paradigm explained above built the functional bases of the TOTAL WORKSHOP. Therefore, we feel our aim to revise its premises is completely justified.

IMMEDIATE MATTERS

Cities are man's greatest social creation. Inside their cities, men have learned to live and share life with others, to produce goods, to suffer hardships, to dreamand to enjoy life. In ancient Athens, the cradle of Western culture, the worst punishment was ostracism - being expelled from city life meant being abandoned, neglected, forsaken, non-existent.

Today, over 54% of the world's inhabitants live in cities, a century, world population has soared from 1,000 to almost 7,000 million. Cities, however, occupy only 3% of the earth's surface. How will cities cope with this unstoppable population growth and do so with sustainable quality of life?

The introduction of the automobile helped to break the crowded concentric city limits. Since then, cities have expanded onto the surrounding agricultural areas without apparent consequences. Similarly, new developments are simply waiting for the opportunity to take over "country space" that has been left around while there is almost unlimited growth of shopping malls and office blocks.

This massive urban sprawl takes its toll on inhabitants' lifestyles, destroys the environment by irrationally invading green areas, which are vital for survival, and polluting them with the combustion by-products of the gigantic transportation networks; and finally destroys local cultural identities by replacing them with a new creed that has no history or traditions.

These new challenges involve the design of more complex habitats to meet the needs for accommodation) services and facilities that respect social requirements. We need to control sprawl, provide room for green areas and build a habitat that is naturally and environmentally friendly.

The new paradigms include the protection and care of the environment, respect for cultural identities and the achievement of urban eco-efficiency- as clearly defined in the norms of Urban Rights and Urban Economics.

Who or what will drive this momentous process? Entrepreneurs? Economic benefits? Clueless political administrators?

Obviously, the training of new architects is an integral part of this challenge. Such training should meet the new paradigms and combine them with the core aspects of Architecture: efficiency, creativity and cultural identity will have to go hand in hand with the social value of the new architects' projects.

Will our graduates be up to the challenge of our social wonder The City?

RECOMMENDATIONS

1. Vocational and career guidance must take into account the job opportunities available toyo ung professionals. Also, the social dimension of their professional work should be stressed.
2. Urban growth requires course syllabuses to be updated, including discussion and training in urban design from the early stages of the Curriculum.
3. Course design should include the use of new technologies to help protect the environment, save energy in both private and public buildings, prevent urban warming, and solve the serious problems posed by social services and housing. Such technologies

and requirements will probably result in a different Architecture; the Architecture that our current graduates will deal with during their professional careers up to 2070s.

4. Urban growth and Internet use will surely create a different habitat. Architects will have to be ready to interact with other experts in the fields of transport services, waste treatment and disposal, renewable energies and environmental control, among others
5. The Graduate Curriculum should include courses in Urban and Local Planning along with sustainable ecosystems.
6. Schools should analyze the creation of new related degrees, specializing in meeting these multiple new requirements.
7. Access to knowledge, understood as a vertical relationship of Giver – Receiver, must change to include students participation and sustain a critical vision in order to further and update knowledge.
8. Annual teacher assessment, which would include sensible and reliable student participation, should be free from any sort of discrimination and independent of tenure selection processes.
9. Jurors in tenure selection processes should have impeccable backgrounds. Be highly qualified and be drawn from universities in different parts of the country.
10. Teachers applying for tenure should have taught for at least a year before the selection process. In the way they will have acquired first–hand knowledge and experience of dealing with a given syllabus, and students will be able to assess the Teachers in terms of their interaction with the students, devotion to work and teaching ability. Students shall not shall not make Technical – Academic evaluations or discriminatory considerations of any sort.
11. Given the intimate relation between architecture and urbanism, and their social implications on city life, the Curriculum should include elective courses such as Philosophy and History of Critical Thinking and urban Culture. Students should also be required to do a year`s internship in the Public sector, working in areas related to the above mentioned issues.
12. Postgraduate Courses must also be renewed. Research should focus on these new requirements posed by society and the production sectors. Also, Universities should aim at the professional development of teacher trainers. As *Luis Beauge says : " you cannot be a good teacher in Higher education if you are not also a searcher; you cannot be a researcher if you do not have disciples ..."*
13. The teachers' private professional activity should be considered as Research aid Practice when performing their evaluation and assessment Colleges should stop being closed academic compartments to offer and share their knowledge with the Community.

14. A semi-permanent Academic Committee should be set up to revise and update the Curriculum and Syllabuses so as to meet the needs of new professionals that will be working well into the 2070s. These updates shall include new advances in technologies and innovative materials. The Committee should be made up of teachers, students, graduates and special guests such as prominent professionals or scholars. The Committee should be kept free of influences from University political organizations.
15. A "Free Course" should be created. Foreign or Argentinean Teachers or Celebrities could make proposals for optional extracurricular training instances – courses, seminars, lectures, conferences, etc. – that would enrich and update students' knowledge and training.
16. In order to implement these immense changes, teachers must have a generous attitudes how willingness to interact with professionals from other fields of knowledge and open up their respective areas of expertise.

Our society expects these and other contributions from its university.

However, it is today`s young students who will have to face the new professional demands in the coming decades. So it is them who shall demand better training and change implementation.

Conformity is the enemy of creativity and a friend of authoritarianism.

THE TOTAL WORKSHOP (1970)

This "separata" explains the different aspects, concepts and methodologies applied in the TOTAL WORKSHOP (1970 - 1975) and aims at providing information for those who could not have access to documentation or did not live that period.

It is a brief description of a very enriching experience, which went beyond the usual practice of teaching in separate courses and subjects and in which students be-carne protagonists of very creative process.

The social profile of the TOTAL WORKSHOP was a constant characteristic in all the design work in that period.

THE TOTAL WORKSHOP (1970)

TOTAL WORKSHOP took its name from its objective: to approach knowledge from a globalizing, horizontal and participative perspective.It created room for the University to question its aims and practices at the time and presented a new proposal for Architecture, its teaching and the architect's role as a social being.

Thus, the Interactive participation of different disciplines, the reformulation and creation of new knowledge—challenging the previous sterile and structuredw ays of processing knowledge - , the social and political dynamics, and the institutional climate in which the Total Workshop was born and grew carne together to build a Cosmo vision shared by teachers and students in a given social framework.

World news showed the May 1968 events in France, theVietnam War, Cuba and the "Che", fuelling students' pro-tests against an unfair world, a world in which Third World countries became dependent and oppressed.

In the local scene, the authoritarian military government created a sensitive response in some areas of the University. The Total Workshop became the only voice raised against authority: a critical academic proposal that stood out among an inert desert that lacked political questioning.

In our School of Architecture, students and young teachers questioned teaching practices that were detached from reality, enclosed practice in separate compartments, did not welcome multidisciplinary design and were divorced from the urban realities, contents and social concerns, aimless without recipients.

This led to the idea of systematically integrating the contents of the different disciplines finto an interdisciplinary approach to real problems, in a socioeconomic and political situation that demanded not only academic solutions.

However, this discontent did not find channels of expression in Student bureaucratic organizations and their Councils- whose representatives proved to be very "sensitive" to pressure from political parties particularly at election time when the University President and Deans were running for office.

Tenure selection processes, heavily influenced by political interests were sometimes turned finto provocativa mockery.

It is only fair to point out that there were many student representatives, teachers and clerks who did not compromise their ethics and will always be remembered for their integrated. We pay our deepest respects to them.

The situation of general discontent that reached all corners of University life explains the emergence of the Total Workshop as a comprehensive proposal that covered all aspects of university activity - from Curriculum design, to Academic Structures, Teacher Training and the forms and nature of representation, government and power in the School of Architecture.

The Curriculum underwent great transformations. This process of change was not free of omissions and improvisations that needed revision and correction.

Essentially, Design ruled all academic activity, social disciplines were incorporated and methodologies based in some cases on the materialist conception of history- became a common tool for analyzing and determining the design conditions — which was the current ideology in that decade.

The use of dialectics in the conception of opposites (town and suburbia / labor - intellect / bourgeoisie - proletariat / freedom - dependence) went along the same ideological lines when choosing opposites and their resolutions. Despite some exaggerations, these aspects were part of exhaustive methodologies of analysis before actual design, which led to a healthy analytical vision.

Marxist ideologies were held by University members to challenge Capitalist philosophies, but this was done in a respectful atmosphere where there was neither political party interferente nor discrimination of any sort.

The Curriculum ditched the notion that the different fields of knowledge were separate compartments. Contents were divided into Basic and Applied knowledge. The former included technical and scientific subjects, such as Mathematics, Physics, Structural Calculus, and Ad History, among others, and should be studied individually by attending lessons and reading books and publications. On the other hand, Applied knowledge involved integrating activities into Design.

This was called "Synthesis" and it was a Workshop activity where various fields of knowledge concerned with design converged in the development of solution to a design problem proposed by the analysis of a given reality.

This substantial change integrated design activities with other disciplines and the final result was achieved by applying all contents to the solution of a problem under study.

The vision of design as a fragmented activity, the sum of separate contents which the students had to integrate was a thing of the past. No longer was it seen as a mixer where you dropped a bit of everything and hoped for a good result.

The changes introduced in the Academic Structure were deep and massive.

Integrating Workshops were set up from 2r^{1º} to 6th year.

As described above, the Design was the leading activity that drove the process of knowledge acquisition by integrating the other fields of knowledge into a "synthesis" workshop where each subject contributed to the Design activity.

Experts in fields such as Health and Education were invited to contribute to the design processes.

A team of educational psychologists supported the methodologies and learning processes that led to the vision of Design as depicted above.

In other words, the much needed integration of knowledge and design into a universal vision in architectural work had become true.

For each workshop, a team of Teachers was appointed. They would analyze together with the students- de Design problems to process, the areas to deal with, the socials structure to serve, the methodologies to be used, the bibliography to consult, the guests to invite and even the "ideology" underlying the development.

This group work did not disturb the teachers' role — they were in charge of leading this creative and democratic interaction.

However, sometimes problems were over analyzed which would make it difficult to close the analytical process.

Architectural solutions kept clear of any schematic or typological solutions, any cliché that did not come up after exhaustive interdisciplinary analysis. Obviously, we did not enjoy the permissiveness of today's eclectic visions, nor could we resort to easily justifiable semiotics. In Frampton's words, there was no place for "demagogic architectural results"

Creativity, therefore, had to be found in analysis in its most primary form, in its unquestionable threshold- the analysis of the needs and ways of human activity in an almost philosophical quest for the

suitable room to house human development. It was a new "COGITO ERGO SUM"[2]. That is, it was total rationalism.

This constant, and sometimes exhausting, search resulted in the achievement of unprecedented solutions to common problems; solutions whose originality and authenticity came from the fundamental analysis carried out without resorting to the well-trodden paths of archived typologies.

All the teachers involved in leading the academic and pedagogic aspects of each Workshop had the same hierarchy and responsibility.

Each Workshop group chose a Student and a Teacher representative to sit at the "Total Workshop General Coordinating Committee". This body was in charge of coordinating all aspects of the Total Workshop.

Representatives had to report back to the members of each Workshop. Each Workshop, in turn, could agree or disagree with their Representatives' performance and Representatives could be re elected or removed.

In this "direct democracy" approach, it was impossible to deviate from what the members of the Workshop required from their Representatives or for them to engage in practices that would favor political or personal interests over purely academic ones.

The Total Workshop General Student Teacher Coordinating Committee was the highest governing body.

This brief description of the Academic Structure of the TOTAL WORKSHOP shows a functional structure of direct government that led learning processes in a horizontal and democratic interaction between students and teachers. However, each sector kept control of its functions, roles and responsibilities.

There has often been criticism of the necessary camaraderie that characterized this horizontal and creative work saying that it was mere student-centered demagogy. It couldn't be more wrong. The toughest quality control was performed by the students themselves, who were very demanding when assessing their teachers' performance.

The TOTAL WORKSHOP also introduced changes in the Teaching career which became more open and participative at all levels.

[2] DESCARTES

The process started with an Admission Test followed by a trial period (6 months to an academic year) The Admission Test included an analysis of the applicant's background and the presentation and analysis of an academic issue or problem. The evaluating jury was an interdisciplinary group of teachers and students. During the trial period, the applicant was constantly evaluated.

This novel selection process allowed new teachers to gradually adapt and develop their skills and also to have their academic and methodological abilities assessed over a school year by a student-teacher body.

The fact that students formed part of the Selection process Jury created some institutional conflicts since there were no regulations on this matter either in the University of Córdoba or in foreign universities. Therefore, there were no guidelines or criteria to follow.

Because of the Total Workshop, then, the University of Córdoba became the first Latin-American University to launch such a Teacher selection process. We recommend reading the Call for Teachers Resolution of the time which, together with the student-teacher evaluation records, constitutes a valuable historical document.

This unprecedented selection process upset more traditional sectors that mistakenly believed students were being given the power to evaluate the applicants' technical and academic abilities and to fully assess their teachers' merits.

However, such a thing never appeared in the letter or the intentions of the Resolution.

Students did take part in the assessment of the Admission and Trial teaching period, evaluating the applicant teachers' ability to convey and facilitate knowledge, their devotion to work and their ability to interact with students and colleagues in order to achieve this collective construction of knowledge.

For obvious reasons, technical and academic assessments were perfor-med by the teacher jurors.

This novel process of incorporating new teachers into the staff was yet another unprecedented contribution from the Total Workshop concept. It made it possible to correct errors brought upon by the existing selection process. Such process consisted in setting up a jury whose members were specifically chosen — not randomly selected- and who did not represent multiple disciplines. These jurors shortlisted three potential candidates who had to present a topic. After 45 minutes of presentations, the jury chose a teacher who would keep tenure for years.

With the TOTAL WORKSHOP approach, nobody could favor a candidate or by-pass the admission test. All applicants needed to face a multidisciplinary jury of 10 teachers and several students.

The main flaws of the old system were the lack of a multidisciplinary approach, the brevity of the applicant's presentation and the absence of assessment by the students- who were, alter all, the ones who would benefit from the teachers' expertise.

What conclusions can be drawn from such a remarkable experience? The TOTAL WORKSHOP provided:

- A renewed vision of all academic, pedagogic and methodological structures in the teaching of Architecture.
- A social role for architects, in a society which needed change.
- The introduction of the reality phenomena in the Teachinglearning process, and the active inclusion of a multidisciplinary methodology in the design process.
- The use of a system of analysis to introduce sociological, political, technical, and urban-morphological variables in the design process.
- Encouragement towards cons-tant study and research. This was clearly shown in the number of publications by teachers between 1969 and 1973, many of which are still of scientific values for student architects.
- The introduction of specialist consultants (educational psychologists and other experts). Not only in design processes but also for specific issues related to health and education, among others.
- The concept of knowledge acquisition as a horizontal, participative and collective process, achieved through the interaction of students and teachers focused on habitat problems.
- A change from the vision of "the lecture" – centered on the brilliant, engaging teacher- as the only possible teaching process towards the "feed back" - in which students were considered active participants in the learning process.
- A democratic system of representation that made it possible to deal with proposals from teachers and students on a daily basis. Such proposals could be analyzed by governing bodies without bureaucratic delays, tergiversations, or "personal" o political biases.

CONCLUSIONS

In 1917, Córdoba witnessed a revolutionary change: The University Reform.

In 1970, the TOTAL WORKSHOP could have furthered, enriched or changed the Reform proposals. It didn't happen. We still need an explanation from the protagonists that led to its disappearance.

The TOTAL WORKSHOP implemented changes that were driven by young teachers and their students who felt the need for change, renewal and participation in the process of knowledge construction and acquisition.

There were mistakes, no doubt. In particular, we regret the loss of prominent teachers who could not adapt to the changes proposed.

The University was living times of decadence and lack of interest, and students called for changes — not only locally but worldwide. Marxist, socialist and other ideologies challenged the world financial system and its social consequences for the dependent peoples. All factors contributed to feed the need for change.

Why, then, did that quest for a better world, that drive for change disappear?

The return to the Reform system, sanctioned by law, made it difficult to implement changes. However, it is clear that there was no willingness to fight for change and everybody returned to the well-trodden path: the current situation.

Conformity prevailed - not the behavior we would expect of our youth or of our universities.

Unfortunately, the regime of "Feudal tenure" questioned in 1917, was reinforced by the old system.

Party politics again presided over many important University decisions. Regrettably many university positions were used as political springboards in order to obtain more privileges instead of being places where ideas were created and questioned-which is after all the role of a University.