

**ara és demà**

Debat sobre el futur  
de l'educació a Catalunya

## Report 2

# The Architecture of the Education System: Reflections and Proposals

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## Introduction

Svante Paabo, in the book entitled *Neanderthal Man: In Search of Lost Genomes*, says: “Throughout the 400,000 years they lived, the Neanderthals were not able to cross the sea. They were even unable to reach Madagascar, which was relatively nearby. In only 100,000 years, modern humans have been to all places imaginable, and there lies our great difference: the capacity to intuit the future as well as the need to want to see and explore what is beyond the other side of the present... despite the danger.”

In face of the profound changes that have occurred in our societies which are forcing an accelerated paradigm change in education, and keeping in mind the possibility of being able to freely decide the way we wish to build our educational structure, the great challenge is, precisely, to dare to explore what exists on the other side and meet with determination any changes necessary to discover new answers to the education needs of Catalan society and the citizens of Catalonia in the 21st century.

With this daring spirit, we present our contribution divided into three sections:

- In the first, we will analyze the complexity of our society, describing and commenting on the most significant characteristics. We will especially evaluate the impact they are having on the education world, as they create the need to re-think and find structural solutions to these issues.
- In the second section, we will present the basic structures of various European education systems, particularly focusing on the ten systems of reference in the Western world. Apart from approaching them graphically, descriptively and comparatively, we will show the main contradictions detected in terms of the characteristics mentioned and to what extent the structure answers the most critical problems of our society.
- Finally, in the third section, we will present a proposal, imagining an education system for the Catalonia of the future. We will do so graphically, in the first place, and then by offering an explanation which attempts to establish not only the elements that make up the system but also to present and justify the levels of internal and external relationships that will need to be set up if we want the structure to be dynamic and interactive within the social framework.

In the end, we aspire to opening up a debate, one we hope will involve broad participation, which will help us to work out a proposal with an initial configuration, yet of an open and flexible nature that will be sensitive to various contributions so that the final version will be widely accepted. What we aim to do is, simply, offer a bit of light to those in charge in the future of the education administration.

## Characteristics of Current Societies

### A Society in Constant Change

Richard Riley, Secretary of Education under Clinton, said: “We are currently preparing students for jobs that don’t exist yet... using technologies that haven’t been invented... in order to solve problems we don’t even know are problems yet.” The changes in an interconnected and interdependent world nowadays entail new degrees of complexity, tension and paradoxes, in addition to new horizons of knowledge that need to be taken into account (UNESCO, 2015). The uncertainty of living in a world of constant change is one of the other elements that complicate the setting of educational objectives and education policies.

## The Strategic Character of Modern Knowledge

In 1991, for the first time in the United States, total expenditure on industry was surpassed by that spent on Information and Communication Technologies (Trilling and Fadel, 2009). This fact demonstrates the same change that occurred in the mid-1800s when an agricultural society gave way to an industrial one. In this case, the shift is from an industrial to a knowledge society.

The term *knowledge society* was coined by Drucker (1969), who strongly and more pertinently embraced a previous term: *information society*, as proposed by Machlup (1962). At the outset, the expression was basically associated with the theory in which, for the first time in history, knowledge was introduced as a major economic factor. In the words of Brey (2011): “knowledge [was introduced] into the economic equation and mercantilised...”

Nowadays, half a century later, the term has gone beyond the specific field of economists and become a common area for society as a whole. All this implies that upon expanding to more global perspectives the concept has prospered. This in turn implies it is acceptable for modern knowledge to be associated with a set of characteristics that establish a profound change in its nature.

Thus, the markedly strategic character of the term *knowledge society* is clear. The technology revolution in which we are immersed requires high levels of quality knowledge, shared with large sections of the community, and a high capacity for managing it competently, that is in efficient interaction with more and more complex realities.

The construction of this new post-modern knowledge is no longer substantiated with great changeless truths but rather with the critical analysis of massive amounts of data and information circulating on the Internet (*big data*), that generate substantial, dizzying changes in knowledge itself. The magnitude of the task forces researchers to specialize and fragment knowledge fields in order to outpace rapid obsolescence and continuous, accelerated innovation. On the other hand, it results in the need for instructors to design new methodology approaches and pedagogical focuses to be presented in an integrated way, enabling holistic understanding and guiding interpretation and intervention in increasingly sophisticated real contexts.

## A New Relationship within the Knowledge-Education Duality

The nature of knowledge is being revamped, moving from a conceptualization of knowledge as a solid, consolidated matter —with a marginal, elitist role in society as a whole— to a vision of a fluid essence type of knowledge with exponential growth, continuous change and which plays a markedly strategic, driving role in modern societies. Given this case, it is also necessary to change our relationship with knowledge. A relationship of mastery on the part of a select minority and based on individual action (characteristic of centuries ago) is substituted by encouraging a competent knowledge management in broad layers of the population, who have to work collaboratively and with a high ethical sense of responsibility. This new outlook obliges us to make radical changes in methodology approaches but also must cause substantial modifications in education systems.

Education as a link between the individual and the universe, by establishing bonds between education and the interpretation of reality in order to understand it and intervene in its transformation, requires new conceptualizations, as Morin (2001) tells us, as well as new fundamental education system structures (which I sincerely believe), especially if we seek, as Borghesi points out in his book entitled *El sujeto au-*

sente (2005), to understand that “teaching means converting knowledge into shared experience and information into life”.

## **Towards a Paradigm Change in Education**

We must recognize that the paradigm change that has occurred in education fundamentally revolves around learning and it will be advisable to pay special attention to all that affects it, avoiding didactic traditions anchored in completely obsolete teaching-learning models in order to manage the new needs of society. We cannot ignore, first of all, the impact the change has caused in our concepts of training, instruction and teaching to transform the system as a whole.

This makes a profound curriculum revision inevitable. Curriculums must be oriented towards personal competence development and centered fundamentally on learning to learn skills. We understand competences to mean the capacity to use knowledge in specific contexts and in response to specific needs.

*Education for All: Global Monitoring Report (2012)* proposes a very interesting and useful perspective to the various competences. It identifies three main principles in the education of young people: Foundation skills (in other classifications called “key”) transferable (transversal) skills and technical and vocational skills (specific).

## **Education and Learning: Education as a Priority Goal of Education Systems**

The core role that knowledge plays in modern societies and its impact on the economy turn it into a leading strategic factor. The great danger lies in reducing the changes into something that exclusively affects learning and forego making educational and global change. With regards to the general public, the challenge of education systems goes beyond that of learning because it also means acknowledging identities and promoting development based on principles of respect for human dignity, equal rights, social justice, cultural diversity, solidarity and a sense responsibility towards others in an increasingly interconnected and interdependent world.

It is therefore necessary to resolve the controversies arising from the education – learning duality. Knowledge is not simply the working objective of learning. The vulnerability and sophistication of modern societies cause the creation and use of knowledge to be guided by a deep ethical commitment and an extensive exercise of responsibility. Thus, in the new discourse on education and learning, it is not enough to focus educational activity on the very processes of acquisition, validation and use of knowledge for learning. We must also face the fundamental topics of creation and control of knowledge characteristic of educational activity from a social and ethical point of view. Consequently, we need to consider not only how knowledge is acquired and validated but also that the creation of the most substantial knowledge, and especially the way to access it, is often very controlled, so it is vital to guarantee access and availability to everyone in conditions of equity and dignity.

## **Effects of a Global Economy on Education Systems**

The complexity of modern societies is one of the elements that have most modified the meaning of education and its role in today's world. One of the most apparent characteristics of the current complexity

in a global economy and one of its clearest effects can be found in the imbalance produced between education, training and employment. "All current employment trends question the long-standing link between formal education and employment, upon which the discourse and practice of international development rest and which have supported investment in human capital for years" (UNESCO, 2015).

The intensification of the global economy is producing growth models with low and precarious employment. The education system must work together with the social system to attempt to ease these effects: it must do so fostering reconciliation policies for young people, taking joint responsibility for educating children, even converting educational activity into higher level training cycles to achieve real, active formulas for job placement in decent conditions.

Education and learning have to go beyond pure utilitarianism and economism. We require an open, flexible view towards learning, understanding it as a permanent activity, a view that comes with opportunities so that everybody has a chance to discover their own potential and fully realize it in order to live life with dignity. Lifelong learning becomes the cornerstone of education policies in all countries and especially in the developed world.

## **Mobility in Modern Societies**

Promoting mobility will constitute one of the core areas of modern education. In order to make mobility possible, multilingual and multicultural training are a must for our students, but new models of knowledge and transfer of competences will require new ways of recognition, validation and evaluation of learning.

## **Innovation as an Operating Culture**

In this context, innovation as a normal operating culture becomes a basic element in the process of rethinking how education systems must evolve in the future. (Barber, Donnelly and Rizvi, 2012). Nevertheless we should not confuse the meaning of education innovation in the 21st century with other previous innovative movements. Modern innovation represents a movement implying global systemic action and engaging the system as a whole as well as the educational community. Or as Lyn (1997) points out: "Innovation implies an original, disruptive and fundamental transformation of the basic tasks of an organization. To innovate involves undermining structures and changing them permanently."

## **New Learning Models**

This concept of learning systems as open, flexible and guided towards lifelong learning is drastically turning around the emphasis on certain aspects of educational activity. We are going from traditional models that center attention on curricular contents and training programs to others that focus on recognition, evaluation and the validation of acquired knowledge.

In this context it is vital to ensure clearly inclusive education. Education systems must guarantee not only second chances but real continuous frameworks for everyone and especially for those who are the most socially, physically and intellectually underprivileged.

The digital age and e-learning opportunities, mobile learning and other digital technologies offer the possibility to, in effect, radically transform the education stage because they give rise to emerging learning

spaces that force a role change and a repositioning of the most important players. These new realities have re-opened full-force the redundant debate on school drop-outs. (Illirch, 1973).

The role of formal education in civic socialization and learning is complicated by the influence of new spaces, relationships and dynamics offered by the digital media. There must be, as the UNESCO points out (2015) a substantial modification of global learning strategies: "What we need is a more fluid focus on learning, understanding it as a continuum in which schooling and formal education institutions must interact more closely with other less formalized education experiences."

## Re-contextualization of the Right to Education

Finally, we must achieve the recognition of education and knowledge as worldwide common goods. Education is oftentimes defined in international discourse as a public good. The theory of a public good has a long tradition and its base is in a market economy. It basically focuses on the guarantee of individual rights by the administrations. However, the rapidly changing relationship of society, state and market creates a dilemma: How can the fundamental principle of education be protected as a public good in the new global context in which learning is taking place? The UNESCO (2015) defines common goods as goods which, independently of their public or private origin, are characterized by a binding and necessary destination for the realization of fundamental rights of people.

From the vantage point of the theory of common good, it is not only the individual right of the person that matters but rather the goodness of life that humans have in common. In times such as now, in which in international discourse there has been a change in emphasis from education to learning, we run the risk of neglecting collective dimensions and the purpose of education as a social task.

The idea of education as a common good reaffirms the collective dimension of education as a shared social undertaking: shared responsibility and a commitment with solidarity. The concept places emphasis on the importance of promoting participative processes and considers shared action as intrinsic to the concept. Education as a common good, therefore, needs an inclusive process of formulating and implementing public policies, with the proper and necessary accountability. This implies, among other things, that the field of education governance cannot continue to be separated from the field of knowledge governance.

## The Structure of Education Systems

### Education Systems as Living Entities

There exists a false idea that the structure of education systems is a neutral element, one that has no impact on education policies. Our thesis is the exact opposite. Education systems are living entities and very powerfully condition the nature of policies applied.

Beforehand we will make some general remarks on European education systems.<sup>1</sup>

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1. The Evaluation Council of the Education System of Catalonia has developed a descriptive study of ten educational systems of reference in the Western World..

## Models and Basic Structures

In principle, we have to consider that there are two clear models for early childhood education. On one hand, a unitary model in which early childhood as well as primary education are considered part of the same phase and there is no need for transfer between institutions. On the other hand, the models for early childhood and primary education are developed in separate schools.

For compulsory secondary education, we can take into account three clearly differentiated models:

- Single structure models in which compulsory education is carried out from beginning to end with no transition between primary and secondary education.
- Common core curriculum models in which students advance to secondary school after having completed primary education and where they all follow the same basic curriculum.
- Differentiated models in which, upon completing primary education, students are required to follow different paths in different types of schools. This differentiation occurs either at the beginning of or during compulsory secondary education.

In the majority of European countries, the administration takes on the responsibility for early childhood education starting at 3 years of age. Only in Germany, Ireland, Greece, The Netherlands, Liechtenstein and Switzerland does this commitment begin at 4 or 5 years of age.

The most usual compulsory education period is from 6 to 16 years of age. However, there are countries that extend the compulsory period to 17 (Romania), to 18 (Belgium, The Netherlands and Portugal) and in some cases to 19 (Germany and Macedonia). There is an important group of countries (representing 20%, the majority in Eastern Europe) where the compulsory schooling period ends at 15 years of age.

Regarding the transition between primary and secondary education, we will bear in mind only those countries not using a single structure model. This transition usually happens at 12 years of age. It is also quite usual at 11 (France, Italy, Lithuania, Malta, Romania, The United Kingdom —except for Scotland— and Liechtenstein) yet is less common at 10 years of age (Germany and Austria).

If we analyze the countries of reference selected by the Evaluation Council of the Education System of Catalonia, the passage from basic secondary to upper generally occurs at 15 or 16 years of age. There is a certain tendency to make upper secondary education last three years. This is what happens in Germany (16/17-18/19); The United Kingdom and Spain (16/17-17/18); Italy (14/15-18/19); Finland (16/17-18/19), France (15/16-17/18); Sweden (16/17-18/19); Australia (14/15-17/18); The United States (14/15-16/17) and Canada-Quebec (16/17-17/18).

## Some Paradoxes of the Systems

Some models such as the German one —which opts for separating students very early on in order to try to better attend their personal educational needs— end up compounding the discrimination of children from the poorest families.

Those models geared towards meeting the needs of the productive system favor models centered on practice, improving students' skills for initial job placement, but do increase vulnerability in face of the changes upon leaving out basic comprehensive training.

Promoting a market focus in the English education system management has fostered a group of highly competitive schools, something that makes them very attractive internationally as the destination for foreign students but the wager has worked in detriment to the so-called community and comprehensive schools, ultimately, defenders of the comprehensive educational models.

This management system (British) has widened the gap between high and low competitive schools and has increased the lack of social cohesion. Despite having some of the most renowned flagship schools in the world, the system as a whole has lost quality and prestige internationally (one need only look at the results obtained on international tests) in favor of more comprehensive systems such as the Finnish, or more competitive ones in Asian countries in terms of results (South Korea, Japan and so on.)

Italy, in spite of having one of the most extensive upper secondary systems in the world (5 years), and which would seem an optimal choice with regard to guaranteeing university studies access and success, has the third lowest enrollment rate in Europe, along with a very high dropout rate.

The Finnish system is considered one of the successful systems of reference but its universities are not among the most renowned internationally and their research is not cutting-edge. It needs to be noted that Catalonia's density of research and international publications is greater than Finland's.

The structure of the French system is possibly the one that best holds up under rational analysis. It is a balanced proposal and for each element one can find a perfect, well-founded justification. Conversely, it has given rise to a very selective and elitist system in which most students do not identify with their school center nor do those of foreign origin with their host country and educational proposals. It is one of the countries where the social elevator works the least with people of foreign origin, even if they are third generation.

It is likely that the high centralization of the French system, with very sophisticated services and control instrumentation, has generated a product that is formally correct but inefficient in practice. French rationalism brought to the management of the system has led to operational models without a soul. Internationally the results are mediocre and far from those of Nordic or Asian countries.

The case of Sweden represents a basically decentralized system model in which communities have broad responsibilities in education management. Despite that fact, the result is a system with an elevated degree of social segregation and one of the highest rates in Europe of young people who neither work nor study. It seems that the proximity policy alone does not fully work and a greater level of awareness and commitment is required from local governments if they really wish to address the issues in the system.

The American system is one of those most clearly directed toward university education. The percentage of the population with a higher education degree (44%) is far greater than the average of OCDE countries (33%). Nevertheless, the non-university system is only passable. The success of higher degrees is based on low profile technical degrees with a marked comprehensive nature which become stronger at post-graduate level. At higher university levels, the resources applied to the system are large and universities compete with each other to attract funding and talent both nationally and internationally. The paradox lies in a low profile non-university system in one of the most highly competitive and creative settings in the world.

Finally, we have chosen the cases of Australia and Canada as they involve clearly emerging models, and must be followed closely in the future. These are two countries highly sensitive with aboriginal and foreign students and, despite the complexity that it may mean, they are among the most innovative countries in the education field as well as having clear above-average results in international indicators.



## Initial Conclusions

We have made a brief summary of the countries studied from the perspective of an analysis of their contradictions. With this in mind, we seek to send out a first message: The structure of the system alone, no matter how balanced or rational it may be, is not enough to solve the pressing problems of society.

This is why we have used the title “the architecture of the education system” thus trying to overcome a static view that is implicit in the term *structure*.

When a structure is analyzed from an architectural perspective, it is not only a study of the elements of which it is comprised but also the balance of forces among them, the functionality of the whole, the emotions given rise to upon beholding it, the impact on the environment where it is found, the serviceability, the sustainability, the degree of comfort that it will give the users, the potential, and so on.

In order to pose changes in the structure of the system from an architectural perspective it is necessary for those of us who must intervene to come out of our comfort zone. The new realities demand not so much planning actions as being able to solve paradoxes. The paradoxes and complexity require another profile of capabilities to enhance the action.

The system must be conceived and designed as an intelligent ecosystem, capable of unlearning and re-learning, of interacting with the environment, of collecting and interpreting data in a continuous, fluid way. It demands all of us system players to act with authenticity and strategic capacity, to be innovators without a fixed set of words or ceremonies and, ultimately, changing ourselves clearly into complexity managers.

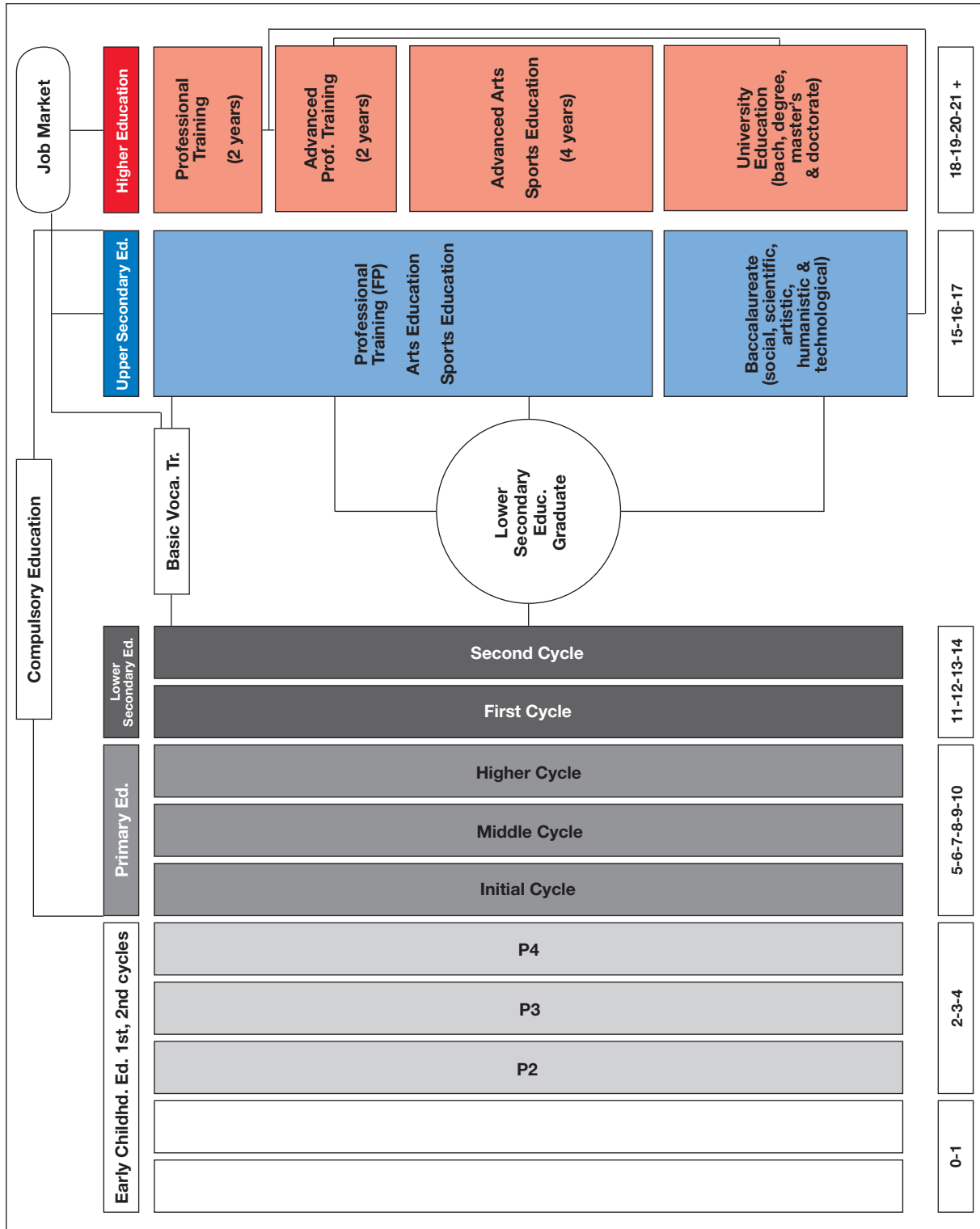
In the following section we will present an infographic with the system structure we propose, and later relate each one of the elements with the principles we presented at the beginning of this presentation. This relation is what will allow us to convert the structure of the system into an integral architectural proposal.

It is not at all easy to generate a system capable of overcoming the numerous paradoxes that will arise and will allow us to truly identify and determine the scope of the problems in order to solve them: it requires fleeing old-fashioned logic that used to work in a very hierarchical world. Substituting routines and managing change call for innovative attitudes and accepting the necessary participation of the whole education community.

It is from this perspective that we have designed this proposal, of an open and flexible nature, awaiting the contributions of everyone. We must work together to build paradigms, the main virtue of which is not that they be favorable to our particular or collective interests but rather that they offer us fundamental parameters that allow us to identify and give meaning to all the relevant elements of the system, that help us to establish more substantial relationships and enable the construction of an education version with the capacity to process and understand the present data with the experience of the past and the vision of the future.

## Proposal for Discussion

### Organizational Chart



## Explanation

### Early Childhood Education

The Catalan Education System divides the early childhood stage into two cycles. The first cycle covers from 0 to 3 years of age and the second from 3 to 6 years old. In our proposal, we suggest establishing the dividing line at 2 years old: the first cycle of early childhood education from 0 to 2 years of age and the second cycle from 2 to 5 years old.

Our intention is to include 2 year old children in the universal coverage which already consisted of the 3 to 6 year old period as well as to transmit the message that the educational model for that age must be formalized within the children's regular schooling. We consider it absolutely vital to start all learning and personal stimulation processes early and systematically. We also consider it an element of equality, since it guarantees universal schooling to the poorest of families, correcting with the regulatory action of schools and specially enhanced programs any possible shortage of socio-cultural family funds.

On shortening the first early childhood period, we attempt to promote future designs enabling family reconciliation. We understand it is easier to create labor policies that allow parents periods of labor flexibility if that period is shorter. With this we also aim for parents to not need a lengthy interruption of their professional career.

The school model of this cycle would have to be very open and flexible, very receptive with regards to the real needs of families and, to this end, adapt timetables and activities. The school center will have to take into account, within its routine framework, the powerful interaction of parents so that there is an explicit continuity between school and family. Schools would also have to give close training support to parents, especially for those families with more training needs or in a situation of greater vulnerability.

### Compulsory Education

Compulsory education would be set from 5 to 18 years of age. The complexity of society nowadays will need to substantially broaden the training base of citizens in future if we wish to avoid instability in their essential development. In the same way that the LOGSE once extended compulsory education to 16 years of age and thus eliminated the legal void that existed between 14 and 16 —when it was not possible to work but conversely it was not compulsory to attend school— we believe the moment has arrived to close the moral gap we are currently experiencing, in which basically the most vulnerable young people are those who for the most part drop out of school at 16. We must be ready to create the methodological conditions and materials to make that possible. The programs, the objective conditions of schools, the systems of grants and paid work practice, as well as attitudes will have to be revised in depth and with an open mind.

If we look at these decisions from a European perspective, there are fifteen European countries that start compulsory education at 5 years of age and five that finish at 18-19 years old. However, in the latter five cases it is expected that during the period of 15/16 and 18/19 years of age, there is a possibility of combining studies and work, both part-time. Only when the students are evaluated simultaneously and formally in both activities will they be considered full time compulsory education students. (Eurydice, 2016).

## Primary Education

Primary education would run from 5 to 11 years of age, divided into three cycles of two years each (initial 5-6, middle 7-8 and higher 9-10). At these ages, some of the curricular contents from the previous structure would be pushed forward, always guaranteeing the acquisition of basic competences in reading and math at an age appropriate level.

This is the key stage for working intensely with socialization skills and promoting positive attitudes towards classmates and school. The family-school relationship will need to carry on being a privileged space for action and counseling will acquire this fundamental family nature in which emotional education will be one of the clear areas for collaboration.

## Secondary Education

Secondary education is distributed into two stages, lower secondary education and upper secondary education. The first would consist of four school years from 11 to 15 years of age and would be subdivided into two cycles of two school years each. Upper secondary comprises one single cycle of three school years, from 15 to 18 years of age, and would include both baccalaureate and vocational/professional training.

Students who do not attain a lower secondary diploma will be able to study a three-year professional training module, complemented by general education courses, which will give them the corresponding accreditation of having studied and completed lower secondary education as well as accreditation for their acquired professional competences.

These studies will open access to professional specialization courses (which we will define later on when we talk about Advanced Professional Training) or upper secondary education, during which students will be able to validate (depending on the studies and specialties chosen) a group of subjects equivalent to a school year in this stage and successfully rejoin the central system pathway.

This offer involves a curriculum adaptation in order to guarantee all students the chance to complete the training base necessary and adequate enough to enter the job market or keep studying, but in any case with the ability to continue growing as active citizens in society.

This pathway will normally need to develop at regular education centers but, in those cases in which for reasons of personal profile the students need not only a curriculum adaptation but also an adaptation of the environmental conditions, flexible learning spaces will be created which will have to guarantee a very careful attention to the students' personal needs as well as be managed by staff specially selected for their degree but also, fundamentally, for their personal, professional and attitude characteristics.

## Lower Secondary Education

Lower secondary education will have a comprehensive nature the same as for primary education. In order to graduate, a student will have to prove that the basic curricular knowledge and the development of key competences have been acquired.

The last year of lower secondary education will have a strong guiding role. The teaching staff, coordinated by the counselors, will have to program self-awareness activities to help students explore the realm of possibilities the education system provides them to find their future life path formalized by counseling advice, in complicity with the students themselves and their family, at the end of this stage.

The first year of upper secondary education will have to maintain the same guiding role. The counselors will conduct a follow up of the student and, at the end of that school year there will be a second report to present a reinforcement or a change of option according to what is best for the student, naturally, and as in the previous stage, with the complicity of the students and their families who will always have the power of final decision.

### Upper Secondary Education

Upper secondary education studies will include professional training studies and the baccalaureate. According to *Education for All: Global Monitoring Report (2012)*, three types of competences will be developed:

- Foundation skills: Key linguistic competences in Catalan, Spanish and a foreign language.
- Transferable skills: Analyze problems and find adequate solutions; communicate ideas and information effectively; show leadership, awareness and entrepreneurship.
- Specific skills: Scientific-technical, socio-humanistic, technical-professional, arts and sports.

The first two, the foundation and transferable skills, we consider common to all upper secondary education, while the third will depend on the specialty chosen, whether it is the baccalaureate or vocational training. Secondary education as a whole will need to equip all citizens with a wide range of skills that will open doors to realization and personal development, social inclusion, active citizenship and the job market.

We would like to initiate a new perception of upper secondary studies, that they all be considered as equal and, to a certain extent, interchangeable. This would especially affect the traditional concept that has been held until now of professional vocational studies.

We have understood that, to achieve this training level, it would be necessary to extend the training to three years and thoroughly change academic and methodological focuses. With the total number of hours needed to develop generic skills effectively, we did not believe that two school years would enable meeting the demands of such a comprehensive proposal which, on the other hand, is absolutely necessary.

In the case of professional education, the need for change is completely essential and, in the case of baccalaureate, one only need listen to secondary school and university instructors to understand the necessity of extending the number of school years and elaborating on the training proposal.

In the *New Skills Agenda for Europe (2016)* in terms of education and professional training for the period 2011-2020, we read in Chapter III (Strategic Objectives) section C (pg. 11), that the following objective must be accomplished : "Ensure that key competences are integrated into the vocational training study programs and set up appropriate means of evaluation." This objective clearly indicates the need for

broadening the students' training base as a chief element to avoid social complexity from increasing the vulnerability of some students who must be, above all, prepared for the inevitable change.

Attempting to create a common skills base among secondary education students aims to transfer the message to society that studies are different yet sufficiently connected so that students may move between studies with ease.

In the European vocational training agenda and also as part of the strategic objectives resulting from the Copenhagen Declaration, there is talk of the need to "improve the quality of vocational training through gateways between all levels of education and make known all the possibilities it offers. This is especially important in those countries there has been a tendency to underestimate it."

In the case of baccalaureate students, and along the same lines of thought, we understand the curriculum should include practice areas in a business setting or service to society. As we delay young people's joining the job market, we must make approaches to allow them to develop values, attitudes and skills that would be difficult to achieve far from real environments.

Programs to support mobility would also need to be introduced for secondary education students. These programs would attempt to complement European support which at this time is completely insufficient and accordingly would need to be accompanied by enough grants and in-company training offers from an economic and quality point of view. We must value the enormous conceptual and especially strategic importance that this type of learning has and which can only be acquired in these types of experiences.

### **Training Centers**

The period from 0 to 2 years of age would take place in pre-school centers where proximity would be a fundamental factor in promoting the school-family relationship. We would maintain very open, flexible schemes to facilitate contact between school and family and respond to family reconciliation scheduling needs.

The period from 2 to 15 years of age would unfold in institution-type school centers. We see this as the central stage of students' personal education and the fact of staying at the same center for very long periods of time contributes to developing deep personal ties, thus increasing socialization and making an emotional balance possible. They would be neighborhood or community centers that would promote the necessary interaction between the center and the nearby physical environment. From this perspective complementary training activities could be set up in collaboration with municipal governments, which are so important in encouraging different kinds of counterbalancing education according to the sociocultural profile of the students.

The period from 15 to 18 years of age would be carried out at baccalaureate and professional training secondary schools. These centers would preferably offer mixed options including professional training specialties and the baccalaureate at the same school. This way we would promote mainstreaming of these upper secondary education choices. The students of different options could share classrooms in subjects or activities that would result in common skills and also in elective subjects in which students from one specialty could opt for fields in another.

In the end, all secondary education students would have to pass the corresponding entrance exam for access to higher studies, for professional training as well as university. The offer of places would not

adapt to personal demand but would rather be based on social needs. The exams would contain a common part for all options and another part adapted to the characteristics of the studies chosen. To enable pathways between the training received and the type of entrance exam, centers would have to offer a transition course to prepare and foster the entrance exam, thus in practice making a transition possible from one option to another.

These would not be devised as local centers. The school center and options for the baccalaureate and vocational training would need to be established according to a global distribution of studies and take into account the needs of the area as a whole and the players operating within the system.

Students this age already have a great capacity for mobility and this is precisely the reason there could be established more easily policies of student redistribution not only tailored to the study options but also on the grounds of fairness. Guidance counseling would be invaluable at that time to re-direct students to the kind of centers (whether they are in the local area or not) that for them represent the most and best range of opportunities according to their personal profile, obviously regardless of their background or financial standing. Consequently, so that all this is possible, the most vulnerable students would need to be equipped with the means they needed to make this proposal happen.

Baccalaureate centers would be places of study and school coexistence where students would find the pathway to personal realization and growth, to learn how to discover and build projects for the future as well as to learn to live this stage as a real life experience, so that this stage is not just a passageway from lower secondary education to upper studies, but rather means a crucial moment when the students discover the meaning of globalization, the vastness of communications and socialization through multi-connectivity. Secondary schools and families are the most important references, stable in nature, that can help them anchor their character, and all of this will need to be addressed in the framework of this momentous stage.

### **Advanced Professional Training Studies**

Students who decide to continue their studies within the context of professional training would be able to do so in two cycles of two years each. Upon completion of the first cycle they would receive a first level diploma and upon completion of the second they would obtain the diploma of graduate in advanced professional training.

Recognition of an advanced diploma would need to be the equivalent of a university degree and would give access to post-graduate studies, whether sponsored by vocational training centers or by universities. Pathways would have to be established between the two types of studies to facilitate transfer from one to another.

### **Advanced Professional Training Centers**

These large centers would cover not only advanced studies but also broad, ambitious continuous occupational training offers. Thus they would service all kinds of students, and not only during adolescence but also throughout life. They would also constitute spaces for technology transfer, assessment, research and innovation focused on the professional world.

As the most representative centers for lifelong learning, they would have very strong guidance services, with the ability to act at any moment during people's life cycle, paying special attention to the most vulnerable groups in our society. These centers would attest to skills, recognize and certify qualifications, take stock of training as well as re-direct people's training so that they will be able to stay in the job market.

These centers would enjoy a wide autonomy and, therefore, would be obliged to act with principles of high responsibility. At this level of action, centers would need to be well connected with the local business world as well as with social agents in order to effectively address training needs. This type of relationship should enable them to become the real engines for active job placement policies.

From a structural point of view, these centers would need to be connected with baccalaureate and professional training secondary schools. Each secondary school would have an advanced professional studies center or university of reference; together they would review programs and training offers, attempting to give them technical coverage and facilitating transitions.

Professional training is called on to be the central core that must bind together and give social meaning to the whole education system. Without vocational training it will be impossible to fully develop equality within the framework of society. People in general, and especially those who are the most disadvantaged, will need continuous help in order to move freely and with dignity throughout their work life, as well as the integrated professional training center, where they will find the services they require at different moments of their life so they can maintain their level of self-realization.

In the framework of our proposal for change, we are aware that the most sensitive area, and at the same time the most significant in a far-reaching renewal of the non-university education system, is exactly professional training. We trust we will receive many suggestions for all education levels, but we would especially appreciate them with regard to these studies.

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