

EDUCATION

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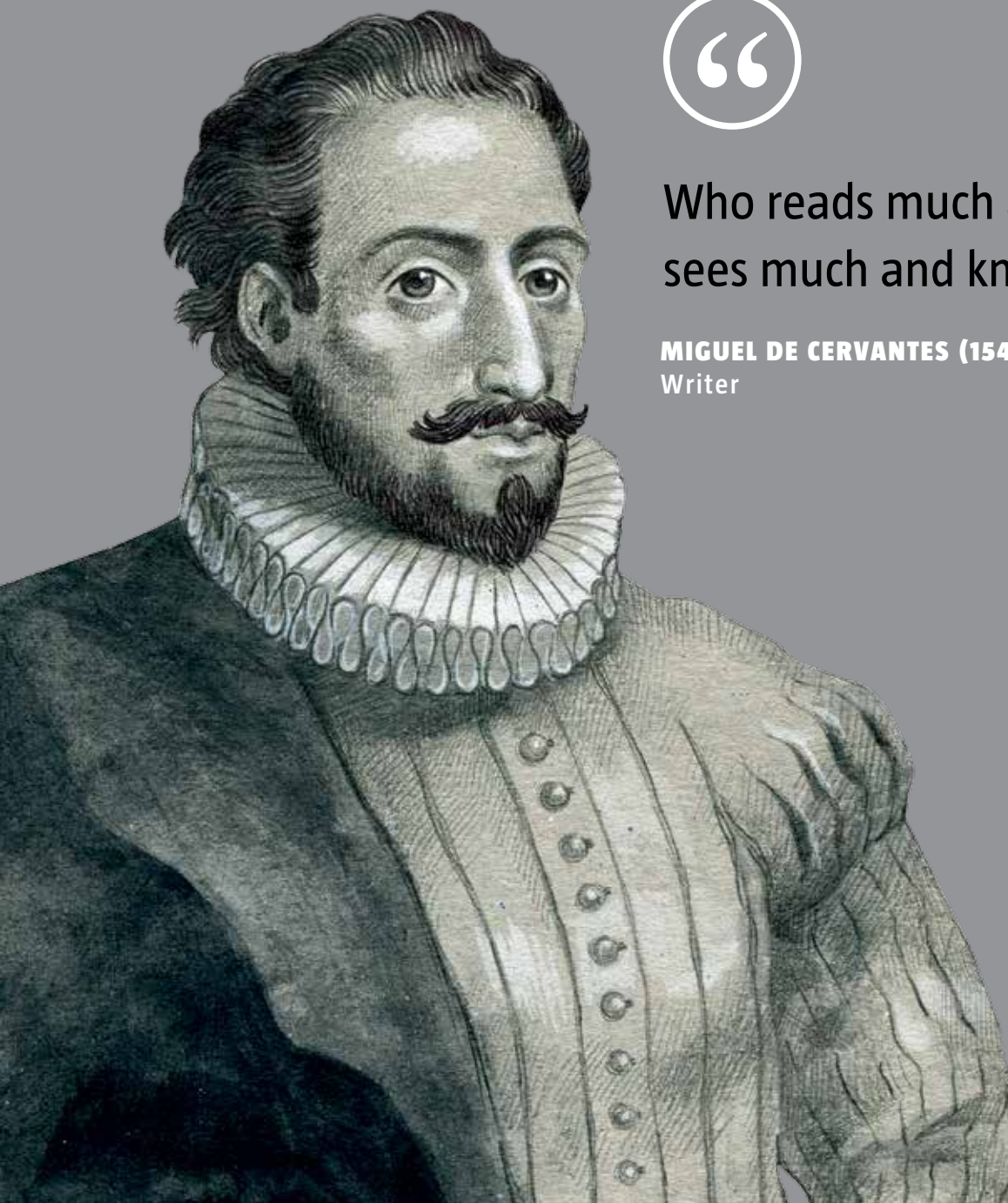
A BETTER EDUCATION SYSTEM IS POSSIBLE— EVEN IN THE SHORT TERM

With the exception of business schools, Spain has fallen behind in all university rankings and school results. Vocational training is not a satisfactory option. Spain's young people and mature adults must be well prepared so that they can compete in a much more technology-heavy, global world.



Who reads much and walks much
sees much and knows much

MIGUEL DE CERVANTES (1547–1616)
Writer





DEUSTO

Creating stable reforms: The need for a national pact

The set of actors with a share in the responsibility for education should commit to implementing the range of measures needed to provide firm support for the profound adaptations that Spain's education system requires at all levels.



Susana Pérez de Pablos

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Our education system has been unable to keep up with the pace of society's modernization, driven by technological advances and their impacts on all spheres. But keep pace it must. Education has the most complicated of missions: it must teach all of the skills, knowledge, and professions affected by the changes demanded by the new times we live in. Some of these spheres just need a bit of an update, while others will have to be entirely reinvented. How can we make sure that the new generations living in a society that has undergone profound and rapid change are able to assimilate contents already adapted to these changes, employing up-to-date tools that, in some cases, haven't even yet been fully defined by the various professional spheres creating them? These are reforms that affect the new skills needed: they imply new ways of working, and—most complicated of all—a new way of understanding work. Adapting to this new society is proving to be very challenging for all

sectors, but in the case of education the impact has been profound, and will continue to affect society for a long time to come. This has caused a period of deep disorientation, both in the classroom and beyond, in a sphere that is absolutely vital to the prosperity of this country. What has become very clear is that we can only achieve our objectives if the whole set of actors with a share of the responsibility for promoting the prosperity of society can acknowledge the true seriousness of the situation in which our education system finds itself. They must then make a firm commitment to implementing the range of measures needed to provide strong support for the profound adaptation that Spain's education system requires at all levels. This firm commitment means having a broad enough vision to ensure that all actors (political parties, trade unions, employers, business organizations, and education centers) put their particular prejudices and interests to one side for the greater good: to provide Spain with a stable education system

both in terms of legislation and from an economic perspective, providing a guaranteed budget allocation worthy of the most advanced European countries. Public spending on education in Spain accounts for 4.42 percent of GDP according to 2012 figures, the last dataset reported by the Ministry of Education. In 2009, spending on education reached 5.07 percent; in 2001, it stood at 4.3 percent; while in 1998, it was 4.45 percent. These percentages are still far below the European average (5.25 percent of GDP in 2011, according to Eurostat figures).

Education policy has a strong ideological component. The only way of guaranteeing the crucial stability education requires would be through a state-level pact to promote a review of the education system as a whole. The last attempt at forging a pact of this kind took place during the latter years of the previous government under the Spanish Socialist Workers' Party (Partido Socialista Obrero Español, PSOE), when Ángel Gabilondo served as Minister of Education. As



The city of Salamanca, famous as a centre of culture and learning

part of the Law on the Sustainable Economy, that government approved some changes and concessions proposed by Spain's conservative People's Party (Partido Popular, PP), who were in opposition at that time. An example of these concessions is that during the last year of compulsory secondary education (Educación Superior Obligatoria, ESO), two routes would be made available to students, as proposed by the PP with the so-called "itineraries." In the end, no agreement was reached. The problem lay in deep-rooted differences in the parties' concept of the model of education, according to the PP. A pact had already been attempted, this time in civil society, some fourteen years earlier in 1997. It was driven by the Fundación Encuentro, chaired by the late José María Martín Patino, who proposed a national pact involving a commitment from all political parties and sectors of society. It actually managed to get almost all social organizations, whether public or private, to the table. But ultimately there

wasn't enough political support for the agreement proposed. The proposal consisted of a parliamentary agreement for the last five years on financing for the completion of the network of secondary schools, the implementation of a new vocational training system, the fight against inequality in the education system, the provision of performance-based incentives teachers, and the expansion of agreements with private centers with a view to ensuring that education for children aged three to six would be free of charge. At that time, it was proposed that the percentage of public spending to be allocated to education should be raised from 4.7 percent to 5.5 percent of GDP. Although the three problems that most concern the general public continue to be unemployment (cited by 78.6 percent of people surveyed), corruption (48.5 percent), and the economic situation (25 percent), the survey carried out in February of this year by the Spanish Sociological Research Centre (Centro de Investigaciones Sociológicas, CIS) showed

that concern for education had risen by almost 2 percentage points from 7.1 percent to 9.5 percent as the seventh problem that most worries the Spanish people. Our citizens are becoming increasingly dissatisfied in this respect.

The country has undergone numerous education reforms since the transition to democracy. And the greatest damage has been done by the pandemonium that has ensued from such reforms, which have brought uncertainty and chaos for centers, teachers, and center directors alike. As has become clear following the implementation of the reforms, the sensation of continual change and image of instability have been worse for education than the changes established by the new laws in the framework of the education system itself—which has, in reality, hardly been changed at all, with the core subjects and contents that all children and teenagers have to study essentially remaining the same. Issues such as debates as to whether the subject Education for Citizenship



It is indisputable that the level of learning achieved by Spanish students at certain schools and colleges, both public and private, in certain degrees or at particular business schools, is excellent, worthy of competing on the international level. The techniques, ways of working, and resources required are out there and the mechanisms we need to make use of them to the benefit of everyone are within our reach



Bilbao campus of the University of Deusto



IE Business School, ranked among the best in the world

should be part of the curriculum or changed for something different but similar, or whether exams should be given on religion, are examples of where the attention of successive changes to the education system has actually been focused.

The process of applying the Organic Law for the Improvement of Education Quality (Ley Orgánica para la Mejora de la Calidad Educativa, LOMCE), approved in 2013, is currently in full swing. It is the seventh organic law on non-university education approved in Spain during the last thirty-five years. With the arrival in government of the PP, the new Minister of Education, José Ignacio Wert, attempted to implement a partial reform of the previous law created by the PSOE, the Organic Law on Education (Ley Orgánica de Educación, LOE). The latest regulation imposes two sets of examinations at the end of compulsory secondary education (ESO) and advanced secondary education (Bachillerato), makes religion an assessable subject—as campaigned for by the Catholic Church—and channels

children into different study routes before they have finished compulsory education at the age of sixteen, as well as changing the subject Education for Citizenship that proved so controversial.

These disputes have had negative side effects, damaging the image of schools and the quality of the education system as a whole. Meanwhile, certain Autonomous Regions—such as Madrid or the Community of Valencia—have been placed in the spotlight when it comes to criticism of public education while at the same time policy has been promoted that would clearly favor subsidized private education. And while everybody has been immersed this absurd to-ing and fro-ing of reforms, schools and teachers have had to adapt the teachings of the last twenty years as they go along, with the attendant negative impacts for pupils who have had to suffer reforms to two or three laws while they progress through compulsory education. During recent years, under both the PSOE and the PP, many of the peo-

ple in charge of adapting education to modern times have been distracted by these petty squabbles, unable to focus on the reforms truly needed. The changes actually required are related to teaching methods, support for the teachers during the complicated adaptation of classrooms to the digital world, the promotion of English teaching to guarantee real competence among students, the incorporation of new materials suited to new times, and so on and so forth. Thus, the debate goes much deeper than a simple discussion about the teaching of values or beliefs, or criticism of the public or private education model, both in the case of school education and universities. It is necessary to focus on what the Spanish model actually needs in order to achieve modern teaching and education management systems with a view to accomplishing excellence not only for a few but in the system as a whole. To this end, it is important to examine the real situation in which students are being educated, and adopt different

reforms (not necessarily concerning legislation) that can adapt everything the education system offers to the new times we are living in. The labor market that students are going to encounter when they leave the classroom will presumably be very different to the current one, and new generations must be trained in a solid, intelligent way that allows them to adapt to new requirements and skills as and when they arise.

All stages of education, from infant to university and including professional training, should undergo an adaptation process that will surely continue into the future with the purpose of training the citizens needed by society at any particular time. Education is no longer static: it is no longer a body of knowledge that everyone who has passed through the education system possesses. Today, education is dynamic, full of new discoveries emerging every day, every year, every decade. Poor results from pupils and centers in secondary education tests must cease to be used as an excuse in fa-

vor of one particular set of interests or another. In 2011, just 60 percent of pupils passed the minimum standard test given as part of the controversial exams faced by pupils of fourteen and fifteen years old (in their third year of compulsory secondary education) in the Autonomous Region of Madrid. The results of these tests do not affect pupils' academic records, but are published by schools. Although results have improved somewhat in the few years that have passed since these exams were established, there are still major gaps in pupils' knowledge of subjects as basic and crucial as mathematics.

With regard to international university rankings, the Shanghai Ranking (which rates the world's five hundred best universities) is a landmark reference; however, it gives the greatest weight to research, which, while it is one of the great missions of universities, is not their sole reason for being. The latest addition of the ranking for 2014 features just one Spanish university—the University of Barcelona—among the first two hundred

on the list. Nevertheless, another four Spanish universities do appear in the top three hundred, eight in the top four hundred, and twelve in the top five hundred. In 2013, no Spanish university made it to the top 200, although similar numbers to 2014 figures did appear in the rest of the ranking. We might add that since some of Spain's business schools are considered to be among the best in the world, it must be possible for our country to achieve similar renown in the case of at least some universities. Only a broad consensus, a national pact promoted by people who know about the sphere of education and have a strategic vision for its future, will make it possible to overcome prejudices and make some progress. The search for equity, for equality of opportunity achieved through support for those who are born into less privileged backgrounds, is compatible with a commitment to competence and excellence. Public and private networks can coexist if their situations are reviewed and adjusted using criteria of equality, placing an emphasis on reason, and without discrediting the other faction. This is also the case of university education, where public-private partnership is possible within a well-designed, well-controlled financing model that lends stability to public education centers and respects their independence.

It is indisputable that the level of learning achieved by Spanish students at certain schools and colleges, both public and private, in certain degrees or at particular business schools is excellent, worthy of competing on the international level. The techniques, ways of working, and resources required are out there and the mechanisms we need to make use of them to the benefit of everyone are within our reach.

We just need to work together to achieve our goals, with all parties committed to making it happen, not tomorrow but right now. Because education tomorrow will be nothing like it is today.



José Saturnino Martínez García

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Efficiency, equality, and education policy

There are two sets of indicators that we must improve within the Spanish education system: those related to qualifications and those related to skill levels. The countries with the best results in education are those that better compensate for a lack of equal opportunities based on social background.

The education that we will need in the coming years must provide a balanced combination of humanities and technical skills. We don't know what the future holds, but without a doubt we will need people who know how to grasp the meaning of the world we live in and are capable of resolving new problems. This means focusing education on revaluing and recreating cultural traditions, mathematics, programming, and languages. And all this must be achieved in conditions of equality. Recent studies show that the countries with the best results in education are those that are capable of better compensating for a lack of equal opportunities based on social background. There are two sets of indicators that we must improve within the Spanish education system: those related to qualifications and those related to skill levels. In relation to secondary school education, the Organic Law on the General Organization of Spain's Education System (Ley Orgánica de Ordenación General del Sistema Educativo de España, LOGSE), led to an absurd situation that erected barriers preventing pupils from entering post-compulsory secondary education. Those that hadn't been awarded the basic qualification at the end of compulsory secondary education (ESO) could not participate in official courses past this level. The Organic Law on the Improvement of Education Quality (LOMCE) mitigated this situation to a certain extent by introducing Basic Vocational Training (Formación Profesional Básica, FPB) into compulsory secondary education, thereby making it easier for students to access intermediate and advanced vocational training

and educational cycles (Ciclos Formativos de Grado Medio y Superior) although this also had an impact on the quality of vocational training. This loss of quality stems from the fact that dwindling support for compensatory education has come at a time when basic vocational training has been introduced for pupils with the most difficulties. The education system must be capable of distinguishing between those who have a professional vocation and those who need educational support. If not, we will end up giving the message that vocational training is for "dimwits and troublemakers," and its capacity for training will be reduced to a catch-all solution where all children that prove problematic for teaching staff can be sent (and it is used as a threat to hold over such pupils). It is, therefore, necessary to distinguish between three education routes: academic, professional, and for pupils requiring support to achieve basic targets. As in the case of the countries around us, the level of skills achieved in each of these paths should be accredited and, according to the level obtained, access should be provided to official post-compulsory education. With this system we could solve the "black hole" of Spanish qualifications that is advanced secondary education. Half of the dropouts from the education system can be attributed to the fact that pupils have not achieved their compulsory ESO qualification and cannot go on to study post-compulsory courses of any kind.

With regard to improving skills, the issue is more complicated. While it is true that certain countries have im-

proved the skill levels of their young people in compulsory secondary education (Germany, Portugal, and Poland, for example), others have gone downhill (such as Sweden and Australia), and the majority of countries have maintained constant levels. One of the aspects of our system that can be improved is teaching. Despite the good intentions behind the LOGSE, teaching staff have been more preoccupied with stuffing pupils full of content than developing their ability to solve problems. Compulsory education should be more focused on getting in touch with pupils' interests and developing general skills than with transmitting knowledge for pupils to memorize.

When improving skills, we must take care to avoid the insistence within the reformist movement on giving an inflated importance to performance indicators. This movement believes that if we perform external assessments on centers and publish the results, families will have more criteria at their disposal to choose good schools, while the state will have the opportunity to take action in the case of the centers that are not performing well. The United States has been using this system for almost fifteen years without seeing any improvement in their pupils' skills, and with the perverse effect of turning schools into centers preparing students to pass tests, neglecting certain areas of the curriculum such as humanities and other learning avenues along the way. In contrast, they do not use any measures of this kind in Finland, and their results in education are pretty good. This does not mean that such tests are not a much-needed tool in assessing the education system, but they must be used alongside other measures and with great care in order to avoid fulfilling the so-called Campbell's law, which says that "[the] more any quantitative social indicator [...] is used for social decision-making, the more subject it will be to corruption pressures and the more apt it will be to distort and corrupt the social processes it is intended to monitor."

When it comes to languages, Spain is starting from a substantial disadvantage that underlines how the teaching methods employed to date in formal education have not fulfilled their purpose. Bilingual education has been put forward as a solution to this problem. But implementing bilingual education is a complex task, since it is necessary to ensure that the promotion of the foreign language does not detract from the quality of the contents being taught. Moreover, depending on how pupils are selected, it could encourage inequality of educational opportunity, leaving schooling in Spanish alone for students with a poor social background and/or more disruptive tenden-

cies. Given that this route is expensive and complicated, it might be worth experimenting with educational innovation or intensive language courses. Another possible means of improving performance in languages is to encourage the consumption of audiovisual media in original versions, which requires combating a strong current of cultural inertia.

With a view to improving our performance in humanities subjects, it is important to encourage artistic talents and an appreciation of cultural traditions. Leaving aside the intrinsic value of this kind of education, it has proven links to creativity. It would be important to avoid directing such training at providing a passive knowledge of cultural heritage; rather, a humanist training should be employed to maximize creativity. For example, having to pass an exam by memorizing the main ideas proposed by Kant is not the same as doing another exam in which you have to comment on a text which captures the possible meanings of the work of that author in a way related to pupils' practical experience.

When taking part in the debate on the education policy that we need, we should also reflect on what it is that Spain does well before embarking on a poor copy of what other countries are doing. For example, much is said of the level of skills demonstrated by Finnish students in the OECD's Program for International Student Assessment (PISA), but no mention is made of the fact that some of Spain's Autonomous Regions such as Castile and León achieve similar results. There is also great deal of talk of reducing dropout rates and improving vocational training, while the Basque country has already achieved the targets for school dropout rates set by the European Commission for 2020 (10 percent) and boasts excellent vocational training. This shows that it is possible to achieve good results in education under the same legislative system and with teachers who have received the same kind of training as those in other regions of the country. We could always argue that the socioeconomic and cultural differences between the various regions of Spain are considerable, but the differences between countries are even larger. Finally, we should highlight the link between poverty and poor results. One of the fundamental purposes of a decent education policy is to ensure that no children live in homes with a precarious financial situation, since it has been proven that growing up in very poor households affects their performance in education throughout their whole lives. This means that social policies and employment policies are also education policies.

POINT

COUNTERPOINT

We can sort our education system out in five years: It's a problem of management

Leaving aside the university system, it is possible for the basic education system in Spain to achieve high performance levels within five years on an education budget at precrisis levels: just above 5 percent of GDP. The problem isn't to do with money but with management.

In Spain, the education crisis is now chronic. We have been stagnating for the last fifteen years, and no amount of budget increases has been able to achieve progress on results. Successive governments have tried to improve the situation by changing laws, instigating a political to-ing and fro-ing that has had a negative impact on the system and induced a certain sense of resignation. So the moment has come to shed this feeling of defeat in education, explain to the general public that the problem does have a solution, and call on politicians to commit to some specific objectives with fixed deadlines.

We need to convince ourselves that the basic education system in Spain (leaving aside the university system) can achieve high performance levels within five years on an education budget at precrisis levels: just above 5 percent of GDP. The problem isn't to do with money but with management. This explains why the different Autonomous Regions of Spain achieve such vastly differing results.

In order to avoid getting lost in vague rhetoric, we must define what we mean by "high performance levels in education." I propose four objectives: reduce school dropout rates to the 10 percent recommended by the EU; improve Spain's PISA classification by 35 points; improve the percentage of students that excel; and promote equality, with attention to children and teenagers with disabilities or serious learning difficulties.

What are the measures that we would need to take in order to achieve these objectives? Well, education is not enigmatic. It is true to say that sometimes results seem to be unpredictable. Australia has tripled its spending per student since 1970, and yet the country is still unable to overtake Singapore, which spends less on education than the majority of the world's countries. The United

States does not achieve great results despite almost doubling its spending and reducing the student-teacher ratio. In contrast, South Korea achieves notable success despite swollen class sizes. Finnish pupils achieve very good results despite spending less time in the classroom than in other countries of the EU. When faced with such disparate figures, it is worth analyzing the factors underlying scholastic success in depth.

The most important of these factors are as follows:

1. Funding. Funding to the sum of at least 5 percent of GDP is required for education or an equivalent to \$50,000 (€47,000) per student during the years of compulsory education (six to fifteen years of age). Upwards of this amount of spending, says the PISA report, the effectiveness of an education system depends mainly on the way it is managed. Spending on education in Spain has reached up to 5.07 percent of GDP with an accumulated spend per student of \$82,000 (€77,000). Therefore, there is no economic reason that justifies the mediocre quality of our education system as long as we're spending at levels similar to those seen before the crisis.

2. Establishing efficient management teams. The basic teaching unit is the school, not the classroom. That's why its correct functioning is transcendently important, and it is the management team who are responsible for how a school operates. Running a school—or any other institution—is a very difficult task. You have to know how to do it well. An admirable quantity of books has been published in the United States on head teachers, narrating their experiences of bringing about a transformation in their schools. In Spain, management skills have always been undervalued. For a long time, it was thought that the ideal hospital director must be the best doctor, or that the best teachers would, by default, make perfect

head teachers. These roles require different competencies and involve different tasks.

3. Teacher training. This is an aspect that Spain has paid little attention to. The OECD's latest Teaching and Learning International Survey (TALIS) shows that 40 percent of Spanish teaching staff admitted that nobody had ever told them whether they were doing a good job of teaching their classes or not. In contrast, in countries with an advanced education system more than 80 percent of teachers have attended classes given by their colleagues to observe their work. In Finland, teachers are divided into groups so that they can collaborate with each other: they supervise each other's classes and have an afternoon free every week to prepare classes together.

The quality of an education system cannot be any better than the quality of its teachers. In Spain, few of the brightest pupils go on to study teaching. In contrast, South Korea recruits its teachers from among the top 5 percent of its highest achievers, while Singapore and Hong Kong recruit teachers from the top 30 percent. The secret does not lie in their pay, since they are not offered above-average wages, and there are countries that do not stand out in terms of education quality despite teachers being better paid (Germany, Spain, and Switzerland). Getting the best teachers means being very selective, but in a particular way. In contrast to the system of selection exams held in Spain, for example, the countries with the best results employ a different method: places at teaching colleges are limited to the real demand for teachers, with a great deal more spent on the training of student teachers.

4. Greater independence for education centers. Our education system is very centralized and bureaucratic. The government does not trust in its employees and subjects them to a series of controls that are entirely useless. The people who should take charge of controlling the quality of teaching in schools are their management teams. Inspectors must be capable of assessing teaching skills as opposed to being mere monitors.

5. Resolving the problem of vocational training once and for all. A dual system is not something you can improvise. Once again, we are looking at a flaw in man-

agement. The current law was created by central government, but it has to be implemented by the Autonomous Regions, which complain that, among other problems, they do not have the money to do so. The lack of quality vocational training serves to foment dropout rates on the one hand and leads to an excess university population with little motivation on the other.

6. Ensuring that no pupil is left behind. One of the distinguishing features of the countries with the best results is what they do when things are going badly. The first thing is to identify problems quickly and take prompt action. Finland is number one in terms of teachers dedicated to helping pupils who are falling behind: in some schools, up to one in every seven teachers is dedicated to this task, meaning that in Finland during a normal year one in three pupils receive individual support classes. We should not have to wait to the end of the year to know what to do with a pupil who is falling behind.

7. Involving society as a whole in the renewal of the education system. In this sense, it is very important that action is taken by families and local areas to coordinate activities both at school and outside of school, even if they do not have a background in education.

Universities

The ideas set out above do not refer to the university system. The Spanish university system has some far-reaching and endemic problems. One of them is the system's refusal to be an institution of excellence. University has served as the only channel for social mobility in a society like Spain's, which is closed and classist. This has led to many young people going to university when they do not have a vocation for academic study. According to OECD analyzes, Spanish university students take an average of nine years to finish a five-year degree. One out of every five finish their degree when they are aged over thirty-one, which is rather striking since the proportion of students who work and study at the same time is very low. But there is no doubt that an increase in the level of secondary education and vocational training would also provide a crucial boost to improving our university system.

José Antonio Marina

Philosopher, essayist, and teacher



TALK ABOUT
THE FUTURE

Santiago Íñiguez

Dean of the Instituto de Empresa (IE) Business School

What is more important: an education system that is stable, or one that teaches the ideology of the majority?

Governments have believed that by changing the content they can change values, and they are mistaken. They continue to teach the same things with different labels. The Spanish education system is hyper-regulated and there should be a more homogenous relationship between the different Autonomous Regions in order to facilitate geographical mobility of talent, students, professors, and ideas. But we are too critical of the Spanish education sector when it comes to higher and university education. We shouldn't look solely at rankings but also at the type of professionals graduating from our universities.

age terms. But we need to redesign the university financing model. And when we look at countries where universities work more efficiently, such as the United States, we can see that they have a very different system of government. We have a system that combines the worst of the federal system and the worst of a centralized system.

What country might serve as an example for Spain?

Personally, I think the Dutch system is exemplary. The British system is considered the model par excellence, but it is currently undergoing a controversial transition, given that university fees have increased substantially. We can learn much from the Dutch university meritocracy and the universal education delivered in some Scandinavian countries. The coexistence of public and private models in the United States is also a good example. There is a market where big public and private universities with a world-class reputation exist side by side. Public and private education are often set up in opposition in Spain. Spanish public education is

“The thing that we don't know how to manage correctly is the transfer of knowledge to the business environment, although there is an increasing number of initiatives in this area”

Spanish universities have some very good business schools that compete at the international level. There are also engineering schools that produce some of the best engineers, working on projects in Saudi Arabia, the United States, Latin America, and China. The Spanish university system produces graduate profiles that are very competitive worldwide. The thing that we don't know how to manage correctly is the transfer of knowledge to the business environment, although there is an increasing number of initiatives in this area.

Is it cheaper to study here in comparison with other countries?

No, it isn't. In Scandinavian countries or in Holland, where the tax burden is much higher, university is free. Moreover, the government funds students to study abroad. At the moment, Spanish investment per student is lower than in the rest of Europe in percent-

in need of reform, but both systems can complement each other.

A majority of Spanish graduates do not feel that their degree has prepared them for the professional world.

There must be a connection between graduation and incorporation into the labor market. We live in complicated times, not only in Spain where we have high unemployment rates but also in other countries such as the United States. During the last decade, the phenomenon of new technologies has meant that there are increasingly fewer jobs available for university graduates. We must prepare graduates so that they can acquire skills related to entrepreneurship, mobility, and the possibility of developing multiple skills. We must generate more mobility within our country and Europe. Things are changing. Measures to liberalize the labor market are leading to increased employment.

Teresa
García-Milà

Director of the Barcelona Graduate School of Economics

Should the various political parties stop trying so hard to leave their mark on the education system?

Yes, clearly. It isn't necessary for each new government to change the country's education model. The political parties should meet up, and plan and agree on an approach to education that will avoid the need to make changes to legislation concerning this sector. In Catalonia, a pretty broad pact has been reached and it has proven to be very useful. Such pacts should be implemented on all levels, since the basic structure of the education model is defined by central government. We need to create a strong, clearly defined framework setting out what corresponds to the central level and what is to be delegated to regional government. It isn't productive for each government to change the law and understand the powers of the Autonomous Regions in a different way.

Do universities have sufficient autonomy?

Universities have a huge range of problems. One of them is organizational, since the university model imposes various re-



for very talented researchers, allowing them to choose a university or research center. They are selected based on their CVs and the program is designed to attract talent, mainly from outside Spain. The Imdea program run by the region of Madrid sought to attract and bring together very talented people, but since they were just a few, grouped together in one place, it didn't work. The key is to send this talent, these few selected researchers, to existing universities or centers. The Basque country has done something similar with the Icrea model and it has worked very well.

How can bridges be built between research and innovation, between universities and enterprises?

Some researchers decide at some point in their career to become entrepreneurs, and they make the perfect bridge between the world of research and the world of business. This type of person is highly valuable and should be encouraged. Nevertheless, our model has such a closed structure that it represents a barrier to such movement. University professors and their research groups are, in the majority, endogamic. There are models for doing things differently. At the Barcelona GSE, for example, we have a rule that prevents us from hiring the doctors we are training during the first few years they are with us, since they first have to demonstrate that they have talent and potential.

Enterprises and universities are starting to observe each other. It's a big step. And it is possible

“It isn't necessary for each new government to change the country's education model. It isn't productive for each government to understand the powers of the Autonomous Regions in a different way”

strictions concerning the hiring of staff, the selection of directors, and financing. These three aspects of the university system prevent it from being competitive. In order to achieve a decent level of competitiveness, we should seek mechanisms outside the standard model that will allow for complementary actions to be implemented. Some mechanisms have been set in motion in Catalonia, one of which is the Icrea model. The regional government employs this model to fund certain posts

because basic research is beginning to become more solid. Without cutting-edge basic research no transfer can take place. Our country needs to consolidate its research and assess it, and then we can talk about transfer and innovation. From there, it will be necessary to integrate research into enterprises. The researcher isn't the person who innovates, but if you find someone who notices the potential for transfer in what they are researching, then that generates interest.

TALK ABOUT
THE FUTURE

Josep Planell

Rector of the Open University of Catalonia (UOC)

**Does Spain need an education strategy that improves the amount of professionals it produces?**

Spain produces good professionals. Universities serve a purpose and they do it quite well. The problem isn't Spanish talent and how people are trained here; rather, there is a structural problem due to the type of legislation that we have in Spain, as well as the type of government, which is legalistic, regulatory, and centralist. If you want to be a central-

now the French are focusing on creating a big university complex in Paris. That does not mean that Spain shouldn't have local universities. Universities are good for their area. But we need for those local universities that contribute so much to their area to specialize and become a space for excellence in a particular sphere. Tarragona has done a very good job of this. They've got the petrochemicals industry on their doorstep and are a benchmark in chemistry, polymers, engineering, and fluid mechanics. But I expect they aren't as good at other things that are not of interest in the region.

How can ICTs change the way we learn?

The UOC was created in 1995 with an Act passed by the Parliament of Catalonia, and began work with a pilot group of two hundred students in September 1995. The World Wide Web was created in 1993, and that's why UOC got straight onto the Internet. Today, everyone can use ICTs and the whole world is doing training online. This means that the same thing that has happened in the economy is going to happen in education: it's going to become global now, and it will become impossible to protect the education system. While there are civil servants and it is compulsory to have a degree in order to be a civil servant in Spain we will be able to protect the education system. But as soon as a student gets a master's from Johns Hopkins in biomedical engineering, for a pharmaceuticals company that qualification is going to be much more highly valued than what they can achieve here. Online education is a tsunami that is going to hit higher education, and we need to be prepared.

How should training centers evolve?

Professions will most likely not last a lifetime, and if they do, there will be methods or techniques that will change, so people will need to train throughout their lives. Readaptation to new technologies and methods will be essential, and this is a capacity that universities should have and cultivate. The information available on the Internet is enormous, and students need someone to guide them through it. And that might be the new role of the university professor.

ist, then you need to be French because that works for France. But that means applying it to everything: you have to be French about everything for it to work. Since we are not as rigorous in our tax policy as the French, centralism doesn't work for us. It isn't a good system for university staff to be civil servants or that there is an academic degree governed by the law concerning Spanish civil service. The civil service structure is good for other things but it does not boost research or creativity in the university system.

Should universities specialize?

There are very few big universities in the world that deal with all spheres of knowledge and are good at everything. There's Harvard, Oxford, and Cambridge, and

“Online education is a tsunami that is going to hit higher education, and we need to be prepared”

Should entrepreneurship be further encouraged throughout all stages of education?

Young people are talking more and more about entrepreneurship, as opposed to working in a big company and having a good job. That is because they are the post-crisis generation. Having said that, society has to train them. Society should encourage the skills that ensure entrepreneurship is well received and rewarded. Innovation and entrepreneurship are capacities that put good ideas into practice, and they require hard work, organization, and financing. There has never been a lack of creativity, even at the worst of times. We need innovation and entrepreneurship.

Should the university system be more public or more private?

Universities have to be good, whether they are public or private. Where can public universities compete? On proximity and price. Public universities are closer and cheaper—even free. In contrast, private universities are neither nearby nor free, so they have to compete on other aspects.

What should a state pact on education deal with?

An agreement should be reached on what education means in the twenty-first century: it cannot just be about knowledge. It's about knowledge and skills, plus some values. These values must be free from political or religious doctrine in some way, although outside of that there is space for each person to gain an extracurricular education in matters such as religion. The system has to allow people to choose whether or not they study religion, as well as which religions to study. Moreover, there should be different itineraries available for acquiring skills

“Education should be compulsory up to eighteen years of age. This would be transformational because it would force education systems to be much more practical and people could get an education while they work”

because people develop at different rates. Education should also be compulsory up to eighteen years of age. This would be transformational because it would force education systems to be much more practical and people could get an education while they work. This is known as dual education. Another objective is for education to have an international perspective, with a big boost for

bilingualism. Just as in the Middle Ages, when educated people could speak their vernacular language and Latin, today people need to be able to speak their maternal language and English, since English is the Latin of the twenty-first century, a fact that is beyond doubt. This would also highlight the asset that Spain has in its four languages. We must defend the cultural richness acquired with bilingualism in Catalonia, Galicia, and the Basque country, for example.

How does education change the need to recycle ourselves several times over within our lifetime?

People are going to dedicate a lot more time to education: they are not just going to stop studying at twenty-two. This is obviously what we have come to call lifelong learners: people who are going

Miguel Carmelo

President of the European University of Madrid



to be learning throughout their lives. People will study master's degrees more than once because they will need to recycle their skills, and change jobs or profession, and they are not going to go to class to listen to a teacher like they did when they were eighteen, because now they can make use of technologies. Professors are no longer needed except for practical work, tutoring, and mentoring.

TALK ABOUT
THE FUTURE

Ferrán Sancho

Rector of the Autonomous University of Barcelona (UAB)

Do Spanish universities lack autonomy?

According to the indicators created by the European University Association for all European universities, it is clear that Spain's universities are bringing up the rear when it comes to true exercise of autonomy. The starting salary for a professor set to be employed on a permanent contract is around €30,000 to €32,000 per annum. With this salary you cannot attract anyone who is at the top of their speciality at the European level. Even less so at the global level. Ultimately, the iron law applied to the salaries offered becomes an iron law in terms of the talent that you are going to be able to attract.

Should the university system have more contact with enterprises in order to encourage innovation?

The Spanish industrial fabric is made up of small and medium-sized enterprises, and it would not be profitable for them to have an R&D department because it's expensive. And there aren't any large-scale programs to incentivize this kind of interaction: everything is left a bit to the mercy of whatever initiatives a particular university, research group, or enterprise might embark on. We are lacking a support structure to facilitate this kind of exchange between the university world and the world of business.

There is one good idea, that of the industrial doctorate, although it might be a bit of a token concept. It has been running in Catalonia over the last three years. The idea is for a person who wants to gain a PhD to do it by linking the university with an enterprise. In

“We are lacking a support structure to facilitate exchanges between the university world and the world of business”

Are the available resources used in an efficient way?

Yes. The volume of resources invested in Spain is very limited but the results obtained with them are at a pretty high standard. To give you an example, the investment made by the government of Catalonia in universities, a subsidy worth around €700 million per year, is the same as that invested in the University of Copenhagen. Only in Catalonia we have eight public universities and in Copenhagen there is just one. And there's the big difference. Nevertheless, we regularly and consistently achieve good results in rankings. And when a Spanish student finishes their degree and they go to work in Germany, for whatever reason, they don't have a problem. Spain's university system has the capacity to produce good human resources.

exchange they receive a grant to do their doctorate at the enterprise. But first, the enterprise has to agree that the subject of their doctoral thesis will be of interest to the company. It's a very good idea, but only about thirty of them happen each year, so it hasn't had a big impact yet.

What can be done to ensure there is a long-term strategy in education?

All politicians need to get round the table and talk, come to an agreement, make some pact to ensure that within the next twenty years they're not going to touch anything unless everyone agrees on reforming the system. This is quite difficult when education on all its levels—in particular, primary and secondary education—is used as an instrument of ideological intervention. No one is willing to give it up because the issue goes beyond human training in the sense of enriching their capacity to be useful to society.

Do people confuse temporary work with precarious work?

Purely due to our climate, Spain's economy by its nature needs temporary labor to a much greater extent than northern European countries, for example. This temporary work has to be managed properly in order to ensure that it does not become precarious. I see a lot of temporary contracts—in fact, I see plenty within my own organization—that provide a great deal of value to the people that hold them. During the course of one or various temporary contracts, they can gain training and experience, and they can invest in their own employability. Such contracts have a social value, and the employee might feel identified with a particular project, or benefit from human contact, and so on. But I also know of many temporary positions that do not offer such circumstances. These days, whether it's part of their ethos or not, enterprises like mine are obliged to invest the equivalent of some 1.25 percent of the total payroll in their training, and this is something that has to be proven at the end of each year. We are the only sector in Spain that is obliged to do this.

Attracting and retaining talent is essential. How can it be achieved?

They are two different things, but they are strongly linked. In fact, in modern companies we have plans for talent retention that follow the employee engagement approach, which is designed to generate commitment to our company's project, our management values, etc. We also have to attract talent, whether in order to grow or because we haven't actually managed to retain our talent and there's staff rotation. We are working very hard at the mo-

ment on something that I really believe in, and that's "job attitude." It is necessary to really empower people in order to ensure that they have a bond with their project. And this can be done at all levels, both in highly qualified jobs and in less qualified jobs. In order to attract talent, we have to let people know what it is that they will be contributing with their small task to the product of the enterprise or the country as a whole.

Is that the key to employability?

What worker has job security? A worker who currently has a job? Or someone who is highly employable? Workers that don't have a high level of employability aren't particularly well protected by having a permanent contract. What is going to guarantee you a steady income? Your skills, your employability. In short, you need to be capable of contributing value, of contributing something to your organization beyond what you cost them. Those that seek security need to have an ongoing plan to build up their own employability. My main piece of advice for employees in organizations is that they assess whether they are gaining in employability. If they are not, then they should start looking for something else.

In Spain, recently we have been experiencing high rates of what I consider to be excessive company loyalty. We have gone through a very severe crisis in which a great many jobs have been lost, and people are still terrified of losing their jobs. When the labor market accelerates a little bit, as is already happening at the moment, the disengagement that can be found among people at all levels of their organizations is going to generate very high staff rotation in businesses. In fact, studies we have carried out show that approximately 40 percent of employees across Spain are already looking for new jobs. Staff rotation among organizations is a very good thing up to a point. But if it is excessive, it is a very bad thing. This is an issue that worries me a great deal. And we tell businesses, employers, that they should have been working on this for some time already.

Rodrigo Martín

President of Randstad Spain

“Employees must assess whether they are gaining in employability. If they aren't, then they should start looking for something else”

THE BUSINESS PERSPECTIVE

PROFOUND CHANGE

They may disagree on other matters, but all of the businesspeople interviewed as part of this project agree that profound changes to the education system are required, from vocational training to university and with links to business. "If we had to choose a single primary field as essential to the development of a country, it would surely be the education system," says **Raúl González, CEO of Grupo Barceló Hoteles**.

What is needed is a flexible reform designed with a view to ensuring stability and consensus. **Fernando Carro, CEO of Arvato (Bertelsmann)**, a great fan of the German education system in which he was taught, is critical of the fact that "every time there is a change of government between the PP and the PSOE, every four or eight years, changes are made to everything that has gone before. We can't achieve anything like that. We have to think long term, achieving a broad pact on education involving all political parties." **Carlos Guri, Director-General of SIMYO**, adds: "Education should not be split up into seventeen different education systems, one for each Autonomous Region. Spain's regions should be limited to adding value to a national model of education."

Meanwhile, "aligning the range of professional profiles offered by education centers to the needs of businesses is not something that can be achieved by means of a decree-law. This adjustment must come from bringing businesses and training centers together," says **Andrés Arizkorreta, CEO of CAF**.

Meanwhile, **Óscar Astier, CEO of Tak Learning**, insists that training within companies is the way to go, representing "an important value for progress."

TOWARD DUAL VOCATIONAL TRAINING

First, there is the question of vocational training, and in this respect many businesspeople refer to the German dual system, which involves theory and practice both in the classroom and in the workplace. "Bertelsmann's project *Tú eres tu futuro* ('You are your future'), which is for young people who have not finished their compulsory secondary education and do not have a job, has made me realize that young people—including those that neither study nor work—generally always have a hobby or something they like doing, be it cooking, hairdressing, car mechanics, or motorbike mechanics," **Carro** observes. "They don't like studying or memorizing things, but they don't have the opportunities to learn a profession because there are no professions. In Spain we have this curve with a great deal of university students on it and then a lot of people who have very few qualifications. And between those extremes there is nothing. We need a cultural middle class, and with this in mind we need to try to ensure that once people have a minimum level of qualifications (the bare minimum possible) they can have a go at learning a profession. To make this happen, we need to define a large number of professions and place the maximum emphasis possible on practical learning as opposed to theory. This would generate a radical change in the vocational training system, covering a great many more professions with a totally dual system."

Rosa María García, President of Siemens España, another German company, explains: "The dual model allows us to adapt educational contents and human capital to the needs of businesses, achieving very low unemployment rates because there are trained people who are perfectly prepared to perform a given

task in a company whose culture they may even already be familiar with." She goes on: "At Siemens, forty thousand people apply for our dual vocational training, but we can only take two thousand. That's a figure similar to the application rate for Harvard University. In this sense, it is very important to understand the advantages of good, dual vocational training, which fosters an increase in the number of candidates that get accepted because it aligns training with businesses' needs."

Carro adds that implementing dual vocational training requires "a complete change in our companies. Young people and companies don't even know about many of the things that the current government is doing. A large percentage of small companies employing less than ten people do not know what they could be doing to provide vocational training opportunities. The fact is that it would hardly cost them anything at all because such training is subsidized by the new Pacto por el Empleo (Employment Pact) program, but nobody takes advantage of the initiative because they don't know it exists."

SUFFICIENT NUMBERS OF TECHNICIANS

Do we have enough professionals? **Amuda Goueli, CEO of Destinia**, and others in the business world lament the lack of app programmers or designers in this country, for example. "We have to bring in programmers from abroad. We have created a hub, a center, right next to the beach in our office in Valencia, and another for programmers in the Canary Islands. And why are they close to the beach? To attract the attention of Norwegian or Danish programmers so that they will be tempted to come and work with us near the beach and the sunshine." He continues, "We have to change the mindset of young people entering the labor market. We

have to train them. Some years ago, I said that Spain's children should learn programming. They told me I was mad. How could a child learn to write code? But look at how things have changed. There's a U.S. company that is currently creating a programming language for children. Because there's a need for it. Back in the day, simply switching Windows on was programming. Now it's normal. The fears that people have now when it comes to learning programming are the same kind of fears we saw twenty years ago with Windows."

"We currently have a sufficient number of quality engineers, but it won't be enough in the long term," points out **Emma Fernández, former Director-General of Indra**. "There is insufficient stimulus for scientific and technical careers or a knowledge of mathematics in primary, secondary,

and advanced education, and so the number of people who want to study scientific and technical degrees in this country is still lower than those interested in business administration or other types of degrees that are currently more fashionable. But when we look at the employability of recent graduates with degrees in subjects like mathematics, only 5 percent of them are unemployed, and only 12 percent are engineering graduates. So their level of employability is much higher than in other spheres of training. But we do not manage to attract enough people."

María Lasa Irizar, Director-General of Irizar Forge, thinks that "it is necessary to establish a long-term framework that will allow industry to be a central driving force for growth. Within this framework, we must revitalize training and careers with links to industry. It's very difficult to

find metalworkers these days, for example. There just aren't any. Why is that? It is clear that we must create a model of education that is better suited to our needs. And we have to ensure that students get more international experience and sooner. It is essential to ensuring they can feel confident when they go to work abroad, so they can be free from fears and complexes."

BUSINESS-UNIVERSITY LINKS

Spain needs to encourage links between businesses and universities or research centers, although some progress has been made in this area. Many of the businesspeople interviewed feel that Spain's model of university administration is outdated and lacks true independence when it comes to hiring university teaching staff or adapting to the needs of the market.

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THE BUSINESS PERSPECTIVE

"Businesses evolve much faster than they did before, and it is essential that they have at their disposal young, responsible people who have experienced this dynamic of change during a learning process that combines elements of both the labor and educational sphere," says **Graham Johnson, CEO of Connectis**.

"There are hardly any joint research programs involving businesses and universities," highlights **Javier Ruíz de Azcárate, President of Catenon**. "Spanish universities should oblige researchers to seek sponsoring enterprises in order to carry out research projects that can be applied in some way." According to **Fernando Valdivieso, President of Neuron Bio**, "in contrast to the situation of some years back, it is no longer considered a bad thing for a researcher to work for a company or for an industry. But in Spain we still haven't taken on board that research and innovation are useful to the economy and to society as a whole." **Rosa María García** believes that it is necessary to "ensure that post-degree plans and doctoral theses have some clear returns for society, such as producing patents." Meanwhile, **Ricardo Martínez Rico, Executive Director of Equipo Económico**, complains that "in our company we always have eight interns at any time that come from the best Spanish universities and we still sometimes have trouble getting the universities to sign the necessary agreements."

"Producing excellence has nothing to do with the kind of center that trains the person, or with lobbies, or ideologies," states **José María Guibert, Vice-Chancellor of the University of Deusto**. "The debate should be about efficiency, social purpose, value-added, and a contribution to social, national, and global development."

Alejandro Bengoa, Director-General of IK4 Tekniker, points out that "if the

only indicator used to assess universities is that of the number of publications they produce, then they will only produce publications. If we looked at indicators such as the generation of spin-offs, patents, or royalties generated by universities selling their results on the market, researchers would get their skates on and do it."

"We are watching our competitors hire vast numbers of people trained in Spain. It is sad to see how we are losing our talent, which we have trained with so much care," laments **Ignacio Mataix, Director-General of ITP**. "We can compete with any other country in the world when it comes to technical qualifications," says **Luis Miguel Gilpérez, President of Telefónica España**. "Perhaps we need to bring this training closer to businesses by means of joint programs with universities so that our graduates are more quickly incorporated into the business world. We are working intensely on this front. We are in contact with chairs at different universities and we are developing courses and imparting them to candidates and employees on a continual basis."

Ferrán Sancho, Vice-Chancellor of the Autonomous University of Barcelona, proposes promoting the concept of the industrial doctorate, a concept imported from the United Kingdom. "Although today this is still something of a regional one-off so far, it could provide a way of encouraging transfer and consolidating a system that makes it possible to turn research into innovation. This kind of doctorate immerses researchers in businesses to develop innovations." Meanwhile, **Antonio Calvo, Vice-Chancellor of the CEU San Pablo University**, has a rather different vision of general training and specialization: "We have prostituted out the purposes of the degree, which was designed to provide students with a set of general knowledge and skills that would make them more versatile. University should serve that pur-

pose, and then provide the master's degree that teaches the specialization. However, the current range of degrees on offer provide a very high level of specialization that holds students prisoner, disregarding the general skills and knowledge that would allow them to adapt to the dynamics of the economy and today's society." He continues, "Achieving a balance is always complicated, but we have lurched from one extreme of having teaching staff very much interested in teaching to many professors who have become cut off from the task of training students because they are too concerned with research and publications."

And then there's the problem of the mobility of university teaching staff. "In the past, university professors could move around Spain and teach at different universities, taking part in competitive selection processes and having a career based on prestige," recalls **José Luis Manzanares, President of Ayesa**. "The change from competitive examinations to the barometer of publications—which are often devoid of interest—has turned the Spanish university system into a parochial, incestuous institution. The vocation of excellence has disappeared from universities: merit doesn't count any more, and there is no mobility. Professors are not motivated to progress and improve because they are civil servants."

Jorge Sendagorta, President of SEN-ER, provides some good examples that he has witnessed firsthand at Rolls Royce's vocational training center in Derby in the United Kingdom and another such center in Querétaro, Mexico, home to the Mexican National Aeronautics University of Querétaro (Universidad Nacional Aeronáutica de Querétaro, UNAQ)—a similar scheme to that of Rolls Royce, but on a more modest scale. At the end of the day, he explains, "It is a much more flexible system in which young people who are

embarking on their postsecondary-school education can begin working in workshops while simultaneously taking part in theoretical training offering a wide range of possibilities for broad subsequent development. They might begin their training in a workshop as a mechanical operator before progressing onto some kind of production process and ending up with a PhD or management degree in their sector. What's more, this isn't a range of skills that one has to choose right at the start; rather, the opportunities to change direction essentially never end."

A CHANGE OF SYSTEM

"The education system has changed very little since the trivium and quadrivium of academic studies: at heart, it's about scholars going up podium to transmit knowledge to students who learn it." But **Francisco Ruíz Antón, Director of Public**

Policy and Institutional Relations for Google in Spain and Portugal, adds that these days technology provides much wider range of options. One of those he mentions is the design of curricula that can be adapted much more rapidly. "Salman Khan, of the Khan Academy, says really revolutionary things such as that students should be learning at home and doing their homework at school."

Which example should we follow? According to **Javier Ruíz de Azcárate**, "we should be looking to the education model in Singapore as a reference. We should send the most capable people in our country to study at the best universities in the world and implement a model for the transfer of knowledge from other countries to Spain."

LANGUAGE DEFICIT

The foreign language deficit is a

millstone around Spain's neck. "The level of languages among recent graduates in Spain is extremely poor," Carlos Guri laments, "and this is unacceptable in the global context we live in." **Juan Chinchilla, Director-General of Lenovo**, emphasises that "there are some very talented and well-trained people in our country. It is very sad that we have to pass them over because they don't speak any languages."

"Dubbing films and failing to give priority to this issue at the start of children's education is a serious error," adds **Óscar Leiva, President and CEO of Ebioss Energy**. "It isn't right that learning English depends on the financial possibilities of students' parents," says **Ricardo Martínez Rico, Executive President of Equipo Económico**. "English has to be an essential part of pupils' education from an early age."

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