

A brief look at the Argentinean tertiary education

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Abstract

In New Zealand, most employers and learning institutions have a working knowledge of several English-based educational systems in place around the world. However, very little is known of other cultures' education. The understanding of how different cultures educate their people can help us to understand our own system better and apply new techniques and structures.

The paper focuses on some of the most important characteristics of the Argentinean tertiary education system. This model reflects differences not only in the spoken language, but also in structure and socio economic conditions.

The intention of the author is to provide a personal view of the system in which he was educated and the differences and similarities experienced upon entering the New Zealand system. It is expected that this personal reflection will pave the way for future research and analysis around curriculum and delivery, in addition to industry perception of graduates, in order to identify transferable aspects of good practice from both systems.

Keywords: Argentina, tertiary education system, Polimodal, EGB.

1 Introduction

There were a number of reasons why I chose Information Technology as a career when I finished high school in my home country (Argentina). I was a computers and video games aficionado as many teenagers are nowadays. My family encouraged me to study engineering (IT is an engineering career in most Argentinean universities) over other "social" careers that I also had in mind. Most of all, the idea of an international career was exciting. As I had studied English since I was ten, I thought I could work anywhere in the world if I wanted. The possibilities were endless.

I had to study fulltime for six years to be granted my degree. I also worked in the industry for six years, four of them concurrently with my studies, before coming to New Zealand in 2004. In spite of my experience,

qualifications and "shortage of IT professionals", it took me a year and a half to get my first IT related job as teacher. I was disappointed.

Many immigrants who are not native English speakers are in similar situations. There are a range of possible explanations for this: from the work permit catch-22 situation (you are not offered a job if you haven't got a work permit, work permits are not granted without a job offer); no work experience in New Zealand; level of English; knowledge of technologies that are not in use in the local environment; pure bad luck...the list goes on. In my view, the most important issue is the differences between the New Zealand education and business environments and those of non-English speaking countries.

For example, the official translation from Spanish to English of my degree is "Systems Engineer". In Spanish the term "Engineer" denotes the study of sciences like Physics, Statistics, Mathematics, Electronics, Mechanics, etc. "Systems" originates from "Information Systems", and involves the knowledge of hardware, network and software concepts. This complex definition is very different from the more specific "Systems Engineer" job advertisements often published in New Zealand.

Another example is the nature of the industry. While broad skills are often pursued and specific skills are learnt on the job in Latin America, in general, New Zealand companies look for specialists with considerable experience in one particular technology. It is an issue that also affects most of New Zealand's graduates. How can you gain experience if you are not hired in the first place? Of course, there are exceptions.

The purpose of this article is to describe the model in which I was educated. It is a system that is different in many ways, but by no means better or worse than the New Zealand model. Like other aspects of life, it is interesting to learn from people or organisations that do things in different ways from us. We can then adapt good practices from other cultures and avoid mistakes that others have made.

2 Characteristics of Argentina

Systems are not isolated from their environment. Therefore to understand any educational system it is necessary to understand the environment surrounding it. I will briefly introduce some of the key geographical, political, economical and social factors that describe Argentina.

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LEVEL	Course	Age	Mandatory
INICIAL (Initial)		3	No
		4	No
		5	Yes
E.G.B. 1 - Educación General Básica 1 (General Basic Education)	1 st year	6	Yes
	2 nd year	7	Yes
	3 rd year	8	Yes
E.G.B. 2 - Educación General Básica 2 (General Basic Education)	4 th year	9	Yes
	5 th year	10	Yes
	6 th year	11	Yes
E.G.B. 3 -Educación General Básica 3 (General Basic Education)	7 th year	12	Yes
	8 th year	13	Yes
	9 th year	14	Yes
POLIMODAL -5 orientaciones diferentes. (*) (5 different streams or trades/qualifications)	1 st year	15	No
	2 nd year	16	No
	3 rd year	17	No
EDUCACIÓN SUPERIOR: TERCIARIA Y UNIVERSITARIA Superior Education: Tertiary and University		18 and over	No

Table 1: Structure of Argentinean education

(*) *Trades like electronic technician, mechanic technician, etc., require an extra year of study.*

Note: EGB3 and Polimodal replaced the old Argentinean Secondary School in the 90's

(Source: Estructura del Sistema Educativo Argentino, n.d.)

Argentina is a complex country, rich in resources but still a third world country. It is the eighth largest country in the world, approximately ten times the size of New Zealand in population and surface area. Natural resources are abundant (not for long if the establishment continues on the current track): all sorts of minerals, plenty of fresh water, forestry, fishing, cattle, etc. Oil, natural gas and petrochemical products are the second largest export, soy being the first.

Almost 97% of the population is of European descent, mostly Spanish and Italian. After many years of Spanish domination and later a cruel campaign to exterminate the native population, only 0.5% of the population is Amerindian. As a result, 92% of the population is Catholic, 2% Protestant, 2% Jewish and 4% practise other religions. (The World Factbook, 2008)

The country is divided into 23 provinces and one autonomous city (Buenos Aires, the capital city). Provinces are autonomous with their own congresses, governors and constitutions. However regional laws are subordinated to the national constitution and the national congress which is comprised of two chambers. The head of state is the president. Finally, as in most democratic systems, there are also judges who are distributed in national and provincial courts. This intricate government structure, typical of big countries, affects other public institutions like education.

3 The Argentinean educational system

It wouldn't make much sense to speak of the educational system of a country if it were a complete failure or nonexistent, and this is not the case with Argentinean education. With all its faults and flaws, it is still the vanguard of Spanish speaking countries. It has been so successful that, according to UN statistics, adult (15+) literacy rate in the period 2000-2004 was 97% for both men and women. In the same period the literacy rates of some of the other Latin American countries were: Brazil 86.2% for men and 86.5% for women; Chile 95.8% for men and 95.6% for women; Mexico 92.4% for men and 88.7% for women; Peru 91.3% for men and 80.3% for women. Note the difference between men and women in some of these countries. (UN Statistics Division, 2005)

It is important to remember that 2001 was the year the Argentine economy collapsed after almost 10 years of recession with an unemployment index varying from 15% to 25% or even more (depending on the author of the survey). This period was the worst recession in Argentine history. Often in the third world during hard economic periods children and teenagers leave school to work and help their families. However, somehow, this hasn't happened to the extent that would have been expected.

There are many differences between the Argentinean education system and the New Zealand system. Some of these are related to its conception. Others are the result of socio-cultural and economic factors that have affected Argentina in the last half century. Table 1 is an overview of the structure of Argentinean education.

4 Argentinean tertiary level composition

The Argentine tertiary level is composed of 492 tertiary level institutes and 102 universities. Most institutes depend on regional authorities, some are provincial institutions and others depend on local councils. Universities are mostly funded by the national government. According to the Ministry of Education, university-like institutions are distributed in the following way:

- 38 national universities
- 41 private universities
- 6 state university institutes
- 14 private university institutes
- 1 provincial university
- 1 foreign university
- 1 international university

(Secretaría de Políticas Universitarias, n.d.)

National, state and provincial institutions are absolutely free for students. There are no student loans or any other scheme to fund the institutions. However often voluntary contributions are required from students. Private companies also contribute money to faculties supporting careers in which they have a personal interest.

National universities are free even for international students provided they have all documentation/visas up-to-date. Traditionally Latin-American students were the main source of international enrolments, but there has been a noticeable increase in the numbers of students from other regions like the European Union, EEUU, Japan, China and South Korea. The increase of international enrolments in state universities has grown in 2006 by 32.7 %; 2005 had already recorded an increase of 33.5 % from 2004. (La Nación, 2006)

The following success stories, largely unknown by the public outside Argentina, evidence the quality of tertiary education in Argentina:

- Carlos Saavedra Lamas received the Nobel Peace Prize in 1936 for his work in the pacification of South America. His work in international mediation ended the Great Chaco War between Bolivia and Paraguay in 1935. He also presented the 1934 South American Antiwar Pact to the League of Nations where it was well received and signed by eleven countries. Acclaimed for all of these efforts, he was elected president of the Assembly of the League of Nations in 1936. He received a Doctor of Laws degree from Buenos Aires University in 1903. After his role as foreign minister of Argentina and president of the League of Nations he worked as a professor at the Universidad de la Plata. Lamas finished his career in Universidad de Buenos Aires, first as professor and then as president of the university. (Nobel Lectures, 1972)
- Bernardo Alberto Houssay received the Nobel Prize in Physiology of Medicine in 1947 for the discovery of

the role of the pituitary hormones in regulating glucose in animals. He was a graduate of Universidad de Buenos Aires (University of Buenos Aires). (Nobel Lectures, 1964)

- René Favaloro developed the techniques and performed the world's first ever coronary bypass surgery at the Cleveland Clinic in the late 1960's. He was a graduate from Facultad de Medicina de la Universidad Nacional de La Plata (Medical Science faculty of La Plata University). (Captur, 2004)
- Luis Leloir was awarded the Nobel Prize in Chemistry in 1970 "for his discovery of sugar nucleotides and their role in the biosynthesis of carbohydrates". Although Leloir was born in France, he was educated in Argentina. He was a graduate of Universidad de Buenos Aires. (Les Prix Nobel, 1971)
- Adolfo Pérez Esquivel received the Nobel Peace Prize in 1980. He received the award for his organization "Servicio Paz y Justicia"'s work, in fighting violations to human rights in Latin America during the 70's. He is an architect and graduated from Universidad de Buenos Aires. (Les Prix Nobel, 1981)
- Cesar Milstein shared with Niels K. Jerne (Denmark) and Georges J.F. Köhler (FR Germany) the 1984 Nobel Prize in Physiology or Medicine "for theories concerning the specificity in development and control of the immune system and the discovery of the principle for production of monoclonal antibodies". He was another graduate from Universidad de Buenos Aires. (Les Prix Nobel, 1985)

Unfortunately several political and economic crises, including a war, have drained much of the intellectual talent out of the county in the 1960's, 70's, and 80's and recently at the beginning of the new century.

5 Tertiary level entry requirements

While tertiary institutions in New Zealand have a myriad of options to gain entry to tertiary level study and qualifications, including open entry, Argentinean tertiary institutions are stricter, mainly because the secondary school is not a modular scheme based on credits and levels. There is no such thing as a school leaver. The Argentinean school (EGB3 and Polimodal) is based in years of completion. A year is considered complete if all papers from that year are passed. There are no optional papers. It is an entry requirement of all tertiary institutions to finish secondary school.

Because there are no credits, certificates or similar options for students who haven't completed the Polimodal level, there are special courses for adults wanting to get access to tertiary level or just wanting better employment opportunities. These courses usually take place at night in the same building as the standard secondary course.

As is happening in New Zealand, the gap between tertiary level expectations and secondary school results has increased. Therefore many tertiary institutions have a

short introductory course with a final exam. The student is allowed to enrol in a programme, but in order to sit exams in the first year has firstly to pass the introductory exam. Other institutions have taken a more drastic approach including a whole year of a 'levelling' course. This is the case at Buenos Aires University, where an Engineering degree is granted after six years of full time study, while in the vast majority of the country's other universities, it requires only five. (UBA, n.d.)

6 Tertiary studies are not based on credits or levels, affecting the duration of programmes.

Tertiary institutions follow a similar structure to secondary schools in the sense of having to pass a rigid set of papers in order to proceed to the following year. To obtain a degree it is necessary to pass a fixed set of mandatory core papers which normally make over 90% of the total. There are only a minimum number of optional papers.

Careers like System Engineering consist of a set of mandatory science, business, hardware, networking and software development papers without streaming options. There are only a couple of optional papers to choose from where the students can focus on a field of their preference.

The strict nature of the system also affects the duration of graduate degrees. Degrees of less than four years of duration are not well perceived in the labour market. For instance, the average duration of engineering degrees (Mechanic Engineer, Electronic Engineer, Civil Engineer, Systems Engineer, etc.) is five years. Buenos Aires University engineering degrees require six years of fulltime study.

Although there are exit qualifications as in many New Zealand institutions, these usually require at least two years of fulltime study. At Universidad Abierta Interamericana, the private university where I studied, to obtain a Systems Engineering degree it is necessary to complete five years of full time study, although it is possible to be awarded an exit qualification called System Analyst after the first three years. (UAI, n.d.)

In the technology market Argentinean employers are used to only two levels of qualifications: analyst/bachelor and engineer. No levels are mentioned. Another particularity of technology employers is their willingness to hire personnel with general engineering/analysis skills, often without emphasising a particular technology as New Zealand employers do.

7 Exam-based against assignment-based systems

Informality in all aspects of life is a characteristic of the Latin culture. This acceptance of informality can easily cross the line into cheekiness, or even more, can convert to corruption, plagiarism... Therefore all aspects of life have become quite documented and subject to checks and counter-checks. Education is no exception.

In New Zealand many qualifications are assignment based and even competence based instead of achievement

based. Many papers consist purely of assignments to be solved without supervision. This approach would not work in a Latin culture. Even good and honest students would eventually get "help" or even copy another person's assignment. This factor and the size of the population of Argentina, make it very hard, almost impossible, for an instructor to detect plagiarism or unauthorized assistance.

Actually, broadly speaking, any institutions that use an assignment/competence based approach for their programmes do not have a good reputation. They are considered "easy" and their degrees lack value for prospective employers.

As a consequence, in Argentina, assignments are complementary to the final exam or a condition to be allowed to sit the final examination. For instance, in my engineering years, I had at least two partial exams and a final exam for each paper. Many papers added assignments that had to be completed before the final exam in order to be allowed to sit it.

Argentineans are used to being assessed with grades from 1 to 10, 10 being the maximum grade; 4 to 5 is usually the minimum grade to pass final exams at university. Using numbers is an easy way of ranking students for different purposes: scholarships, research funding, employment, etc. Students of the most important universities with average grades of 9 and above are very likely to be offered employment by big corporations as soon as they finish their studies or even before then.

In regards to how assignments and exams are audited, there is an inbuilt contradiction. Most of institutions don't trust the students but they do trust their instructors. There are no moderation systems in place. Course outlines are documented, but the final content is subject to the instructors' decision and selection. Therefore, the quality of the content and delivery varies significantly.

8 Often academic staff are not educational professionals, but professionals currently working in their field

Another difference when comparing Argentina with New Zealand and many other developed countries is how educational professionals are perceived and rewarded. In Argentina instructors at any level are very poorly paid. This means that tertiary education is provided mainly by professionals in a particular field who have full time employment in their own industries and teach a group of subjects part-time. There are advantages and disadvantages to this.

Some of the cons are:

- In general, professors (as they are called in Argentina) are not formally trained to teach, although recruitment and progression processes favour those who have formal qualifications.
- Professors, whose only income comes from teaching, might have busy schedules in order to receive a reasonable salary. It is common for them to teach in

several institutions at the same time, carrying an outrageous workload.

- The load of work, either because the teacher is a full time professional in her/his field or because of teaching in several institutions, makes it almost impossible for students to have access to the teacher.
- Low salaries are not attractive enough to encourage professionals in a field of expertise to enter education and share their knowledge. Although in New Zealand this salary gap also exists, in Argentina it is higher.

On the other hand:

- Having instructors who are active in their field provides students and institutions with inside information about the labour market and technology/business/social trends.
- Professors are usually perceived as mentors, not as an authority figure or somebody with no practical knowledge. However, this is not always the case.

9 Student life

Tertiary institutions in Argentina, with polytechnics first, and universities following their lead, adapted their teaching hours to the reality of the country. The high percentage of students with full-time employment increases in the final years of any degree. Therefore small institutions have almost exclusively night classes, from 7 pm to 12:00 am. Meanwhile big institutions usually have morning, afternoon and evening courses.

Students can attend any of these classes according to their schedules. However they have to follow academic procedures that vary across institutions.

10 Bad infrastructure

A very important issue that worries the Argentine community (although apparently not the politicians) is the poor infrastructure of public institutions. The tertiary landscape is composed of old buildings with very little or no maintenance at all, overcrowded labs and classrooms and old equipment. Academic strikes due to salary and benefit negotiations are also common. In some cases these can continue for weeks and even months in the worst scenarios.

Basically, public institutions are geared to self study. Materials, equipment and resources in general have to be procured by the students themselves. This has positive and negative effects. On the one hand, students are more prepared for real life, where you are left alone to solve a problem. However, students of low social stratus are disadvantaged against those with greater economic resources. Although self reliance is a good skill to learn, there are cases in which it is physically and even legally impossible. Imagine a medical student collecting bodies from the morgue to practice plastic surgery at home (!)

Although the private tertiary sector is also affected, these issues are not as critical as they are in the public sector.

11 Conclusion

The intention of this article was to provide a very brief overview of the Argentinean tertiary education. It would not be possible to describe all the details of a system as big and complex as the country in only a couple of pages. As mentioned, there are approximately 600 tertiary level institutions in Argentina, all of them with their own peculiarities.

Many things can be learnt from taking a quick look at other systems, beyond the usual examples: UK, Australia and USA. Although language, culture and history shape the institutions of a country, the ultimate goal in education remains the same: the passing of knowledge from one generation to the other.

One of the things that I disagree with in the current New Zealand education system, compared to the one in which I was brought up in Argentina, is the “softening” of education. It is a worldwide phenomenon, but New Zealand seems to be seriously caught in it. The concept of competency based assessment, levels, credits and multiple, endless qualifications, and exit qualifications do not benefit the student (maybe only from the economic point of view) nor the industry.

In my field, Information Technology, employers tend to look for students who have graduated from the longest and more complex programmes. But this creates a problem, most of the students are trapped in this “video clip” culture where everything has to be fixed in three minutes. So our students want to get a “cardboard” qualification fast, with minimum effort, and to be entertained along the way. If institutions offered qualifications of five years of fulltime study with an exit qualification after three years, nobody would enrol.

I don't pretend to want to change a whole system. It probably wouldn't work. But there are little things that can be done to raise the bar if we really care about the quality of our graduates. One of them is changing whenever possible, our programmes from a competency based system to an achievement based one. Also using unsupervised assignments as a complement of supervised assessment and not otherwise.

After all, as an immigrant, in order to be accepted as a resident I had to pass a kind of achievement based system. I was given points according to the identified qualities required for an inhabitant of New Zealand: level of English: x points, qualifications: y points, job offer in shortage of skills category: y points, etc. Human resources departments and recruitment agencies use similar criteria. Then, why shouldn't I ask the same of my students?

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