

GLOBAL TRENDS IN HIGHER EDUCATION

- AN UNEXPECTED CONVERGENCE BETWEEN FRANCE AND INDIA –

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ABSTRACT

WE PROPOSE TO EXAMINE AN UNEXPECTED CONVERGENCE BETWEEN THE HIGHER EDUCATION SYSTEMS OF TWO HETEROGENEOUS COUNTRIES, NAMELY FRANCE AND INDIA. AFTER A BRIEF COMPARATIVE SURVEY, WE ADDRESS THE ISSUE OF THE COMMODIFICATION OF HIGHER EDUCATION IN ORDER TO DETERMINE WHETHER THE LATTER EVOLUTION HAS BEEN ACKNOWLEDGED, ENCOURAGED OR OPPOSED BY GOVERNMENTS. THE MODERN SETTING IN WHICH HIGHER EDUCATION INSTITUTIONS OPERATE IS PARTLY DETERMINED BY GATS RULES THAT GOVERN INTERNATIONAL TRADE IN HIGHER EDUCATION SERVICES, NOTABLY THROUGH THE ENHANCEMENT OF NEW MODES OF DELIVERY SUCH AS E-LEARNING AND DISTANCE EDUCATION. WE THEN EXTEND OUR REFLECTION TO BRIDGE THE GAP BETWEEN FRANCE AND INDIA. FINALLY, THE CONVERGENCE OF ACADEMIC, ECONOMIC AND INSTITUTIONAL FACTORS HELPS US PUT FORWARD THE NEW IDEA OF AN INDO-FRENCH KNOWLEDGE-BASED TRIANGLE.

KEYWORDS: INDO-FRENCH, HIGHER EDUCATION, COMMODIFICATION, CONVERGENCE

JEL CLASSIFICATION: I23, D83, P46

I INTRODUCTION

The “Age of Enlightenment” was an intellectual movement that originated in Western Europe in the 18th century under the impulse of philosophers such as Spinoza, Kant, Locke, Hobbes, Leibniz and Voltaire who advocated an autonomous position of knowledge in human societies with a leading role given to reason in shaping the various sources of authorities within human institutions. Two and a half centuries later, this philosophical breakthrough has dramatic socio-consequences across the world.

Sarvepalli Radhakrishnan (1911,1933, 1936), a foremost Indian scholar of comparative religion and philosophy attempted to show how the Western and the Eastern thought may become comprehensible in terms of each other. This influential Indian thinker predicted that India’s future will be built in her classrooms. The holistic move towards a comprehensive knowledge-based economy has led to the effective enhancement of higher education. In fact, the National Knowledge Commission, an influential Indian advisory body has reaffirmed the utmost relevance of the knowledge paradigm with its fundamental priority to transform India into a global leaderⁱ in the new global knowledge economy (Mashelkar, 2005).

Harold Laswell ([1936], 1990) once described politics as the art of deciding « who gets what, when and how ». In this sense, our article touches on political science as far as the uneven provisioning of education in France and India, and the heterogeneous access to key intangible knowledge-based assets in the international political economy are concerned. The epistemological claim made here is that the economic viewpoint allows us to shed light on a wide range of decisive phenomena (such as the commodification of education or the intensification of international competition in educational services). It is key to understanding the posited convergence between the two countries. Although it is not circumscribed to the

realms of the market, and can alternatively be expressed in terms of the provision of international public goods¹, the pure economic approach does not exhaust our object of study. Our reflection therefore calls for a multidisciplinary approach, whereby adaptive social structures, enshrined in a historical setting, enable the effective transmission of knowledge and values between generations (and across boundaries), in order to maintain a degree of socio-cultural cohesiveness.

The present paper is thus based on the idea that the two countries have recently endeavored to secure a comfortable position in the new global knowledge economy in spite of their idiosyncratic philosophical ramifications and institutional paths.

Section 2 is devoted to a multidimensional examination of the two higher education systems; Section 3 addresses the issue of the commodification of higher education; Section 4 posits a triple knowledge-based convergence between the two countries; Section 5 concludes by putting forward the Indo-French knowledge-based triangle.

¹ The definition of an international public good is not consensual. The term « global public good » has also appeared recently in the literature (Kaul et al., 1999). Whereas national-level education is defined as a national public good (the latter generic term also includes services), our paper deliberately extends the reach of educational services beyond national boundaries. As argued by Morissey et al (2002), the migration of workers, students and academics is not a sufficient condition to lead to the internationalisation of public goods, because individuals merely derive private benefits from the act of migration. However, the systemic and multidimensional convergence of two distinct education systems, as outlined in this paper, changes the very nature of public goods, by giving them an undeniable international scope: « an international public good is where the benefits are inherently international in range (Morissey et al, 2002) ».

II. THE FRENCH AND THE INDIAN HIGHER EDUCATION SYSTEMS

1) France

A quick review of the French higher education system reveals a few idiosyncratic features, the most noticeable being the *Grandes Ecoles* that were founded as an alternative to the broader education provided by universities.

a) French Public universities:

Universities constitute the backbone of tertiary education institutions, and are almost entirely publicly funded; teaching posts are directly distributed by the state, with many university teachers being classified as civil servants (Musselin 2001). Funding for teaching was until recently exclusively formula-based (Decker 1998, pp. 220–2). One major issue plaguing French Public universities concerns their effectiveness in the first years of tuition. As a matter of fact, under the institutionalized affirmation of (quasi) free access to higher education for all secondary education graduates, the French system is still characterized by a disguised selection process leading to inefficient socioeconomic and institutional outcomes, notably at the undergraduate level (the “Licence”).

b) Grandes Ecoles

These prestigious institutions were set up during the Napoleonic era to educate the engineers and statesmen to form France’s “administrative, political, technical, academic and, ultimately, social elite” (Deer 2005, p.37). **There exists no formal or legal definition of *Grandes Ecoles* (Lebegue & Walter, 2008, p.215).** In spite of their name, most *Grandes Ecoles* are actually quite small, enrolling fewer than 1,000 students. According to the Ministry

of Higher Education, there are 431 Grandes Ecoles in France (ibid). Whereas the French higher education system must now cater for a mass system, with nearly 2 million students, against 300 000 in the 1960s, the Grandes Ecoles are implicitly designed to train the elite. These schools have embraced the globalization of higher education, and recently opened their courses to international students, who are encouraged to apply for these first-rate programmes. Admission to a Grande Ecole is very selective and the procedure is designed by the higher education itself, be it scientific literary or business orientated. There are two main procedures based on either previous academic qualification or on a competitive examination called “concours”. In the latter case, the students must prepare the concours by spending two or three years in special training courses, the so-called “classes préparatoires” offered by many institutions throughout the country. These classes are divided into three main areas of study: literature, science, economics and business. To enter a “classe préparatoire”, students must hold the Baccalaureat, preferably with distinction, with top marks in the subjects to be studied and excellent references. In 2003, the yearly cost of a student in “classes préparatoires” was 13170 euros (against 6820 euros on average at the university)².

Revisiting the idiosyncratic dualism between the two systems

a) The social functions performed by Grandes Ecoles

It is worthwhile emphasizing the unique dualism between Grandes Ecoles and universities³. Unique, it certainly is. Although many countries have adopted a two tiered system with a small number of elite institutions outpacing most others (Cambridge and

² See Ministère de l'Education Nationale (2003) : <ftp://trf.education.gouv.fr/pub/edutel/dpd/ni/ni2005/ni0505.pdf>
The latest figures available date from 2007, with 13880 euros a year for a student in “classes préparatoires” and 8970 Euros a year for an average university (non IUT) student. See Ministère de l'Education Nationale (2007) : <http://www.education.gouv.fr/cid28337/le-cout-de-l-education-en-2007.html>

³ Besides Grandes Ecoles and Universities, there are University Technology Institutes (IUT in French) and Higher Technician courses (BTS in French) in Lycées (secondary education institutions) or in Universities.

Oxford in the UK, the Ivy League in the USA, IIT in India etc...), the common denominator of these countries is that the elite is always confined to top universities, whilst only France has developed a parallel system that lies *outside* universities. The first *raison d'être* of Grandes Ecoles seems to be sociological. Daniel Cohen (2003) argues that a well-entrenched and socially codified collective consciousness has allowed French upper classes to design an effective strategy of university avoidance for their childrenⁱⁱ. The means to achieve this sociological differentiation is a drastic selection process during the years of “classes préparatoires” in which mathematics play a decisive role⁴. The defining feature of this institutional mindset is that, whether or not it is justified on academic and economic grounds, it tends to be self-fulfilling, and encourages social reproduction. This social endogamy is raising awareness amongst political leaders. Hence, a report on the social composition of “classes préparatoires” commissioned by the French Senate (2007) went as far as using the term “insider dealing” in its title⁵. The second *raison d'être* of Grandes Ecoles is the meticulous social mapping and long-term career planning for their high-caliber graduates⁶, whether it be in the public sector (within the confines *haute administration*) or the private sector (within so-called CAC 40⁷ corporations). Furthermore, the professional frontiers between the two worlds have long been porous, as shown by the phenomenon known as “pantouflage”⁸.

⁴ Veltz (2007, pp 27-32) describes the emphasis on mathematics in the selection process of Grandes Ecoles. The central role of mathematics is deemed socially discriminating and conducive to “hyper-selection” (ibid., p.32).

⁵ *Diversité sociale dans les classes préparatoires aux grandes écoles: mettre fin à une forme de “délit d’initiés”*, rapport des sénateurs Jacques Legendre et Yannick Bodin, 12 Septembre 2007.

⁶ A stunning evolution must nonetheless be noted. A recent paper titled « Polytechniciens, énarques ... et malgré tout chômeurs » (Le Monde 5 January 2012) shows that the global crisis has altered the perspectives of these high-caliber Graduates. The article stresses that the latter are no longer immune from periods of unemployment that may extend up to eighteen months, if they are not closely monitored by outplacement service providers.

⁷ The CAC40 is the French stock market index including the forty companies with the biggest capitalization.

⁸ These practices marked by the shift of many top civil servants from the high administration to more lucrative careers in the corporate world were tentatively regulated in 1995 (Décret n° 95-168 du 17 février 1995). However, it was eased up by a new Law voted in 2007 (décret n° 2007-611 du 26 avril 2007).

b) Why this dualism is detrimental to France in the new knowledge economy

To date, it is uneasy to understand how the French higher education system has concretely embraced the Lisbon strategy that sets forth the objective to turn Europe into the most dynamic and competitive economy in the world with the new knowledge economy (Veltz, 2007, p.79). Indeed, Veltz (ibid., p.83) explains that universities are, in essence, the better equipped institutions to face up this challenge thanks to their decentralized management modes, their flexible monitoring of research, their ability to explore new areas of knowledge and their interdisciplinary scope. Aghion and Cohen (2004) argue that the link between higher education investment and growth becomes more relevant, when a country's economy ceases to be based on mere imitation, and starts to rely instead on innovation as the principal engine for growth. Veltz (ibid, p-41) questions the social reproduction of elites ensured by Grandes Ecoles, at a time when economic performance is no longer dependent on the traditional management of well-established industries, but on the emergence of new sectors and innovating companies worldwide. Moreover, it is certainly not a good sign for the attractiveness of French research that the "Dr" title is poorly regarded by French corporations (ibid, p.40).

2) India

The Indian higher Education system, the third largest in the world, has evolved in distinct and divergent streams. Various apex bodies are indirectly controlled by the Ministry of Human Resource Development. The main governing body⁹, the University Grants Commission (UGC), enforces standard and coordinates actions between the government and the State level. The UGC lists well-endowed 44 Central Universities¹⁰, 281 State Universities¹¹ and 130 Deemed to be Universities (as on 23 June 2008)¹².

a) A fast growing higher education sector

In the ancient times, Indian Universities like Nalanda, Taxila, and Vikramsila were renowned seats of learning that attracted students from China, Tibet, Burma, Ceylon, and Nepal (Khemani et al, 2006). During the pre-independence era, the role and goals of education were governed by the preferences and needs of the British Empire. This led to the creation of systems of clerical staff that required no specialized kind of learning and skills. The British established the first three Universities in Bombay, Calcutta, and Madras in 1857, followed by a gap of three decades to set up the Allahabad University in 1887 and about three decades later for the fifth and sixth Universities in Mysore and Benares in 1916. All these were set up on the pattern of the London Universities model and its affiliating system for syllabi, examination, and regulation. In this model, affiliated colleges function under the

⁹ Other bodies include the All India Council for Technical Education (AICTE), the Medical Council of India (MCI), the Indian Council for Agriculture Research and the National Council for Teacher Education (NCTE). The country has some ace engineering, management and medical education institutions, which are directly funded by the Ministry of Human Resource Development of the Union Government. Most institutions reserve a small percentage of seats for foreign students. Together they offer a wide range of degree and diploma programs across the length and breadth of the country.

¹⁰ <http://www.ugc.ac.in/inside/centraluni.html> Retrieved 13 January 2012

¹¹ http://www.ugc.ac.in/inside/State_UniversityOctober2011.pdf Retrieved 13 January 2012

¹² <http://www.ugc.ac.in/inside/deemeduniv.html> Retrieved 13 January 2012

governance of a parent university acting on all academic matters. Following Independence, the aspirations of a young newly acquired free democracy focused on creating mass literacy programs that would ensure distributive justice, balanced regional growth, and positive discrimination in favor of disadvantaged sections. In 1947, the end of the British rule was marked by a process of nationalization of all universities and colleges. Although the London model was eventually abandoned in the UK, it still prevails in India to date, although the growing number of affiliated colleges has rendered the governance of universities increasingly complex, spurring growing dissatisfaction. In the present context of mass-education, affiliated colleges remain the principal providers of education throughout the country; more than a third of them are established in rural areas.

The dichotomy between affiliated colleges and central universities is arguably conducive to a two-tiered system reminiscent of Grandes Ecoles and public universities in France. However, the picture is even more complex in India where privatization is blurring the lines. One must take cognizance of the divide between aided and unaided private higher education institutions, the latter category accounting for more than half of all higher education (Kaul, 1999).

With a GDP of around \$1.8 trillion, India today is the tenth largest global economy¹³ – the third largest¹⁴, if measured on purchasing power parity (PPP) basis (IMF 2011). In 2007, it was projected that if India sustained annual GDP growth of higher than 7.5% for 5 years, the higher education demand would grow at about 9% per year. However graduate turnout or the supply was expected to grow at only 3.6% per annum (CRISIL 2007), aggravating the crisis

¹³ In spite of the global crisis, India's GDP growth rate in India in 2011-12 is estimated at a staggering 8.2% as compared to 8.5% registered in 2010-11 (Economic Outlook 2011/12, Government of India).

<http://pib.nic.in/archieve/others/2011/aug/d2011080101.pdf> Retrieved on 13 January 2012.

¹⁴ <http://www.imf.org/external/pubs/ft/weo/2011/02/weodata/index.aspx> Retrieved on 13 January 2012

in higher education capacity in India. As an example, Nasscom-Mckinsey (2005) projected demand for manpower from the IT/BPO¹⁵ sector to be 2.5 million by 2010.

The Indian business sector should be able to depend on the Indian education system, in particular the higher education sector, to provide the requisite human capital capable of performing knowledge economy related work. As a result, growth in supply of quality graduates has assumed great importance in India's policy thinking on higher education. The National Knowledge Commission (NKC) has recommended a substantial increase in the number of universities, from around 370 to 1,500 in the next 8 years, to keep pace with the demand for higher education (NKC 2006). Therefore, to ease the pressure on opening up of the education sector for private participation, the central government has begun to grant deemed university status to private institutions. The transition from a private college to private deemed university is now a new and growing trend. The number of deemed universities increased from 29 in 1990/91 to 38 in 1998 and to 110 in 2007 (CRISIL 2007) and 130 in 2011 (UGC 2011).

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Graph 1 Growth in higher education in India Source: CRISIL 2007

b) India's young population

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Graph 2 Age profile of the Indian population Source: CRISIL 2007

¹⁵ Many young Indians are now moving away from formal education to professional, technical, and vocational education focusing on skill development and not degrees, as envisioned by the 'New Education Policy' of 'Delinking of degrees from jobs' put forward in 1986. Another trend is the rampant spread of BPOs that employ the youth at high salaries that even graduates may not earn, leading to a high number of drop-outs in colleges and higher education institutions. However, the lure of these jobs is creating social and cultural imbalances, as these workers work at reverse timings (when America is awake and India asleep), creating psychological and biorhythm disorders, with addictions such as smoking, drinking and excessive consumerism that challenge the tenets of Indian society of 'simple living and high thinking' in accordance with Gandhian philosophy.

Out of the Indian population of around 1.1 billion people, 52% or over 500 million are under the age of 25 years. Around 80 million people will join the working age population over the next 5 years till 2012. But India will produce only around 16.5 million graduates during that period, bringing to the fore serious supply shortages (CRISIL 2007).

India's young population is certainly a decisive asset in a knowledge-economy era:

With 52% of India's population below the age of 25 years, the fruits of demographic dividend will only be available to India if this population can be empowered to contribute to growth through education (Vikram M. Sampat, Rohan Maru, Harshit Shah, 2008)

c) Reforming the Indian higher education system

The enhancement and the modernization of higher education have recently been redefined as a national priority, which has triggered a comprehensive wave of reforms:

Ever since the nation recognised the value of higher education for promoting economic growth and social development, the pressure for reforms has been escalating. This has been formally embodied in two eminent reports brought out in recent years, one by the National Knowledge Commission headed by Sam Pitroda and the other by the Committee on Renovation and Rejuvenation of Higher Education headed by Yash Pal. Unlike the tendency in the past to implement such reports in piece-meal fashion, efforts are on to provide legislative basis to usher in the reforms effectively (The Hindu, M. Anandakrishnan Tuesday, Jun 15, 2010, Grappling with core concerns of higher education).

According to the UGC Report - *Higher Education in India* - (2011), it took more than fifty years to have the first 10% of the population participate in higher education. However, the upward trend in enrolments is accelerating substantially. The gross enrolment rate (GER) was at 1% in 1950; it reached 10% at the end of the 10th Plan in 2007, and the UGC is now setting a target of 15% for the end of the 11th Plan (2007-2012).

The mass-scale of Indian higher education in the twenty-first century is increasingly posing a challenge to governing bodies. The 11th Plan (2007-2012) addresses the reforms that are needed in India, in the light of widening disparities concerning the estimated enrolment rates of various ethnic, religious and socio-economic groups. It also addresses the issues of the quality and the financing of higher education in the context of massive privatization, along with the unbridled growth of foreign educational providers (The Hindu, April 7 2011).

III. THE COMMODIFICATION OF EDUCATION

A) An old debate in the history of economic thought: the example of Adam Smith

More than two centuries ago, Adam Smith, one of the founding fathers of economics who pioneered the invisible hand theory, was convinced that private teachers responded better to individual needs of education. He therefore argued in favour of the superiority of the private sector with regard to the delivery of education services: “[t]hose parts of education, it is to be observed, for the teaching of which there are no public institutions, are generally the best taught (Smith 1976, p.764)”. Smith launches another scathing attack on the effects of governmental control of publicly-funded universities that are lethargic, in the sense that they are not responsive to changing information and systems of thought and have little incentive to stay abreast of the latest intellectual developments:

[w]ere there no public institutions for education, no system, no science would be taught for which there was not some demand, or which the circumstances of the times did not render it either necessary, or convenient, or at least fashionable, to learn. A private teacher could never find his account in teaching either an exploded and antiquated system of a science acknowledged to be useful, or a science universally believed to be a mere useless and pedantic heap of sophistry and nonsense. Such systems, such sciences, can subsist no-where, but in those incorporated societies for education whose prosperity and revenue are in a great measure independent of their reputation and altogether independent of their industry (ibid.).

Smith was aware that the provision of education could be a prerogative of the State for political and historical reasons. That was the case, for example, with state universities in France at his time. But Smith disapproved of this solution because of the “arbitrary and discretionary” power of state administration. (ibid, p. 762)

B) Acknowledgement versus resistance to commodification

An unresolved tension exists in higher education between the acknowledgment and the resistance to commodification by governments. Former French minister of education Claude Allegre openly recognized the economic nature of higher education that ought to be treated as a commodity:

We suddenly realize that this intellectual grey matter carries with it the same consequences as every primary material: commerce, money, power, temptation to monopoly, in brief what transforms every object – whether or not it is an intellectual object – into a commodity. It is in the same spirit that we search to improve the international profile of our intellectual profile: the creation of the EduFrance agency to bring more international students. (Allegre,1999).

These declarations are unambiguous as far as the acknowledgment of the commodification of higher education is concerned. In this respect, a fruitful link may be established between these trends and the recent creation of new government-sponsored agencies (e.g EduFrance) constituent to the liberalization agenda of governments (see IV) C)).

However, commodification comes in stark contrast with broader conceptions of higher education emphasizing a societal dimension. For Williams (1987, p. 10), the students are ‘a commodity to be valued mainly for the income they generate’. This rather extreme stance merely commodifies the consumers of higher education services, namely students, but it has often been strongly opposed:

[a]cross the world, the use of the word “trade” is often resented by members of the university academic community; indeed, many reject the term as representative of the undesirable trends in the “commodification” of higher education or the subordination of the values of higher education to commercial interests alone, ignoring the contribution of higher education to the intellectual, social and cultural development of a society (Bashir, 2007, p.8).

The World Bank states that education is "essential for civic order and citizenship and for sustained economic growth and the reduction of poverty" (1996, p. 1). Likewise, the Independent Commission on Population and the Quality of Life states, "education is one of the keys to social development, and virtually every aspect of the quality of life" (ibid. p. 170).

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Chart 1

Government-sponsored agencies (further discussed in IV, B, 3) have generally not been echoed favorably by the academic communities of the developed world whose reprobation go hand in hand with a coordinated resistance to liberalization:

In this case, different HEIs attempted to recruit as many international students from developed and emerging economy countries as was possible, consistent with other institutional imperatives. [...] EduFrance was less successful in [promoting competition], perhaps due to the coordination of resistance to liberalization amongst French higher education institutions (Dodds, 2009, p.400).

Resistance has often emanated from higher education institutions (HEI) themselves:

Indeed, HEIs tried to prevent the agency from promoting liberalization by arguing for a change in its management, away from EduFrance's first Director General, who was strongly pro-liberalization (ibid).

C) A comparative view on commodification

Attali et al (1998, p.7-8) have described a yet hypothetical world wherein the commodification of higher education is pushed to its fullest extent. Higher education therein would be entirely shaped by market forces and its collective dimension would be abolished. Such a configuration would be conducive to the emergence of a two-tiered system, whereby the supply of education is determined, on the one hand, by the expression of a solvent private demand for the highest quality services and, on the other hand, to a massified system of heterogeneous quality designed to meet the needs of the majority, who cannot afford the most prestigious universities. In the long run, the frontier between social and market forces would be blurred, leading to widening socio-economic inequalities in terms of access to knowledge. Attali et al (ibid., p.8) fear that the idiosyncratic divide (unique in Europe) between French universities and Grandes Ecoles could be the latent institutional expression of such a dualism.

In order to cast light on the present Indian context, we draw a parallel with the transformations experienced by the French higher education system in the 1970s and the policy response devised at the time. Levy-Garboua (1976) put forward an interesting theory (called « théorie de l'éligibilité »), in order to account for these transformations. Under the

impact of adverse exogenous factors such as rising unemployment and reduced state-allocated budgets for universities, students in the 1970s, facing less optimistic professional prospects and weaker guarantees of future income levels, had to readjust their inter-temporal utility functions, and devise new strategies involving complex trade-offs between non-mandatory studying time, additional part-time work and leisure time. The consequence was a blatant crisis of universities, whose original mission, the intergenerational transmission of knowledge, began to suffer from deteriorating macroeconomic conditions coupled with far-reaching labour market evolutions. A twofold phenomenon emerged in the aftermath of this turning point: the setting of a more favourable institutional context aimed at increased selection, set in motion by political forces, along with a redefinition of the societal function of higher education. The other noticeable consequence was rising public awareness followed by numerous debates, echoed in the media and governmental reports, surrounding the massive institutional cost of failure, notably in the French « premier cycle » (Forsé, 2002).

Interestingly, the present massification trends in India call for a similar reflection on its socio-economic implications for the stakeholders of the higher education community.

IV. AN UNEXPECTED CONVERGENCE BETWEEN FRANCE AND INDIA

We now posit a triple knowledge-based convergence between the French and the Indian higher education systems on academic, economic and institutional grounds.

A) **Academic convergence**

1) English as a medium of instruction: a difficult path for France, a natural one for India?

Within the aforementioned context of massive internationalization trends, non English-speaking countries have aimed at broadening their range of teaching services available to international students with the introduction of courses taught in English. Many higher education institutions, public and private, have therefore decided to adopt English as their medium of instruction for some, if not all, of their academic programs.

a) France

This tendency has been seen in France, even in the face a confirmed traditional bias rooted in a mature legal structure bent on conserving its own definitions. A law voted in 1994 (loi Toubon) made the use of the French language obligatory in various domains including publications of all kinds and in advertising. If this law was successfully adopted, it is precisely because francophone business associations believed that the influence of France throughout the world was somehow diminished by the predominance of the English language.

b) India

It is often assumed that its British colonial heritage has provided India with a competitive edge in English proficiency over other countries¹⁶. However, recent comparative studies have given surprising results:

In a recent test of English speaking proficiency across BPO nations, the world's outsourcing partner – India – is not where one would expect it be [...] (Hindu Business Line, Prayag, Internet, 2010).

Against the odds, India was ranked third ranked below Philippines, Latin America and Eastern Europe. A recent study established that English-language proficiency leads to higher earnings. Men who speak fluent English earn on average, 34% higher hourly wages than those who speak no English; even workers who speak a little English earn 13% higher hourly wages. Secondly, the wage premium does not concern younger cohorts if their proficiency in English is not complemented by good education (DNAIndia, 2010, Vembu, Internet).

2) The emphasis on autonomy, incentives and bibliometrics

a) Autonomy

We briefly addressed the solid link between autonomy and academic performance in § II) B) Since 1981, the “French higher education has embarked on [an] ambitious programme of reform” (Neave 1991, p. 65). From this point onwards, government has appeared to promote the autonomy of universities, particularly through a new, ‘contractual’ funding system, which required HEIs to negotiate with government for resources (Friedberg and Musselin 1993).

¹⁶ In India, colonialism has had its set of positive and negative impacts. On the positive front, English has been accepted as a medium of instruction and the primary language in all private schools, while the State language as the second language (eg. Marathi in Maharashtra State, Tamil in Tamil Nadu, etc), followed by Hindi, the national language as the third language, compulsory till 7th grade (after which the State language is dropped and Hindi and English are continued till 10th grade). This comes in contradistinction with State/Government funded public schools where Hindi prevails over the national /State language; English becoming the optional language.

There has been a certain controversy over the 2007 reform which profoundly modified the legal and institutional framework of Higher Education in France. Since 2009, a small number of universities in France were the first to become financially independent and therefore able to use state budget allocations as they wished and recruit staff. The lack of autonomy they suffered from before this reform left universities without ability to take initiatives locally. This new law was motivated by ambitious and sweeping aims.

b) Incentives and bibliometrics: a comparative view

Fostering research is a key challenge that lies at the heart of the Lisbon strategy. The relevance thereof is equally significant in India. From a historical perspective, the academic performance of Europe may be benchmarked against the USA owing to its shift from a major economic power to a hegemonic country enjoying superpower status, following its strategic focus on postgraduate research in the post-war period:

[t]he great new distinction achieved by higher education in the United States is owed less to advances made at the college level than to those gained in graduate (including post-doctoral) education, research, and training for research (Pusey, 1978, p.47).

The modern concern with incentives for universities echoes our brief survey of this topic in the history of economic thought. Hence, Smith already believed that when teachers [were] paid a fixed salary by the schools in which they work, rather than being paid fees by each student they teach, their [had] no incentive toward diligence in their duties. Paragraphs 134 and 136 of Book V, Chapter I, explain that: “The endowments of schools and colleges have necessarily diminished more or less the necessity of application in the teachers. Their subsistence, so far as it arises from their salaries, is evidently derived from a fund altogether independent of their success and reputation in their particular professions”.

Across the global higher education community, research management has come to rely heavily on bibliometrics, which is a powerful incentive designed to improve the overall performance of higher education institutions, notably in international rankings.

The Bibliometric study of India's research output and international collaboration (2010) recently stated that "India's output of research papers (and share of the total world output) has increased across all subjects. Citation impact has also increased across most subjects [...] While most of India's research is cited less frequently than world average, it continues to improve (ibid. p.2)". Moreover contrasted trends are observed in the two countries: "most of the growth in Indian output has occurred since 2000, more than doubling since 2008 (ibid. p.11)" whereas "France showed an increase in share of world papers until the late 1990s and early 2000s with a subsequent drop after this point (ibid.)". Likewise, "India's share of world health and medically-related output has grown from 1.1 per cent in 1999 to 1.8 per cent in 2008" while at the same time "France decreased in world share of clinical papers (ibid., p.13)". Similar trends are observed for health and medically-related output (ibid., p.14), in biological sciences (ibid., p.15), in mathematics (ibid., p.17), physical sciences (ibid., p.18), engineering (ibid. p.19).

The French research community has recently tried to reach a consensus on the question of the bibliometric evaluation. For instance, after restating the merits of peer review, the Académie des Sciences (2011, pp.5-7) has issued a series of recommendations, in order to avoid the pitfalls of bibliometry. When assessing individual researchers, articles, rather than journals, should be considered (ibid.). The quality of the data should be rigorously validated (ibid.). Comparisons should be carried out inside homogeneous intra-disciplinary groups without omitting the influence of age and experience (ibid.). Evaluators should always be accountable to researchers (ibid.). Attention should be paid to the publication strategy; the systematic targeting of journals with a high impact factor is sometimes made at the expense of

originality or long-term scientific coherence (ibid.). The report warns against the temptation of mere numerical evaluations at the expense of more qualitative assessments. The use of bibliometric evaluation should also be tailored to a stated purpose: recruitment, promotion, contracts, grants etc... (ibid., p.6). Finally, co-signed papers should be cautiously examined (and weighted according to the actual contribution of the co-author).

The French report seems to have grasped the growing criticism¹⁷ within the profession, directed towards the mechanical and uncritical evaluation of research performance by means of citation analysis¹⁸ :

Citation analysis, in the hands of non-experts, can be an extremely blunt instrument. What's more, the specialists in the field have found that raw citation data often contain errors.... Because it is hard for governments, funding agencies and promotions committees to find reliable yardsticks for measuring research quality [...] Important papers, the argument goes, will be cited more frequently. As a general rule, that is a reasonable assumption. But apply it blindly, without regard to the quality and limitations of the raw data, and the conclusions you draw may be far from reasonable....." [David Adam 2002. Citation analysis: The counting house. Nature 415: 726-729].

B) Economic convergence

1) Integrating the GATS framework

The World Trade Organization and the General Agreement on Trade and Services (GATS) were created in 1994. The most significant agreement ever negotiated by the World Trade Organization took effect on January 1, 1995. It is the first and only collection of multilateral

¹⁷ "The measurement of scientific performance through a bibliometric analysis causes behavior prejudicial to Information Technologies and science itself (by supporting quantity instead of quality, the publication of incremental results with little significance, increasingly frequent appearance of joint authors whose contributions are negligible, and the easiness of crossed citations, to quote only some well-known problems)". *Letter to the President of the Conference of Chancellors of the Swiss Universities (CRUS) - Project for the analysis of the services of research of Swiss universities based on bibliometric criteria* <http://www.sarit.ch/crusletter/index.html#footnote3>

¹⁸ In particular, the "frequency of citation" does not account for the quality of the researchers, because :

- it depends more often on the social recognition of the researcher than excellence of his/her scientific work
- it favours researchers who work on fashionable topics
- it favours fields of knowledge which traditionally publish shorter articles compared to those where publications are longer
- it cannot differentiate between the fashion and the substance of a paper
- it can favour the authors of "surveys", who are very frequently cited, compared to the authors of focused research papers
- a position article or even an erroneous article can be criticized and consequently well cited.

See "For the evaluation of data processing by means of bibliometric analyses" of Friedemann Mattern <http://www.vs.inf.ethz.ch/publ/slides/Mattern-Bibliometry-SARIT06.pdf>

rules governing international trade worldwide. The objective of the agreement that covers goods, services, and intellectual property is to remove or reduce barriers that obstruct international trade. Other features include procedures for dispute resolution and special treatment guidelines for developing countries. The trade sectors covered under the agreement include an unprecedented variety of services related to business, communications, construction and related engineering, distribution, environmental, financial, health and social, tourism and travel, recreational, culture and sports, transport, and of course, higher education.

The GATS distinguishes between four categories of trade in higher education services.

- 1) Cross border supply includes any type of course provided through distance education or the internet, testing services or education material which can cross national boundaries but does not require the physical movement of the consumer
- 2) Consumption abroad involves the education of foreign students and requires the movement of the consumer to the country of the supplier.
- 3) Commercial presence deals with foreign universities, institutions or investors in another country; the provider establishes facilities in another country (local branch, franchising agreements etc...).
- 4) Finally, the presence of natural persons denotes the ability of people to move between countries to provide educational services.

Bashir (2007, p.7) explains how the GATS has revolutionized higher education:

Higher education systems across the world are increasingly impacted by the cross-border consumption of higher education services in a variety of forms. The increase in consumption of higher education services of one country by the nationals of another for which the latter make payment marks a departure from earlier forms of international collaboration. Traditional forms of exchange in international higher education include faculty exchanges and the provision of scholarships for foreign study, financed largely by aid or inter-university partnerships for research. Higher education has today become a tradable service, which although not yet on the same scale, is similar to the trade of telecommunication or financial services.

Developing nations have nevertheless been reluctant to embrace change (ibid, p.4):

The possibility of losing sovereignty over a sector that is vital to national development is another major concern. As a result, despite the growth in international higher education trade, most developing countries have been unwilling to make binding commitments in the current round of GATS negotiations and in bilateral trade agreements. Nonetheless, this trade is bound to increase and diversify due to the growing demand for foreign qualifications and increasing competition among industrialized nations in the higher education market and also due to the entry of more higher education institutions from developing countries, which can compete on both price and quality.

Governments fear the irreversible consequences of the adoption of the GATS frameworkⁱⁱⁱ:

These concerns have tended to crystallize around the possible dangers of making commitments to liberalize trade in higher education in the current negotiations over General Agreement on Trade in Services (GATS), commitments which might be largely irreversible and which might restrict the freedom to develop national higher education policy (ibid, p.8).

Whilst developing countries are wary of the destabilizing consequences, developed ones are trying to conquer markets and seize new commercial opportunities:

Nevertheless, as trade in higher education continues to expand, many developing countries are struggling with the effect of this trade on their domestic higher education systems and whether and how to utilize, regulate or prohibit higher education supplied by foreign providers. Some developing countries are also trying to develop export markets for some of their higher education institutions. The industrialized countries, on the other hand, see a potentially huge and growing demand and many institutions, traditional public and private universities as well as newer corporate entities or consortia selling higher education services, are aggressively seeking new markets abroad (ibid, p.8).

A stepping stone for proactive marketing strategies is offered by international exhibitions:

Studyrama Fair for Higher Education in Nice is a prestigious exhibition in the field of higher international education studies and careers worldwide. This is an exceptional opportunity to promote [...] educational programmes among highly motivated students, providing students with knowledge of Bachelors, Masters, MBA, Internship, Job and Employment opportunities (www.biztradeshows.com).

2) The modes of delivery: e-learning and distance education

In the early 2000s, the growth of e-learning¹⁹ was premised on the belief that it would become “one of the biggest agents for change” (John Chambers, CEO, Cisco Systems, 2000). Around the same time, Philippe Quéau, Head of ICT at UNESCO (Libération, 22 mai 2000) predicted that « [t]he education market should be the biggest one on the Internet, ahead of e-commerce. It already covers higher education and vocational training and spans to primary and secondary education”. Philippe Carré (1997) elaborates on the economic, technological and didactic potential of the market for e-learning solutions that go hand-in-hand with adult self-training:

[i]n this way, the search to increase profit margins in training, through socio-technological and technological evolutions, the advances in pedagogical thinking, and the culture of autonomy, are the four vectors which underlie the large scale development today in the practice and theory of adult self-training.

¹⁹ “e-Learning is a very broad term for internet-based learning in general. Distance education, online learning, E-Learning as all of these terms are becoming synonymous with the latest approach to providing high quality educational offerings. It may be defined as internet-based learning where the student and instructor are not necessarily face-to-face” (Seufert et al 2000).

The market was soon confronted with some fears of economic failure: “[i]s e-learning as we know it a failure? According to Forrester Research, 70% of those who start an e-learning course never complete it... (e-learning, is E-learning floundering? May 2002)²⁰.

Beyond technological aspects, the growth of e-learning raises some philosophical concerns:

The market’s relentless grip takes full effect in specific forms and bars the way to the real freedom of human individuals. But that does not render impossible the devising a new technological vision, freed from commodification and with a democratic aim” (Joshua, 2000).

[w]hat is needed is a global Jules Ferry to promote the idea of a free educational portal structured around knowledge supplied by public institutions throughout the world (Philippe Quéau, Head of ICT, Unesco, Libération, 22 mai 2000).

Importantly enough, Mathit, India (www.mathiit.in), Indira Gandhi National Open University, India (www.ignou.ac.in) and the National Centre for Distance Learning, France (www.cned.fr) currently rank amongst the largest distance education institutions in the world. Although we abstract from the financial dimension of the problem, we propose the skeleton²¹ of an innovative architecture for an Indo-French Knowledge-Management system with the objective to secure a competitive advantage in the knowledge economy (see Chart 3 and 4).

INSERT HERE

Chart 2 Virtual classrooms using synchronous e-learning tools

INSERT HERE

Chart 3 Indo-French information management system to secure a competitive advantage

Our proposal is built on the model²² of the virtual university, which has been discussed at great length in the literature devoted to distance learning:

²⁰ See http://www.elearningpost.com/blog/e_learning_magazine_is_e_learning_floundering

²¹ The detailed analysis of business models used to assess the educational programmes featuring technologically advanced distance learning facilities lies outside the scope of our article. For a good introduction, Seufert et al. (2000) provide an interesting overview.

²² It would be more accurate to talk about a plurality of competing models amongst virtual universities. Hence, Seufert et al. (2000) have distinguished between (1) the pure virtual university where all core activities are delivered online, (2) the additional virtual university, which offers online course components within a curriculum programme, (3) the cooperative model in the academic sector with networks of virtual universities, and finally (4) the collaborative model in the corporate sector (private educational providers and consortiums).

“The term "virtual university" is often not clearly defined and is used to refer to both "conventional" campus-based universities offering online courses ("hybrid" institutions, "brick-and-mortar") and virtual universities in a "pure" form in the sense that all their activities are delivered online via the Internet. A virtual university may be defined as an institution which is involved as a direct provider of learning opportunities and uses the internet to deliver its programs and courses while receiving tuition support (Ryan et. al. 2000, 2).

C) Institutional convergence

1) Cross-border partnerships

The present paper is the offspring of the Indo-French bilateral programme of collaboration in social sciences. A preliminary scientific, cultural and technical agreement between France and India was signed on 7 June 1966. In 1973 and 1974, the Fondation Nationale des Sciences Politiques (National Foundation for Political Science) sent two researchers to India for several months. In July 1973, the first Franco-Indian conference was held in Paris at Fondation de la Maison des Sciences de l'Homme. The French organizers, Mr and Mrs Charles Morazé were assisted by a couple of American researchers, Mr and Mrs Daniel Thorner. On the Indian side, organizers included E.D.N. Chaudhuri, scientific advisor to the Ministry of Defence, P.N. Haksar, advisor to the Prime minister, A.M. Khusro, Institute of Economic Growth, Delhi, Bipan Chandra, Yoginder Singh, Jawaharlal Nehru University, and S. Hashmi, Ministry of External Affairs. The conference was followed by various collaborative steps between FMSH, on the one hand, and the University Grants Commission and the Indian Council of Social Sciences Research, on the other hand, that endeavored to achieve a high degree of cooperation between the two countries in the field of social sciences. Soon after, the Indian Council of Historical Research (ICHR) and the Indian Council of Philosophical Research (ICPR) also joined the new cross-border scheme. The appointment as FMSH chairman of Mr Clemens Heller, a close friend of Fernand Braudel and the Thorner, gave a new impetus to the collaborative programme. A milestone was achieved in 1978 with a visit to India by Clemens

Heller (MSH), Roget Brunet (CNRS), Guy Hermet (CERI) and Jacques Revel (EHESS) whose purpose was to put in place the institutional foundations of the partnership.

The objectives thereof were to facilitate:

- The exchange of faculties
- The organization of conferences and roundtables
- The communication of key research documents.

To date, the Indo-French bilateral programme of collaboration in social sciences remains:

[t]he oldest of all the international programmes of the Fondation Maison des Sciences de l'Homme as it was started in 1978 and, since then, thanks to the unfailing cooperation of our Indian partners, it continued to serve the two academic communities, bearing witness to the constancy of the scientific and intellectual relations between India and France (Minutes of the Joint Advisory Committee Meeting held on January 7-8, 2008 at FMSH).

Besides, India nurtures privileged collaborative links with other countries, most notably with the United States, the United Kingdom and Germany:

The USA is India's largest collaborator producing three-times more research co-authored papers with India than the UK [...] Germany, which publishes slightly more co-authored papers with Indian researchers than the UK, would appear to represent a more significant competitor (Bibliometric study of India's research output and international collaboration, 2010, p.1).

2) Quality assurance and national supervisory bodies

On September 10-11 2001, UNESCO hosted an Expert Meeting on the Impact of Globalisation on Quality Assurance, Accreditation and the Recognition of Qualifications in Higher Education. The purpose of the event was the following:

[t]o explore, for the world as a whole, the international dimensions of quality assurance, accreditation and the recognition of qualifications" and "examine the feasibility of establishing an international forum for dialogue among the different stakeholders: States; the private sector; traditional and nontraditional higher education institutions; students (UNESCO, 2001).

In France, government involvement ensures a higher quality control of degrees:

French governments directly assess the quality of university degrees before they are presented to students, during the process of 'habilitation des diplômes'. Government lacks such powers concerning the degrees offered by the grandes écoles (Dodds, 2009, p.399).

[t]he attribution of degree-awarding powers, the control of quality and the funding of higher education, are all dominated by central government. In particular, in the higher education sectors [...], government ability to set rules governing standards and the allocation of resources have been particularly important (ibid.).

In India, however, liberalization trends are not conducive to quality and transparency norms:

[m]ore than 200 foreign programmes are offered in India in various modes. A majority of them is of substandard quality and value. Regrettably, no agency in India has an account of the number of foreign programmes, their mode of operation, nature of partnership, quality of instruction, fee structure and the protection of students' interest. Many of them put out glossy and misleading advertisements, enticing gullible students with false promises (The Hindu, M. Anandakrishnan, Tuesday, Jun 15, 2010, Grappling with core concerns of higher education).

In this respect, the Foreign Educational Institutions bill that was passed in March 2010 is now changing the conditions under which higher education service providers operate in India:

The basic premise of the Foreign Institutions Bill is that every foreign educational service provider engaged in offering programmes leading to degrees and diplomas, whether it already operates in India or intends to do so in future either on its own or in collaboration with an Indian partner, must register itself with a designated authority, giving all the necessary information (ibid).

3) Governments as liberalizers

Liberalization may be viewed as a multidimensional process enabling “a market alternative to an existing system based on collective solidarity’ (Streeck and Thelen 2005, p. 33). It may also be defined as “an expansion of market relations [. . .] significantly beyond the limits (of) the organized capitalism of the post-war “mixed economy”’ (ibid., p. 2). The modern wave of liberalization is best characterized by unbridled international capital flows resulting in “the precariousness of the domestic political systems (Hobsbawm 1994, pp.9 -10)”. However, a frequent misconception is to equate liberalization to the demise of the State (Navari, 1991):

[t]he failure to consider governments as potential ‘liberalizers’ reflects the common view in comparative political economy that liberalization requires a lesser extent of institutionalization, and thus government intervention, than does the creation of collective institutions (Dodds, 2009, p.398).

Scholars in political economy are therefore often critical of this one-dimensional conception.

We abide by the more nuanced view according to which governments are fundamental agents of change and proactive liberalizers that “construct markets where there had never been commercial exchange to begin with [...] or where alternative governance mechanisms had come to coordinate exchange (Campbell & Lindberg, 1991, p.349)”. In this sense,

governments ‘do not simply support accumulation in an undifferentiated way’, but they ‘actively channel and mould economic activity into particular forms’ (Weiss 1988, p.3):

Governments possess the unique ability, as the makers of legitimate rules, to design new institutions, which provide the incentives and constraints within which regulatees operate (Dodds, 2009, p.398).

Government-sponsored agencies paradoxically play a crucial role by performing a branding mission (ibid., p.403).

[i]t was the activity of governments, rather than of the regulatees (higher education institutions), which led to the creation of new agencies, which promoted liberalization (ibid.).

The creation of EduFrance has been cited, alongside other changes, as underlining the priority given to the training of foreign elites in France [...]. EduFrance put into practice governmental plans developed as early as 1993 to re-focus international student recruitment on particular developed and emerging economies seen as key growth markets for French high-end products, particularly in South-East Asia and Latin America [...]

V. CONCLUSION: THE INDO-FRENCH KNOWLEDGE-BASED TRIANGLE

The knowledge triangle put forward in the Lisbon strategy (Lisbon European Council, 2000) referred to the interactions between research, education and innovation, which are the key drivers of a knowledge-based society. After a brief comparative survey of the French and the Indian higher education systems, we addressed, in this article, the multifaceted problem of the commodification of higher education as well as the resistance this process has encountered.

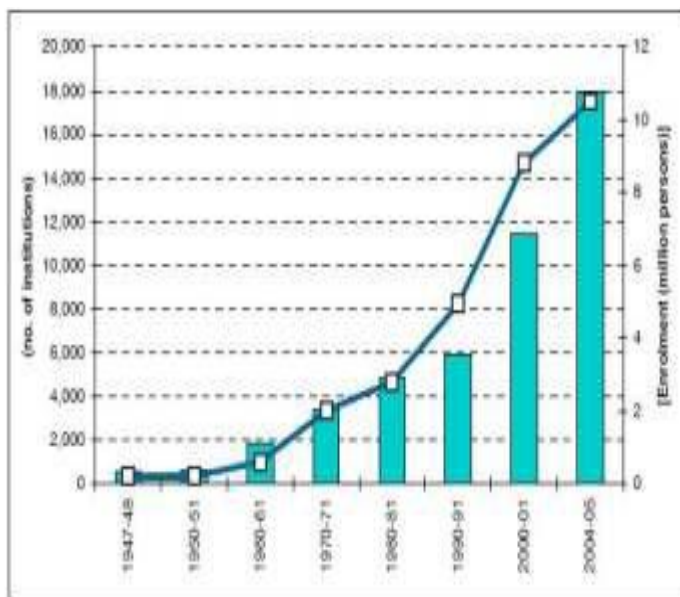
To conclude this essay devoted to the examination of the convergence between two very heterogeneous education systems, we propose a slightly differentiated terminology better suited to our Indo-French perspective with the new idea of a *knowledge-based triangle* structured respectively around academic, economic and institutional factors.

INSERT HERE

Chart 4 The Indo-French knowledge-based triangle

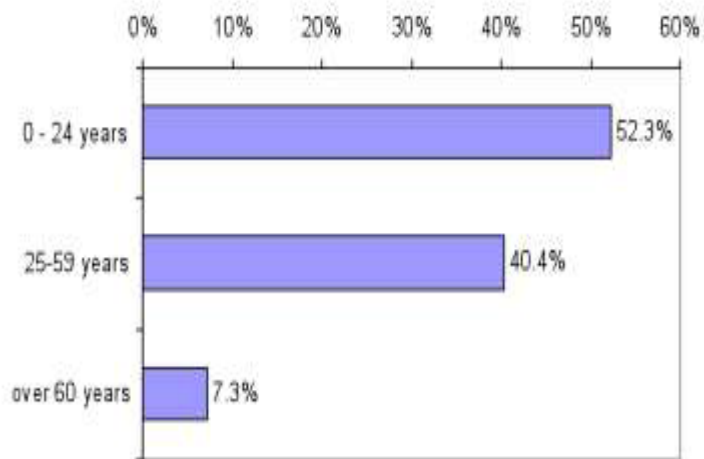
Finally, one may wonder whether these two countries initially separated by History, geography, traditions, languages, socio-economic and political conditions etc... are not presently engaged on the same knowledge path, in a twenty-first century knowledge-bound momentum meant to lead to the ideal locus imagined by the Indian poet Rabindranath Tagore:

[w]here the mind is without fear and the head is held high; Where knowledge is free; Where the world has not been broken up into fragments by narrow domestic walls; Where words come out from the depth of truth; Where tireless striving stretches its arms towards perfection; Where the clear stream of reason has not lost its way in the dreary desert sand of dead habit; Where the mind is led forward by thee into ever widening thought and action (Tahore, Gitanjali: Song Offerings, 1912, p.96)



Graph 1 Growth in higher education in India

!Source: CRISIL 2007



Graph 2 Age profile of the Indian population

Source: CRISIL 2007

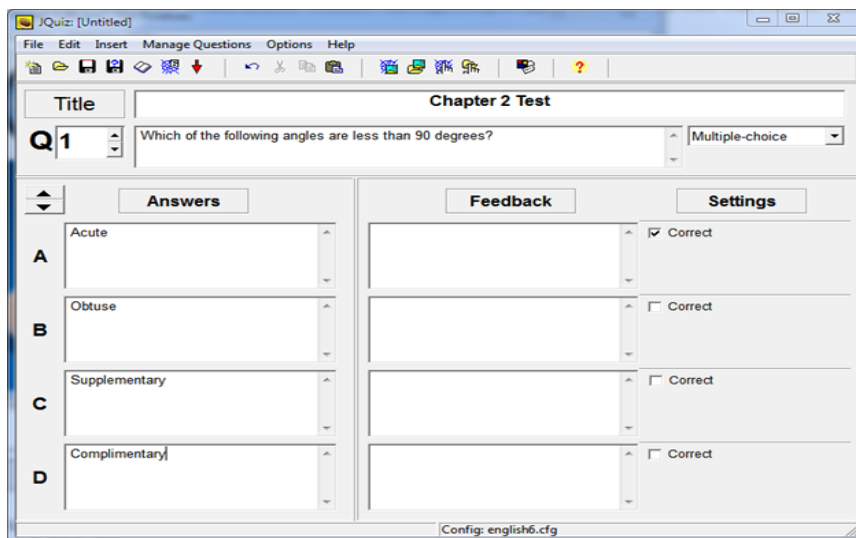


Chart 1 Basic input screen for a standardized multiple-choice test

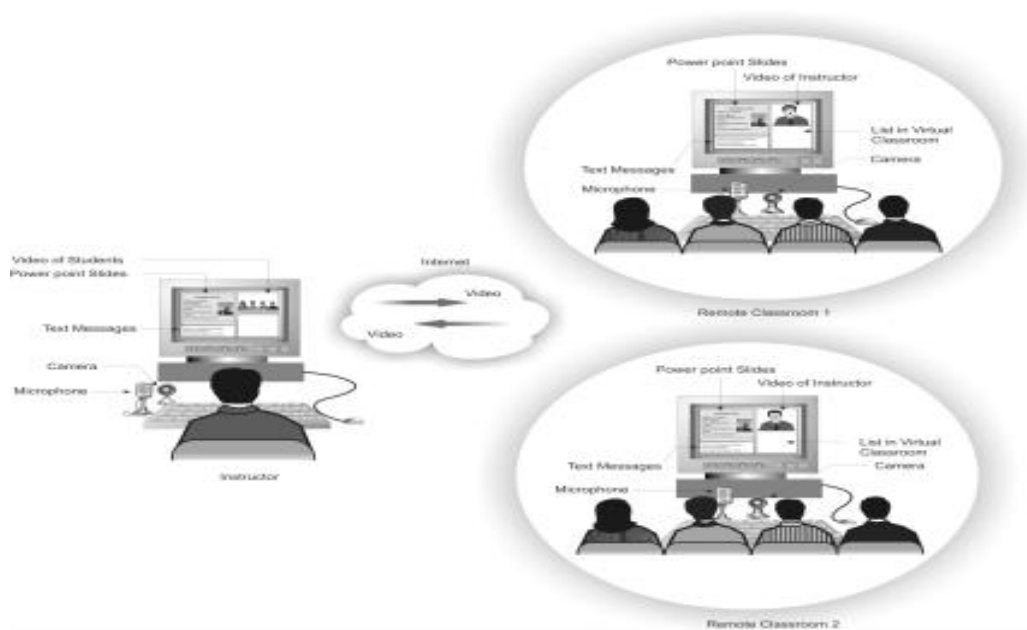


Chart 2 Virtual classrooms using synchronous e-learning tools

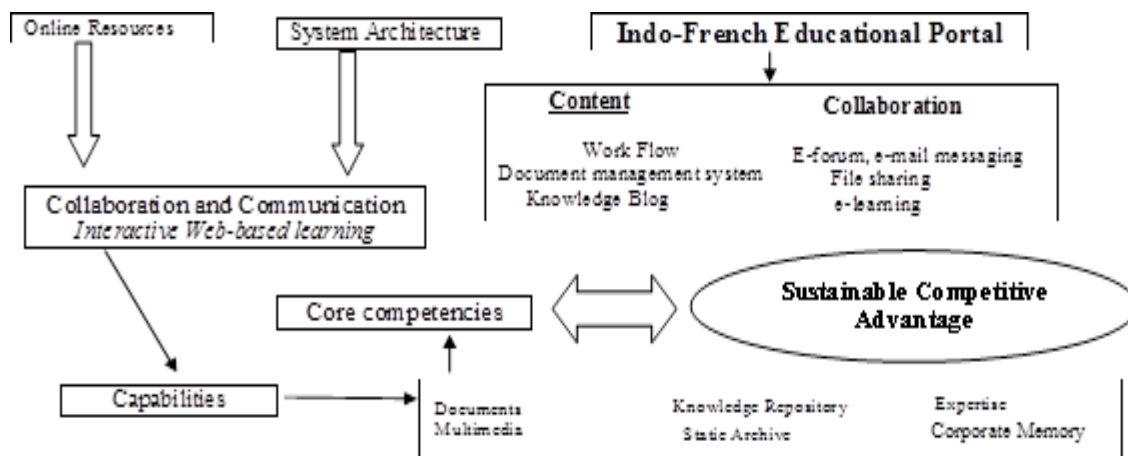


Chart 3: A potential Indo-French Knowledge-Management system to secure competitive advantage

Comments :

The objective is to design a very ambitious Indo-French Knowledge Management system centered on an innovative Educational Portal. The latter is divided into two parts. Firstly, content features include workflow, document management system and knowledge blogs (regularly updated by the members of the academic community). Modes of collaboration include e-forums, e-mail messaging, file-sharing and e-learning solutions.

We first combine existing databases of online scientific and didactics resources in the two countries with an optimal system architecture built into client/server architecture.

Interactive web-based learning is enabled by the enhancement of the multidimensional potential for collaboration and communication through the various modes of online cooperation available to designers (e.g. Skype applications).

Capabilities match the numerous IT functions available to designers. Each country shall draw on its specific capabilities in order to build and consolidate its own competencies.

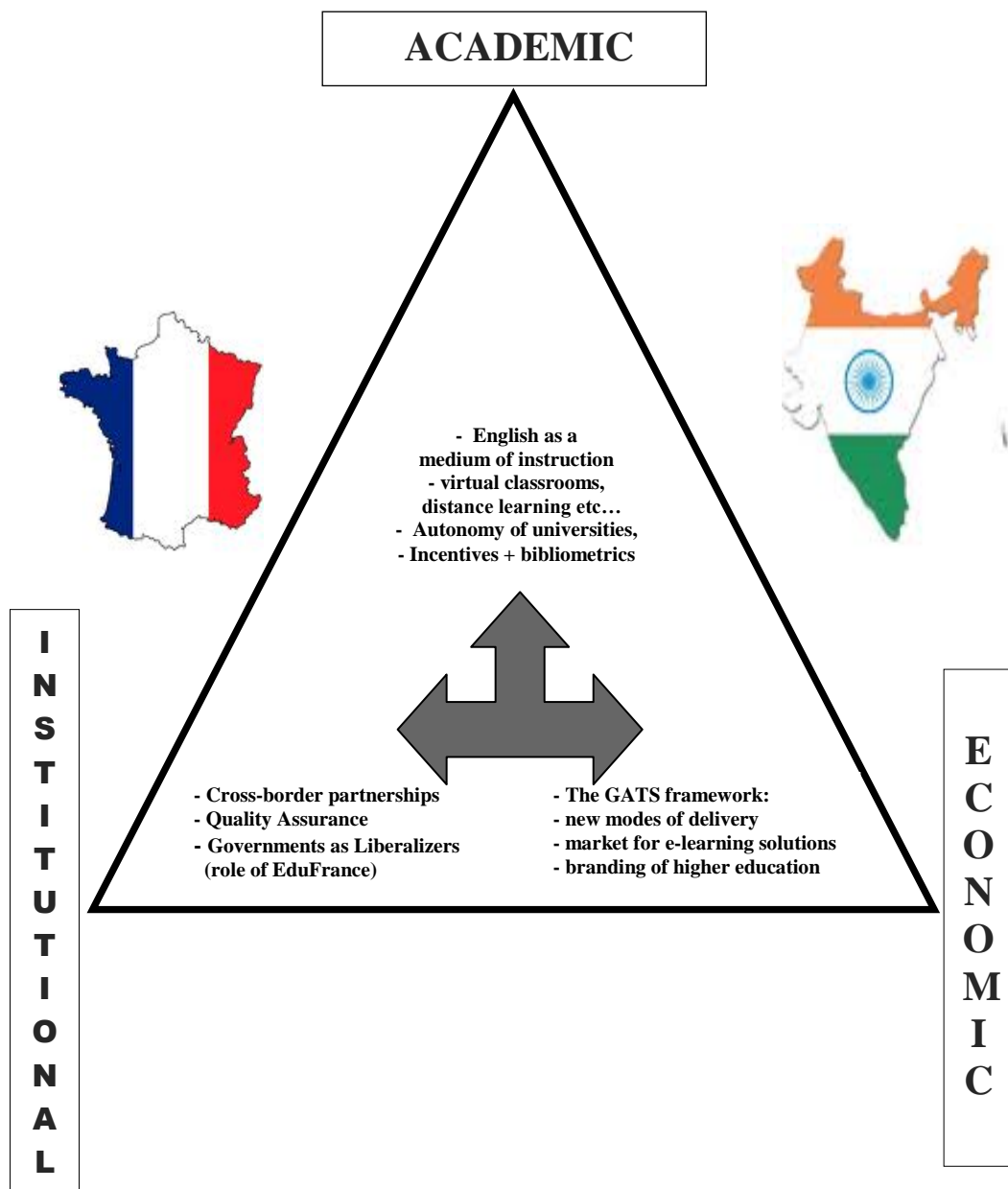


Chart 4

The Indo-French knowledge-based triangle

NOTES

¹ «Nous avons besoin d'un enseignement supérieur et d'une recherche de tout premier rang. Nous en avons besoin car c'est la marque d'un grand pays de donner à ses enfants l'accès aux plus hautes connaissances. L'accès libre à l'université fait aujourd'hui partie des valeurs communes, partagées dans notre démocratie. Nous en avons également besoin parce que la qualité de cet enseignement et de cette recherche est probablement l'élément crucial de la compétitivité à long terme de notre économie et de sa performance de croissance. Dans la bataille mondiale des qualifications, qui sera celle du XXI^e siècle, c'est l'arme ultime de la victoire ou de la défaite (rapport Camdessus, 2004, p.62)».

² *La crainte d'y envoyer ses enfants conduit la bourgeoisie à mener de plus en plus tôt une guerre scolaire préventive. La proximité d'un bon lycée devient le meilleur argument de vente d'un appartement. La ségrégation territoriale s'amplifie. Les classes supérieures fuient les classes moyennes, qui cherchent à les rejoindre, lesquelles fuient à leur tour les pauvres, de crainte que leurs enfants ne soient happés par l'échec scolaire. Cette anxiété doit beaucoup plus qu'on ne pense à la crise universitaire, qui reporte en cascade ses pathologies à l'ensemble de l'école et de la société (Daniel Cohen, Le Monde, 16 Décembre 2003).*

³ «As I see it from my perch in India's science and technology leadership, if India plays its cards right, it can become by 2020 the world's number-one knowledge production center, creating not only valuable private goods but also much needed public goods that will help the growing global population suffer less and live better (Mashelkar, 2005, p.1417)».

⁴ There is some disagreement about the number of universities in France. In her authoritative work on France's higher education system, Professor Christine Musselin (2001) refers to 84 universities. A higher education research institute, the Observatoire Boivigny refers to 86 universities whereas the Minister for Higher Education and Research has referred to 85 universities throughout 2008. Paris Dauphine University, formerly Paris 9 changed status in 2004 and finally, three Strasbourg universities, Louis Pasteur University, Marc Bloch University, and Robert Schuman University fused as of 1 January 2009 to become the University of Strasbourg.

⁵ 80 per cent of medicine students fail to pass first year. Prieur, Cécile, « Valérie Péresse face au "gâchis humain" de la première année de médecine », Le Monde, 22 February 2008.

⁶ The average Shanghai ranking for a European university that must get its budget approved by the government is just above 200 while the average ranking for a European university that does not need budget approval is 316. Each percentage of a university's budget that comes from core government funds reduces its rank by 3.2 points. European universities required to pay the same amount to all faculty members with the same seniority and rank have an average Shanghai ranking of 213. Universities free to pay faculty as they see fit have an average ranking of 322. Universities free to select undergraduate students as they see fit have a Shanghai ranking 156 points higher than those in which the government determines who will attend. Competition also improves research

quality. Each percentage of a university's budget that comes from competitive research grants increases its ranking by 6.5 points.

⁷ Bibliometric research aims at three main target groups that determine topics and sub-areas:

- (i) Bibliometrics for bibliometricians (Methodology) This is the domain of basic bibliometric research and is traditionally funded by the usual grants. Methodological research is conducted mainly in this domain.
- (ii) Bibliometrics for scientific disciplines. The researchers in scientific disciplines form the bigger, but also the most diverse interest-group in bibliometrics. Due to their primary scientific orientation, their interests are strongly related to their speciality. This domain may be considered an extension of science information by metric means. Here we also find joint borderland with quantitative research in information retrieval.
- (iii) Bibliometrics for science policy and management (science policy). This is the domain of research evaluation, at present the most important topic in the field. Here the national, regional, and institutional structures of science and their comparative presentation are in the foreground.

⁸ International responses are varied and eye-opening. Malaysia is strictly regulating all foreign higher education service providers willing to establish, South-Africa has engaged in extensive cross-border partnerships with Australia (foreign branches, franchising agreements), more than half of Canadian universities are actively involved in the export of higher education services, Belgium has ruled out the entire scope of application for GATS, in Romania, more than 1/3 of the students are in private universities, Cameroon is experiencing a massive capacity shortage in public universities.

⁹ The Union Cabinet has approved the Foreign Educational Institutions Bill, 2010 (Regulation of Entry and Operation) paving the way for introduction of the bill in Parliament through which foreign universities would be able to invest at least 51 per cent of the total capital expenditure needed to establish institutes in India. The bill thus allows foreign educational providers to extend their campus facilities in the country and offer degrees too. (see <http://www.oifc.in/Article/Foreign-Educational-Institutions-Bill-cleared-by-Cabinet-for-introduction-in-Parliament>, retrieved on 15/10/2010)

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