

# THE BOLOGNA PROCESS FOR AUSTRALIA?

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**Abstract - The Mediaeval Scholars and their students had no difficulty in crisscrossing the Continent to settle in a new centre of higher learning – their *lingua franca* was Latin and political obstacles were fewer than at present. Subsequently, as Europe became politically more fragmented and higher education became the responsibility of each country, the wisdom they espoused had less of an international focus, and was geared to meet local needs. As economic unification of Europe began to evolve in the second half of the 20<sup>th</sup> century, the need for increased mobility of scholars, students and graduated (professionals) became an issue that had to be addressed. This was first formalized at the University of Bologna in 1999 and refined in subsequent years. In the Bologna Model at its basic, an Engineering undergraduate course is envisaged to last three years which, in essence, would equip its graduates to perform at a technologist level. The subsequent two years of study would define the full professional status that would result in a Masters level qualification in the chosen discipline. Further three years of discipline focused study/research would lead to the ultimate academic qualification of a doctorate.**

Such a program has been difficult to implement in a culturally diverse environment, especially in countries which had traditionally boasted high academic standards and rigour, often requiring 5 years of study for the basic degree. Nevertheless, the conversion to the Bologna Model is scheduled to be completed by 2010, and is taken to be almost synonymous with the concept of fully integrated European Union.

United Europe is often viewed in terms of its economic significance by the rest of the developed world. This is particularly significant for Asia which needs markets for its growing manufacturing sector. Its closer ties with Europe deemed essential, also predicate own academic reforms.

The aim of this paper is to present an overview of the current debate in Australia as to its position *vis a vis* the Bologna Process and offers some reflections on the positive aspects if it is introduced in Australia.

*Index Terms* – Australia, Bologna, education.

## INTRODUCTION

Geographical remoteness is no longer a barrier to effective communication it was in the past. Matters, such as the Bologna Process, relevant to Europe, also matter elsewhere on the planet - Australia is no exception. Developed from its humble beginnings as a colonial outpost of the British

Empire, some 220 years ago, it is a member of the British Commonwealth of Nations – though in effect, it is a completely autonomous country. Its universities are modeled after the well established Oxford and Cambridge traditions – and its graduates are well regarded world wide, as may be attested, in respect of engineering, by its founding membership of the Washington Accord (1989). Education is one of the country's main exports – rivaling that of wheat in terms of national income. Its education export focus is mainly on the fast developing Asia-Pacific Region, particularly China and India. Given this background, demand for instruction in English, geographical proximity, low cost, attractive life style and high regard higher education has in these countries, has placed Australia in an enviable position in terms of the incessant flow of students from abroad to its shores. Though this seems a sequel to a good story of a national success – it is widely recognized in the country that irreversible changes taking place in the world predicate it is unlikely this will always remain an education panacea it now is. The Australian Government has initiated a discourse on the implication on the country's higher education in terms of the Bologna Process now sweeping through Europe, and having much in common with the US system. Since this is a new topic currently under wide review, no formal policy has yet been formulated, though in one case, the major education reform along the Bologna lines as well as embracing the liberal education US style, has already been announced by the University of Melbourne for their 2008 program.

This paper aims to offer an overview of the major contributions to the current debate in Australia as well as offer recommendations to meet some of the current challenges to its education system which, coincidentally, would benefit from the adoption of the Bologna Process – at least in engineering.

## THE ESSENCE OF THE BOLOGNA PROCESS

Following the establishment of the European Union – a politico-economic partnership of countries in Europe, a need arose to provide for greater mobility of higher education students and staff, as well as the professional labour force amongst the member countries. This necessitated a profound reform of the educational system, often steeped in well established traditions of excellence. Convened by the European Ministers of Education in Bologna in 1999, a stage was set to implement these goals by issuing a Declaration with the undertaking that each signatory country mobilize its national government, academic institutions, student organizations and professional bodies to that end. It is hoped

that by 2010, the following objectives of the Bologna Declaration would be realized:

- Easily recognizable and comparable degrees
- Uniform degree structures
- Establishment of a system of credits – such as in the European Credit Transfer System (ECTS)
- Increased academic mobility
- Promotion of European co-operation in quality assurance with the view of developing comparable criteria and methodologies
- Promotion of the European (cultural) dimension in higher education

In summary, from [3], the Bologna Process aims at,

- A three cycle system (Bachelor 3/4 years, Masters 2/1 year and PhD 3 years);
- Consistent quality assurance system, and
- Diploma supplement to describe the qualification

Currently, the Bologna Process involves 45 European countries with 4000 higher degree institutions and 16 million students.

### THE AUSTRALIAN GOVERNMENT INITIATIVE

As the major provider of funds for Australian universities, the Australian Government (through its Department of Education, Science and Training (DEST)) has initiated and is coordinating a dialogue with stakeholders on the implications of the Bologna Process for Australia. The Minister for Education, Science and Training Julie Bishop tabled a Discussion Paper [1] on the current developments surrounding the Bologna Process, its possible global implications and offers speculations as to the likely scenarios affecting Australia if it does or does not follow the same path. The Paper also invites all the stakeholders in the country to address a series of pertinent questions bearing on, among other things, the relevance, impact, costs, benefits, quality assurance, risks and compatibility with the *status quo*.

The DEST Discussion Paper sees the Bologna Process in the positive light, highlighting it as the facilitator of the mutually beneficial interaction between Europe and Australia and as the recognition mechanism of compatible education systems. It warns of dangers associated with the Bologna “incompatibility” as Latin American and Asian countries express their avid interest in the European system -with likely adverse consequences on the Australian higher education market. In addition, there is a concern of being left outside the “rest of the world” club and become too introspective and isolated.

### STAKEHOLDERS’ FEEDBACK

The stakeholders’ response was generally positive in terms of what the Bologna Process stands to accomplish in Europe, but was more guarded in its reverberations on Australia’s higher education sector. Having a higher education system already well acknowledged for its excellence internationally,

there was no perception of urgency to comply with the Bologna Process, though it is comparable with it on several accounts:

- A three-year cycle (Bachelor, Masters, Doctorate) structure already exists, though work needs to be done to achieve compatibility – especially in view of the Australian Honours degrees.
- Promotion of the Diploma Supplement – a certificate of attainment issued upon graduation in addition to the testamur - summarizing academic achievement in a standard manner for easy inter-institutional comparison - has already been piloted in Australia and has been well received.
- There is a compatibility in broad terms, of the Australian Quality Assurance (AUQA) system with the Bologna Process.
- It may be possible to adapt the Australian student workload capacity system (Equivalent Full Time Student Units: EFTSU) to the European Credit Transfer Systems (ECTS).

The general response from concerned institutions invited to contribute to the ongoing discussion invited by [1] is well summarized by the response from the Australian Vice-Chancellors’ Committee (AVCC) given in [2]:

“It is acknowledged that the Australian international education industry must understand the changes occurring in Europe and engage in a dialogue about its implications for Australia. But it is equally important that Australia does not assume that full compatibility with the Bologna Process is the only option. Any engagement by Australia with Europe through the Bologna Process must not result in a diminution of the diversity of the Australian university system nor in its collaboration and cooperation with countries around the world especially those in the Asia-Pacific region, nor in any approximation to a one-size fits all approach.”

### SPECIFIC CONCERNS

In spite of its high credentials, it is often claimed that the present higher education system in Australia suffers from lack of consistency of exit qualifications, difficulties for the mobility of students, incompatibility with most non-European countries and relatively high student attrition: 5 – 6 year degrees 17% higher than 3 – 5 year degree [3]. Adoption of the Bologna Process or a similar modality would ensure Australia’s place as an international player in the higher education:

Table 1: Some relativities of higher education enrolment [3]

	EUROPE	USA	AUSTRALIA
Total Enrolment	19 430 382	12 853 627	1 012 210
Total Foreign Students	1 117 736	583 323	179 619
% Foreign of all students	5.8	4.6	17.7

The significant percentage of the current foreign student cohort in Australia does beg the question, how to maintain, if not increase, the foreign student participation shown in

Table 1. Viewed in this context alone, the implications of the Bologna Process for Australia need careful consideration, lest Australia defaults on its current foreign students intake level.

In addition, there are funding concerns that an extra year of education would impose on already financially over-committed students. This could have a deleterious effect on student numbers staying on one extra year to achieve a professional status.

The National Union of Students (NUS) in their submission [4] states that “Australia does run the risk of being at odds (if it does not comply) with what may become the global framework, with negative impacts on the attractiveness of Australian universities to some international student markets. It may also isolate Australia pedagogically ...”

### **PRECURSOR OF CHANGE IN AN AUSTRALIAN ENGINEERING DEGREE STRUCTURE AND CONTENT**

The Bologna Process dialogue under way in Australia has come at a time when a number of related issues have emerged or are emerging:

- It is apparent that the contemporary engineering practice demands engineering graduate skills with a reduced emphasis on technical aspects, and greater appreciation of interdisciplinary elements, often found in “systems “. However, the non-technical content predominates.
- The non-technical aspects include general literacy, an awareness of social responsibilities, interpersonal and communication skills as well as understanding the fundamentals of sustainability and its overarching role in enabling life on the planet.
- High school graduates do not possess adequate basic pre-requisites that would allow them to be technically competent to a high degree in the four years allocated to a basic degree. In addition, they are mostly poor communicators, lacking in fundamental verbal and writing competencies.
- As a consequence, a university engineering graduate is often taking longer to become professionally useful, after surviving significant attrition rates. This is especially apparent in the first year when it could reach as high as 50% in some cases.
- While this is still under debate, it seems that its eventual implementation in Australia would also timely address the following:
  - Inadequate high school preparation for the university entry to engineering courses;
  - High attrition rate in the first year;
  - Greater utilisation of the technological expertise in the Institutes of Technical And Further Education (TAFE);
  - Provide for the technologically competent graduates;
  - Free up university academics to focus on the

academically more challenging aspects of their disciplines by focusing on the discipline specific subjects;

-Enhance mobility of students and academic staff not only within the country but also beyond.

In summary, the engineering curriculum should be practice driven, particularly involving industry in the education program by having it participate in all applied aspects of a course. Technical skills offered in the Institutes of TAFE should be deployed in the early years which should be a self contained academic offering in its own right and of a three year duration. The two following years at a university would be the equivalent of a Masters Degree, and would provide the appropriate level of a discipline definition – in accord with the Bologna Model.

### **CONCLUSIONS**

The current Australian Higher Education System is already comparable, to a large extent, to the Bologna Model. Formal adoption must not compromise the widely recognized excellence and international recognition it already enjoys.

Concomitant changes to the Australian Engineering Degree structure and content may also be timely, as they would address issues arising from waning physical sciences, analytical and communication skills of high school graduates and under use of the Institutes of TAFE, a valuable national resource.

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