

## Summary

***„Survey on the position of ECCE member organizations on some changes induced by the Bologna process in civil engineering education”***

Received reply from 16 countries: Cyprus (north), Croatia, Estonia, Finlandia, France, Germany, Hungary, Latvia, Lithuania, Portugal, Romania, Slovakia, Slovenia, Spain, Turkey, UK.

**A. Action Line 2 of the Bologna Declaration signed on June 19<sup>th</sup>, 1999, by Ministers of Education from 29 countries asked for "adoption of a system essentially based on two main cycles, undergraduate and graduate".** Since in the "anglo-saxon system" of higher education the two cycles were already existing, the implementation of the Action Line 2 concerned the "continental system" of education and, in engineering education, the "integrated programmes" of 5 or even 6 years duration. Several solutions seem to emerge for the transformation of "integrated programmes" in two-tier or two cycles programmes:

a. 3+2 formula

The diploma conferred to the graduate of the first cycle, in most cases called Bachelor Diploma, is seen primarily as a Diploma to be used for mobility (i.e. transfer to another school in the same field); universities adopting this solution consider that almost **all** graduates of the first cycle will continue for the second 2-year - cycle leading to a Master degree.

b. 3,5+1,5; 4+1,5 or 4+2 formulas

In this case the first cycle leads to a degree which is also "*relevant to the European labour market*", as requested by the Bologna Declaration for the degree awarded after the first cycle. On the other hand, only a part of the graduates of the first cycle will continue for the second cycle.

**Question 1** *What is the solution adopted in your country for transforming civil engineering integrated programmes offered by universities in two-tier programmes*

<b>Schema</b>	<b>Number of countries</b>	<b>Country (adopted in acad.year)</b>	<b>Question 2.</b> <i>What is your opinion on the solution adopted in your country for transforming integrated programmes in two-tier programmes</i>
<b>3+2</b>	10	Croatia (2005), Estonia (2002) Germany (2006/07), Hungary (2005), Finland (2005), France (?), Portugal (2006/07) Slovak rep (?), Slovenia (?), Latvia (1996 -2007)	too early to express an opinion, prefer integrated programmes, solution is bad, too early to express an opinion prefer integrated programmes, prefer integrated programmes, prefer integrated programmes, too early to express an opinion too early to express an opinion solution <u>was</u> bad
<b>4+2</b>	4	Cyprus(north) Lithuania (?), Spain (1996), Turkey (?)	Solution is good Solution is good No opinion ? (no ticked)
<b>3,5 +1,5</b>	2	Germany (2006/07); Hungary (2005)	<b>Solution is bad?</b>
<b>4+1</b>	0	-	-
<b>4+1,5</b>	1	Romania (2005/06)	too early to express an opinion
<b>3+1</b>	1	UK (from 1982)	Solution is good
<b>4,5+1</b>	1	Latvia (from 2003)	Solution is good
<b>5</b>	1	Estonia (2002)	Solution is good

**Question 2** *What is your opinion on the solution adopted in your country for transforming integrated programmes in two-tier programmes*

<b>solution is good</b>	<b>5</b>	Cyprus(North) (4+2); Estonia (5); Latvia (4,5+1); Lithuania (4+2); UK (3+1)
<b>solution is bad</b>	<b>2</b>	Germany (3+2, 3,5+1,5); Latvia (3+2)
<b>I would prefer the integrated programme</b>	<b>3</b>	Finlandia (3+2); France (2+3); Portugal (3+2),
<b>it is too early to express an opinion</b>	<b>5</b>	Croatia(3+2) , Hungary (3+2; 4+1,5; 4+2) , Slovakia (3+2) , Slovenia (3+2), Romania (4+1,5)
<b>no opinion</b>	<b>2</b>	Spain (4+2); Turkey (4+2)

**Question 3** *Considering the solution adopted in your country, what is, in your opinion, the capacity of the graduate of the first cycle to demonstrate higher employability when applying for a job immediately after graduation*

<b>None</b>	<b>(1)</b>	Portugal
<b>very reduced</b>	<b>(2)</b>	Germany, France
<b>reduced</b>	<b>(2)</b>	Slovakia, Slovenia
<b>Satisfactory</b>	<b>(9)</b>	Cyprus(north),Croatia, Estonia, Hungary, Latvia, Lithuania, Romania, Spain, UK
<b>very good</b>	<b>-</b>	-



**Question 6** *Have been consulted professional associations from your country including your organisation, by the authorities implementing the Bologna process when decisions to reform higher education were adopted? )*

No consultation at all	(2)	Romania, France
Very little consultation	(6)	Croatia, Finland, Lithuania, Slovakia, Spain, UK
Good consultation	(8)	Cyprus(North), Estonia, Germania, Hungary, Latvia, Portugal, Slovenia, Turkey
Very good consultation	-	-

### Comments (Part D)

#### France.

Universities adapted their formation system with the 3,5,8 Bologna system...but Civil Engineering Engineers are not educated in the classical Universities, but very generally in “Grandes Ecoles d’Ingenieurs”.

In “Grandes Ecoles d’Ingénieurs”, the system is always an Integrated System, which means 5 years (2+3), which satisfies the main Bologna criteria (At level +3, French students in Grandes Ecoles have no professional qualification. Some young engineers continues to Doctorate according to Bologna formula). 2+3 system allows a high level of formation.

Are to be noted the “Instituts Universitaires de Technology/IUT” with theoretical 2 years studies system, working as follows:

- after 1,5 year of studies, some students can choose to continue for 0,5 year and receive the “Diplome Universitaire de Technologie”

After 1,5 year of studies, students could decide to engage one year more of studies, in order to get a (Licence professionnelle”

After 1,5 year of studies some students can engage a special procedure in order to join the classical system of Engineers studies.

#### Germany

The German universities and non-university institutions like Fachhochschulen could start whenever they felt ready for it. The deadline is 2008 for all.

Universities will very possibly fail to educate their students within 3 or 3 1/2 years in a Bachelor programme to fulfill the conditions of employability. This is true especially for technical and natural sciences, whereas informatics and social sciences etc. may be fit for it.

For Fachhochschulen the solutions very often were simple in the way that the first practical placement semester has been cancelled. So, the theoretical time has not been shortened. On the other hand the specific practical oriented part of the education vanished by this, which I – and others – feel is a mess. For civil engineering education the practical placement was an extremely helpful semester for the students as well as for the building industry.

## **Latvia**

1. It is necessary to clear up what kind of education (academic, professional, both: professional bachelor, professional master) provides university in accordance with certain country certain needs.
2. Education system reorganization we started in 1994 with 3+2 schema. During this time building industry developed very fast and corresponding needs for high level specialists. Our 3 years bachelor programmes contain mainly common and few special subjects. Therefore specialists with bachelor diploma had not demanded for practice and did not live up our expectations. In the same time there were some few students who would like after 3 years to continue studies in abroad (mobility).
3. Besides, in accordance with our legislation the 2<sup>nd</sup> level higher education could be obtain at least during 4 years in university. It means that almost 100% bachelors continue education
4. In accordance with our legislation, graduates only with at least master degree could occupy certain post in research and educational institutions.

## **Turkey**

FOR PART A: Turkey has a two-tier system since late 1950s.

FOR PART B: Turkey does not have non-university HEI.

## **Spain**

Our point of view defends the old status. But, in our case, the model that will finally be adopted is an adaptation of what we have under European Standards.

We shall have an integrated program as Msc Civil Engineer (Ingeniero de Caminos, Canales y Puertos)

We shall have other Masters and a Civil Engineering Grade that will substitute the grade (Ingeniero Técnico de Obras Públicas)

## **Cyprus (North)**

Because of the political status of North Cyprus our Universities are not officially involved in Bologna Process. Our University has a lot of efforts to be involved in Bologna Process but we couldn't reach a result but our universities are taking steps parallel to Bologna Process

**Some findings from Survey:**

1. The World is very fast changing and the people who is responsible for education system try to adapt to these changes and satisfy country needs; and in the same time, within limits, to maintain his own academic traditions;
2. Bachelor studies: 3 years - 8 countries; 3,5 years – 1 (Germany); 4 years– 8 countries; 4,5 years – 1 (Latvia); 5 years -2 (Estonia, Greece); integrated programme – 2 (France, Portugal);
3. In accordance with EUCET recommendations – duration of undergraduate studies are at least 4 years.

**Question: What could be our next step, solution?**

**Possibilities:**

- To level off all countries programmes (former Soviet time experience);
- To define limit (at least 4 years for bachelor studies –EUCET recommendation);
- Business as usual.

**Conclusions – common job .....It is necessary to analyse of this Summary**

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**Thank you for attention!**

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