
PROBLEMS OF HUNGARIAN TEACHERS IN THE STATE EDUCATION SECTOR IN A CHANGING WORLD

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THE SUBJECT OF THE RESEARCH

The research with the working title ‘Problems of Hungarian Teachers of Public Education—In a Changing World’ focuses on gathering the recent problems of teachers on the basis of their preferences in the classroom environment. The aim of the study is to reveal the real troubles of Hungarian educators in the state education sector, the nature of these problems and how they affect the formative role of the teacher. We supposed that the nucleus of the problem is connected with skills and material or professional uncertainty. Here we share the related professional literature and the work of the survey and we would like to highlight further ways of making inquiries. The results could be applied mainly in teacher training, especially in the intellectual and existential preparation of students.

The first aim of the research was to reveal recent problems of Hungarian teachers. We cannot avoid clarifying the concept of “problem”: the word exists as a category in the theory of science and as a difficulty. We aimed at the informal meaning of the term, not the theoretical one.

AIM OF THE RESEARCH

The aim of the research is to reveal the real problems of the high school teachers after the turn of the century, what these problems are, how stressful they are and how they impact on the changing role of the teacher. It has started to be very fashionable to use the terms *self-reflection or to become self-reflective*, and expectations have indeed made teachers self-reflective among researchers and pedagogical surveys of late. So the expectations exist while the exploration of the process continues without any knowledge of the final outcome. In the meantime the teacher has remained alone in fulfilling expectations and meeting requirements, and is liable to go along his or her way without support. “Teachers, aside from their in-class service, perform several

other duties only indirectly related to education. The traditional role of schools expands into such fields as social care, transition into the world of work, the struggle against different forms of deviation, and other social problems". (Lannert et al., 2001). The ability needed to understand this role is often reflectivity, and we suggest that the teacher remains alone in the process of forming it. Our goal is to give some guidelines in setting up a process wherein one can exercise self-reflection.

SPECIALIST LITERATURE

If we look at the related bibliography, it is clear that the supposed problems are multiple and numerous. First we should face the diversity of the difficulties and then narrow them down. What items are related to our recent issue? First of all, we cannot pass by two important statements to be found in the specialist literature: "Over the years, educational researchers have investigated many factors considered to affect student learning. At the heart of this line of inquiry is the core belief that teachers make a difference." (S.P. Wright et al., 1997) and "Teachers are central to any consideration of schools, and majority of education policy discussions focus directly or indirectly on the role of teachers." (Eric A. Hanushek et al., 2006).

Problem-identification

Another problem has been found while reviewing specialised literature for example the methodological culture. "Methodological culture of teachers—classroom work is still dominated by frontal teaching, although recently increasing efforts have been made to involve more differentiated methods, for example co-operative teaching, less rigid class structures, and use of ITC. The most frequently used method of organisation of the teaching-learning process is differentiation within a heterogeneous class. Differentiated class work is a lot more prevalent in general schools, and ICT is more frequently used in secondary institutions". (Loboda et al., 2007). Another problematic feature is teacher-pupil interaction: "There is a contradiction between students' expectations from the school and the school's values as perceived by students. While students expect the school to help them develop their personality and increase their self-reliance, in their opinion the school considers strengthening discipline and community-minded attitude to be its most important job. Students enjoy school tasks less and less, fewer of them think they have a say in shaping school rules, and they increasingly feel oppressed by school assignments

and their image of teachers has been deteriorating” (Loboda et al., 2007 *ibid*). Finally, violence we must list one of the most threatening phenomena in the school. “is more and more conspicuous within the school walls. Surveys conducted among school children reveal the grievances (mostly originating from teachers) students of different ages foster. The most frequent occurrences are related to evaluation in a broad sense. In a lot of schools the judgmental and disciplinary function of evaluation seems to be more prevalent than necessary. In many cases the educational potential of formative evaluation is unexploited. Student behaviour that is a problem for teachers often includes verbal abuse, but student aggression manifesting in vandalism is also a major concern”. (Loboda et al., 2007. *ibid*).

HYPOTHESIS

Ever since the pedagogical researches had started there have appeared many monitors, surveys, data and reports about the actual matters, issues and problems of the teachers and teacher activities. However, these previous examinations were structured or set up on the base of assumptions of researchers. The possible problem-framing was quite hypothetical and suggested the presuppositions of the inventors of questions, not that of the involved teachers.

We have supposed in our research that there are existential problems that are in the forefront of teacher thinking—including skills, lack of conformity to practical demands, and material and financial uncertainty. We have focused our survey on finding the problems that are primary for the educators. An important factor in the examination was that the teachers should share their views upon their opinion and how these problems have occurred in the classroom situations.

METHODOLOGY

The methodological characteristic of the survey was data collecting with qualitative methods (observation). 84 teacher training students had been collecting data in almost 22 settlements and 50 schools. Students were given the task of listing the noticeable problems of teachers, upon their observation and declaration of the pedagogues. Each of the students had participated in 10 lessons. Then they recorded these observations. These records served as the basic data source to develop variables. After the analysis of the before mentioned documents we categorised and enrolled the typical problems and items. We succeeded in compounding the following categories:

pedagogical, societal, and existential ones. We determined the categories upon a societal-ontological consideration as these categories have been either constituent or forming facts of a societal subsystem. In the further period of the research we are going to refine the analysis of the teachers' declarations from the point of view of the relevancy of the location or the speciality, especially the foreign language skills.

PROCESS OF THE RESEARCH

During the observation of classroom activities of the teachers we paid attention to details, such as: role of the teacher, pupils' activity, conductional techniques, being late, consolidation (e.g. of classes), inconsistency between the role players, diligence, value transmission, computer (e.g. skills), partnership with parents, conducting without stress, absence (e. g. of pupils from the school), discipline in class, sustainability, closing up of some departments, impatience. Shortage of time, lack of preparing for the lessons, rewarding skills, creativity, measurement, evaluation, electing of a method, motivation were selected as problematic points, too. In case we list troubles, environmental education, responsibility, maintenance of the attention, and competition for the pupils are different kinds of questions too, that show a considerably diverse picture. Now, these elements of the problem list have started to serve as variables in our research. Then—because of the diversity of terms—we had to set up some categories upon which we could classify these issues. These have turned into the following categories:) *Societal Problems*) *Pedagogical Problems*) *Existential Problems*. Then it occurred to us that some of the issues could not be put unambiguously in one or other category, so we needed to create further grades of classification. These are:) *Societal/Pedagogical Problems*) *Societal/Existential Problems*) *Pedagogical/Existential Problems*. After making such sub-classes of terms we found that the observed and listed problems of the participant teachers have covered each other, e. g. one category coincides with another. Teachers' difficulties are not separable as only existential, simply pedagogical or just societal ones. Problems of how to discipline or motivate and the phenomenon of being late and absence of pupils have occurred almost in every case. Most of the teachers followed the 'traditional pedagogical' values, methodology and demands during the observations. The statement (Halász et al., 2003) in which the main problem of teachers is related to the handing over of knowledge, namely that they consider it as the most important thing, has been approved in our observation, too. In case of the small-sized schools,

the difficulty lies in how to educate the ethnic children, sometimes teachers are afraid of the adaptation of pupils to another environment—after finishing the school. So, the differences between the schools do mean a real fear factor for the pedagogues. If we see the children with specific educational demands then the problem for the teachers is not how to deal with them, but rather that the child with weak skills will hold back those who have better capabilities.

Examples, Citations from the Observations

Some brief comments can describe the situation quite well (in the [.] bracket is the code of the observed):”There will be no changes. At the most, pupils are coming and going.” [Cited from a report] [H15]. Here the student-observer notes that he has realised as “the more the teacher moves away from the desk the closer relationship could be formed with the pupils (...) the desk of the teacher symbolically defends the teacher” [H15]. One of the observers [M71] set down the followings as the most distressing problems of the pedagogue (a famous school in Pécs):

- a) to discipline, because the pupils chat to each other or cut into the teacher’s lecture
- b) Pupils leave equipments at home,
- c) They don’t prepare for the lessons
- d) Children are occupied with other activities than learning during the class (drawing or playing with their mobile phones)
- e) Pupils are arrogant with the teacher, they don’t give them respect and the style of some of them is outrageous”. One of the observers [GY14] was given the following advice by the participating pedagogue: “As you can see, I am not a classical teacher. My methods are quite traditional but my principles are radical: Conform Yourself to the Group! If you love them, then they will love you and bring the stars down. This is the secret, and it’s not taught anywhere! The point is not the lesson hour but the children and to motivate them, in the first step. The next is to make them fond of the subject-matter and the third is to make it their passion. This is the aim.” [cited from a report].

The participants had possibility to ask about the revealed problems so some specific troubles have been outlined: “The term used first and foremost was ‘burnout’. The second is the number of the classes (...) and the declining of discipline (...).

Recently, everybody can be enrolled in the school” [R30]. The most illuminating notice is perhaps the shortest one, but even more suggestive: “no contact—no conflict” [T31]

EXTRAPOLATION OF DIFFICULTIES, MISTAKES OF RESEARCH

As we see, the special literature provides us with a widespread review of problems. We have to make clear what problems are related to the examined issue.

The categorising of the variables is also problematic. What should be the base for the categories? Who will define the problem? For example, the students report about the frontal method, often. Maybe this is not the problem of the teacher but the student—he or she could think that the frontal method was not the adequate one, at that moment. Apart from this, the frontal method appeared in such contexts in which the student mentioned this kind of method as the only applied one.

Humour and irony. The difficulty, in case of the before mentioned two terms, is that the use of them appears as an obstacle not for the teacher; we can rather register the opinion of the student. Namely, the students observed the misuse of humour or irony as the problem. So, the question: who claims something as a problem—the observer or the observed—appeared as the one of the constant difficulties of the research. By the way, it was also problematic that the task was not enough understandable for the participants (students), or that certain terms (like ‘maintenance/holding the attention’) mean the same thing, so we can not count them as separate variables.

RESULTS

We found coincidences among the categories we defined upon the variables. There are no clear differences among these categories and problems, and it has been revealed that not the existential one is the most urgent problem in the community of the observed teachers. After categorising of the variable we found that

- The variables can not be categorised as being only pedagogical, social or existential;
- The three categories are overlapping each other;
- The coherency between pedagogy and society is examined by the field of Sociology of The Education while there is no field for examining the common aspect of pedagogy, society and existence. Our research can help in the working out of such a field.

FURTHER TASKS IN THE RESEARCH

In the further stages of the research we plan structured interviews with 25-30 pedagogues to compare their answers with our findings in order to confirm or disclaim them. In the latter phases of the research we are going to examine the presence of the issue abroad and compare with our national findings. It is a fact that we have “less opportunities to talk about professional attitude, behaviour in an international comparison” (Nagy M., 2007). Completing the research we tend to compare our data to the related OECD indicators.

POSSIBLE IMPLEMENTATIONS OF RESULTS

The results could be applied mainly in the field of the teacher training, especially in the mental and existential preparing of the would-be-teachers. It has also an actuality, since the teacher training stands before a changeover from the traditional structure to the two-level structure (transition between the former traditional and the BA and MA levels of higher education), so these remarks can also add somewhat to the reform program and—at the collective level—to the identification of issues important to the community of teachers, would be teachers and teacher educators.

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UNIVERSITIES: A REGIONAL DIPLOMA-MILL OR A GLOBAL INNOVATION CENTRE?

PETER DOBAY

TRADITIONAL ROLES REVISED

The word “regional” should involve activity of an organisation towards many regional actors. Universities have always had a—minimum—role to communicate with the regional government, later with labor market agencies and politicians. Today universities also work as entrepreneurial organisations, attracting fee-paying students and participating in lifelong learning movements for adults. How are they to maintain their traditional roles—research and the training of talented young people—within these new circumstances? This article is going to focus upon these new challenges.

Traditional universities have always used the dual-objective strategy of “Research and Education” as “terms of reference”. While for hundreds of years universities emerged at venues where political or social circumstances supported (or, as a minimum, permitted) the cultivation of these aims on a relatively free basis, today, I suggest, the situation has totally changed.

In a global networked economy (and all these words have significance) the site, that is the locality in which to establish an institute for fulfilling these aims seems to be neutral. Is it compulsory to provide well-trained professionals for the local community? For which “community” in a unified Europe, where free movement of labour and ideas are among the main principals to live on? Second: is it necessary to run basic research in a situation where global companies spend 20-30% of their revenue for product development and related research projects and use global virtual networks of excellence involving university researchers? Does the “regional university” exist at all?

Medieval universities aligned structures to the mission and strategy of their time. Mainly they followed a voluntary organisation model; however, the regulations (the “statutum”) of the School had to be strictly followed by university citizens. The professors were anyway only responsible for the scientific community and their own

university bodies, although the students achieved high academic levels, and possessed real competence to modify the structures, invite professors and hence to change the direction of training.

In 1810 the Universität zu Berlin was established by the liberal Prussian educational reformer and linguist Wilhelm von Humboldt, whose university model has strongly influenced other European and Western universities. The idea of “free research”, freedom of intention towards any part and direction of sciences, pursuing “the truth and only the truth“ has become very popular within leading universities, as it emphasized the necessity of social funding of institutes that served the community, mainly with proven research results. The organisation of a Humboldt-type university is based on the “cathedra”, on the professor, who leads this research-oriented process. All can learn from the leading researchers—a strict hierarchy, a safe university career. I think this is the time to leave this path and turn towards much more flexible, service-oriented structures.

UNDERSTANDING TERMS: PRODUCTION, VALUE, CUSTOMER, PRODUCT?

Several Authors (Temesi, 2006, Barakonyi, 2004) are in debate over the “economical role” of a university today. A diploma in these contexts might be simply a “product”, families sending (and sponsoring) their children are “customers” and university programmes are “production processes”. The question in this case is to understand and accept the value of the diploma—customers pay for value only.

My guess is that there is no doubt that a modern university produces knowledge in two main forms:

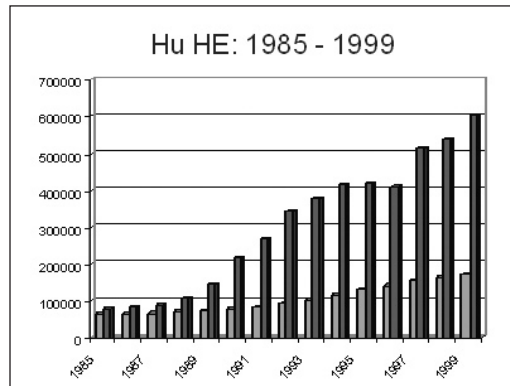
- First, it “produces” educated, creative, innovative people, graduates & researchers, bearers (and also end-users, builders) of knowledge;
- Second: it produces basic & applied research results, tangible innovations, which might support industrial and other field development.

What can the word “produce” mean in this context? In business, a company produces a product, offers a service,

- as a response to demands of customers, giving them value,
- while working effectively, fulfilling the requirements of owners and shareholders.

If this process is a value-generating process, who is the beneficiary? This question has become essential, as many of formerly state-sponsored universities have opened doors to mass clusters of students, fewer and fewer students are finishing their studies within the normal time period, and infrastructural investment prices have been rocketing sky-high towards a modern higher education. If a higher education institute is interested in enrolling more students (call it “value generating”) and in deriving the state funding, then it will follow that type of business model. The result is well known: the Hungarian higher education sector has tripled the number of students in 10 years (see Figure 1.).

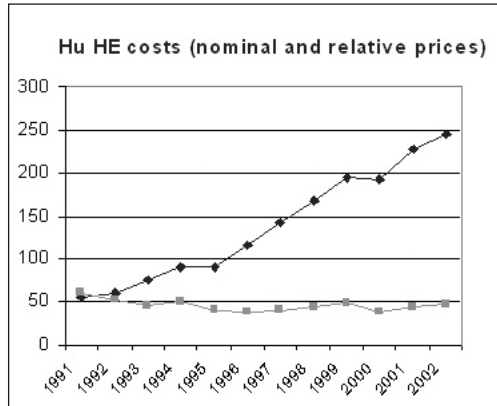
Figure . *The enormous growth of the number of students in the system*



(Source: KSH, OM)

Many arguments state that the benefit is a “state-level profit”, having more highly-educated people, they will have better qualified jobs, attract more investors, etc. This was an indubitable truth when countries normally enjoyed the labours of workers with degrees within their borders for decades as the normative. Now look at the EU, as an example of today: millions are “on the road”, having temporary or final workplaces in another country. If they are knowledge workers, their knowledge is an asset, having been accumulated in a higher education institute of their home country. The circle is closed then: it becomes very bad “business” to offer free home education and suffer—for many reasons—the loss of the educated population.

Figure . Growth in funding higher education



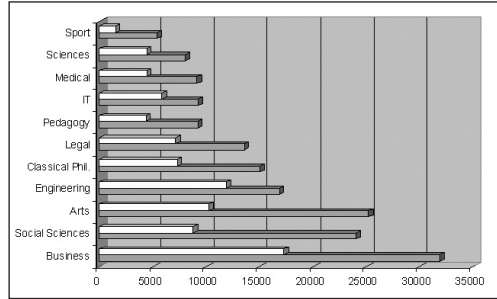
(Source: KSH, OM)

The real beneficiary is the student (and, indirectly, his/her family)—the “student-network”. I call them a “network”, as they interchange information about their future schooling, about faculty, about courses, performances, future job possibilities and all other problems around, together. All of these groups have different expectations, they have non-equal information and we compete for their decision. The knowledge gained (certified by a degree) is an asset for them, if used well as a resource, it can produce profit (i.e.: higher salaries, a better job and position in society, etc.). If an institute can produce good statistics to prove that alumni have better jobs, higher positions, higher salaries, the value generated by the educational process is given as acceptable evidence—this can be called a reference-based value. A huge problem is the information supply towards these “student-networks” about requirements while being in the institute, the full costs of educational programmes and, of course, the value of the degree in the labour market. To see just how biased the situation is, look at Figure 3. It shows what false expectations student-networks have about the future value of the demanded degree.

There is another case, which is important as well for our investigation: when the “product” is needed by a profit-oriented firm. The formula is clear here: if the production process (let it be anything) requires a special trained-educated-skilled workforce, a “university factory” can have production capabilities to produce the demanded number of people. Adult education, further educational forms, vocational trainings: all can produce direct value for a nearby company, offering a business-like alternative for a regionally embedded university. Many experts call those modern

institutes, where the educational budget is half covered by these type of activities—fee-paying courses, make-to-order type educational programmes, accredited testing and so on “entrepreneurial-type universities”—a new role, with a new paradigm: “serving the region”, instead of (or simply alongside) “serving science”.

Figure . Applications to study fields in , Hungary (accepted vs all applicants)

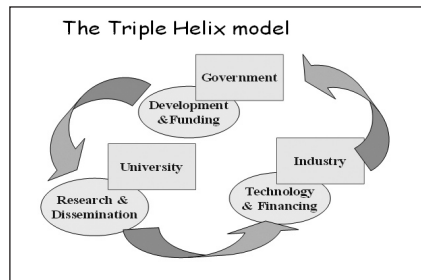


Source: Hungarian HE Statistics, KSH,

THE INNOVATION ISSUE: THE TRIPLE HELIX MODEL

There is another field of activities that has always been a role for solid HE institutes: scientific and industrial innovation. Today the well-known academic narrative, the Triple Helix Model, focuses on innovative ideas coming from the Universitas, on seed capital for basic research coming from Society (the State), and on “orders” for new procedures, products AND new knowledge workers coming from Industry (the Economy)—see the Figure 4. below.

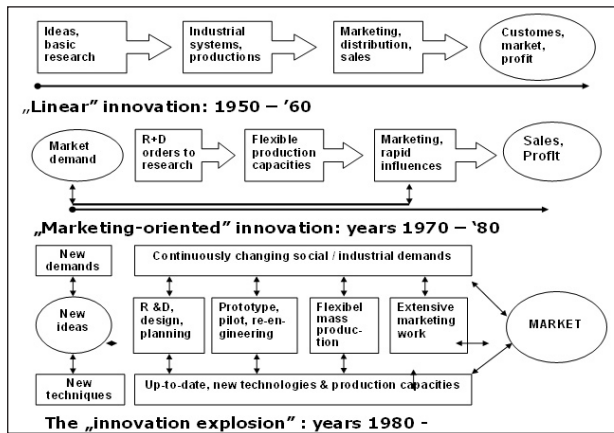
Figure . The Triple-Helix Model of regional innovation networks



Source: edited by the Author

The idea of a changing innovation environment is well-known from literature: the former linear model does not work any more (individual invention—industrial innovation—new product/service on the market—people pay for it—profit feedback to new experimental work). Figure 5 demonstrates the relationship of different partners of today’s world. In a linear innovation model the universities have the illusion that we do research, make publications, they come and pay for the idea. By the 1970s this process had changed radically towards “marketing-oriented innovation”: transfer organizations come with customer (market-) demands, offer funding for R+D centres to work on innovations. This is new stress and pressure for university centres, a paradigm shift: do they have to decide to insist on ideal academic freedom, or decide upon well-paid research-for-order? The third wave is here: the innovation explosion. The markets (industries, the army, large businesses, customer market, etc.) are demanding ever newer products, processes and services – the first to satisfy demand, wins all. Can a regional university play this role? If not, it does not matter: it can be a small research lab, it can be a software company in India, it can be somebody from Asia—in a global world of information exchange everyone is a competitor for a local university!

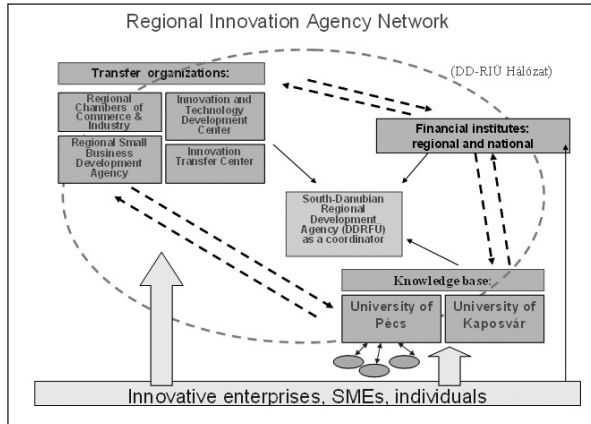
Figure . Change in innovation processes—new roles for R & D knowledge centers



Source: edited by the Author

Figure 6 demonstrates how this works at Pécs, Southern Transdanubia, Hungary. This TH model (The S-D Regional Innovation Network) explicitly shows relationships among knowledge-bases (universities), transfer organisations (agencies, expert networks, consultants) and financial partners (like state-origin and EU funding, banks, etc.).

Figure . The Triple Helix model implemented at the Southern TransDanubian Region



Source: edited by the Author

But numerous questions emerge even with this model. Would this rotating “helix” and the activities involved satisfy universities and academic communities—in academic and in business fields, too? How can the regional community transfer demands to a regional university of well-trained and locally “rooted” people to foster regional business development? Would it be possible to have resources from this university for lifelong learning, or for more “community oriented”, mainly basic level courses, if academic departments run for global high-tech research funding? Could university branches participate in local innovation projects and listen to SMEs, while they rather listen to “A” category publications in research papers and seek for global academic rankings? Can we call a regional university complex a “diploma-mill” disdainfully, if the regional needs are served well and satisfactorily? Where are the borders of the middle-aged phenomenon of “university autonomy” in a world of business efficiency and even, in some cases, economic crisis?

A honest answer could only be a compromise between the demand for world-class innovation and research, and small, application-oriented, field-research towards the region.

But, also, innovation should not be contained within the local city or region. Let me quote here a Hewlett-Packard story from the California Institute of Technology, one of the high-tech institutes of developed world. The local HP research centre offered a problem to CalTech students to create any ideas to support poor rural communities in India. The story is about two young women, Saraswati and Gowri. They live in a rural community called Kuppam, India, and it is about 100 miles from Bangalore, the most developed high-tech region of India. But at Kuppam, one in three citizens is illiterate, more than half of the households have no electricity, and many of the adults are HIV-positive. Now what HP students did: they packed a solar-powered digital camera and a solar-powered colour printer into a backpack and went to Kuppam. They trained the ladies, who started taking photos and had success in the villages around. Then they took some photos of local citizens posing together with a popular, elected politician. It seemed so successful they decided to follow the campaign tour and distributed very cheap photos to locals. This micro-business showed up a larger success in a week than long months of work before.

Is this a regional activity? Of course, not. In our global world a university can outreach to even India from Europe, or vice versa and innovations can be an inspiration and/or have an effective utilisation anywhere on the Globe.

THE RESPONSIBILITY TO SHARE

Regionalism means a diversified and developing labour market, means that the level of local services, development in local industries, space to live and the overall quality of life are safe for generations. Education is part of our life, part of everyone's life career. As the world around is increasingly more complex, more technical, more fast-moving, citizens need more and more time to spend on educational forms. Their need to learn is lifelong. The word "responsibility" is the best to use, when we take HE institutes as regional players on this ground. I strongly believe regional universities should form a new, broadening educational portfolio. Here are some of the reasons worth mention:

- new & developing professions need new training,
- fewer full-time students foster internationalisation,
- people at work (and/or engaged by other reasons) demand part-time & eLearning forms.

To know and understand these demands, we need professionalism. It means a new organisation, it means professionals to be employed, it means processes worked out. Some ideas:

- A professional “liaison office”, a “reachout center” or other solutions might generate more external effects upon decision makers,
- A special “regional policy” calls the interest of all partners to University offers,
- Building a “regional network” needs close co-working activities from university leadership towards regional governmental bodies and towards business representatives,
- Communicating the idea of a “Learning Region” should convince all partners: the University will never more be an academic ivory tower, with never-ending demands for a higher budget to spend—but an “embedded entity”, a serving organisation “Let Academia Serve the City”.

LOCALITY VERSUS GLOBALITY

Borders are not so strict and can even be transparent. See some arguments:

- Academic research has ever been a “global” issue, and this tradition should not change,
- In a “welfare society” students can be mobile, selecting distant venues to learn (even for only a semester abroad), if language barriers are easy to break—“global” universities emerge again, like in the Middle Ages!
- Additional “university services” can be globally marketed (textbooks, cases, Ph.D., lecturers, software, special trainings, research projects, educational methods, etc.).

What a university can do when training its decision makers to plan globally and act locally:

- An institute has to know and understand the borders (the scope) of the region itself and understand & declare what “locality” means. A region can be a city, an economic space, 100,000 or a million citizens, a poor or rich, a developing or a depressed area. If the University has misinformation about basic parameters this is a bad message to build a strategy.
- The institute has to understand the business and development trends of the region call it Role A/: Serving the regional labour market. Industries always need (and immediately need) specific labour, even executives, and if they cannot find them

locally, will go away from the region, or as a minimum, import people from far-off places. Neither is a good message to a regional training institute.

- According to the above, a regional institute has to offer a broad educational & further training portfolio—call it Role B/: Serving immediate community demands. business and social communities always change around: if a local university is narrowing its portfolio for any reason, another institute will emerge very soon. A market need forces players to react!
- As a consequence: we have to re-structure existing (and formerly planned) resources in line of the above—call it Role C/: Governing with a clear regional strategy. All partners around us should know we are able and we intend to serve regional educational and research / application needs—it has to be expressed in a real, strict regional strategy, publicly repeated at any possible occasion.
- And finally: we have to try forcing our labs and research centres to orientate research to local innovation—Call it Role D/: Applied research, regional reachout centres. Having a dedicated regional “Science Park” or similar organisation gives a clear picture to all would-be partners that we are committed to regional development, and we can do basic and even high-end research to support their aims. Future funding depends on this belief. If local players always run to the capital, or even abroad for a simple consultancy work needed—we have done a very bad job.

THE STAKEHOLDERS CONFLICT

Some words have to be said on possible conflict when turning towards regional directions. There could emerge academic conflicts, like

- Excellent departments may intend to be “global” in their research & even education,
- Installed and supported high-tech facilities, other resources might not be utilised well for local research,
- Traditional educational programs and courses are easier to run than creating new ones,
- Local problems are less attractive to solve with a traditional publish or-perish attitude of faculty.

But even the regional community should highlight conflicts, as:

- “Research” level seems to be a strange, unusual solution to solving regional problems,

- Local industries do not show a clear demand for basic and further education,
- No real links exist between academia & local agents,
- Local problems are usually solved by far-off consultants and researchers—do they have any reason to change this way of management?

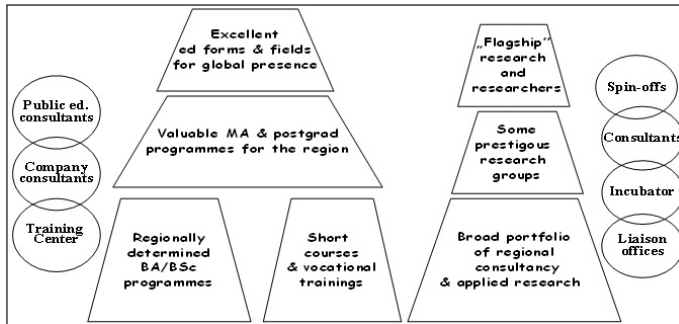
To solve these conflicts requires an indoor change management, with professional skills and with strong leadership commitment. Although universities are frequently called the most conservative organisations, environmental changes (not to forget funding restrictions worldwide) might lead to successful solutions.

FINAL ISSUE: ALTERNATIVES FOR A REGIONAL STRATEGY

We talked about “productivity”, “efficiency” and other business terms related to modern universities. Productivity is a probability process, as we never know whether a freshman will become a Nobel prize winner or will simply fall out during the first year! If productivity means only to issue more diplomas with less cost, we can call the institute a diploma-mill. Parents and student-networks have traditional perceptions, they listen to simple media messages, maybe they have a background informal network of opinions—and they believe in the institute’s reputation. Running a diploma-mill means duping the families and students by telling them they will have a valuable diploma, and cheating society with low level knowledge and missing competencies of graduates. Not a proud portfolio.

Allow me now to finish with an ideal structure for a regional university strategic organisation. Figure 5 shows a demanded level of standard BA level mass-education (“responsibility for labour market”), some valuable MA, MSC programmes mainly with regionally dedicated content. These programmes are running parallel with vocational, higher-level vocational courses and short traineeships, with strong links to local businesses and other labour needs. Research also has to be rooted into local demands, and if the institute is fortunate enough to be able to present some internationally accepted R+D teams, individuals—well, they should do so! Generate local support and be a flagship research topic for the institute.

Figure . Proposal for a regional paradigm in structure and in activities



Source: edited by the Author

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REGIONAL DIMENSION OF INVESTMENT ON RESEARCH

THE CASE OF THE SOUTHERN TRANSDANUBIAN KNOWLEDGE BASE

ZOLTÁN G&L

KNOWLEDGE CREATION: A NEW TOOL FOR REGIONAL COMPETITIVENESS

A general consensus exists on innovation-oriented regional development in the literature in which the utilisation of regional knowledge base, innovation potential and co-operation between businesses and research institutions continues to play an increasing role not only in regard to business success but also in the competitive economic performance of a certain region (Cooke, 1995).

Although several factors are influencing regional competitiveness, its driving forces still can be identified. The European Union's regional reports consider innovation, research and technology development to have the major potential in gaining competitive advantages. The competitiveness of regions can be increased by successful R&D activities within the region and by the creation and spreading of innovation in a wider sphere. Regional level innovation, and especially the practical implementation of R&D results may directly be manifested by the competitive advantages of the region's business enterprises (Lengyel, 2000).

The development of science and technology and their accumulated knowledge basis have become one of the key factors in the development of regional economy. Universities and research institutes as knowledge centres extending and disseminating comprehensive scientific information are playing an increasing role in regional development. A wide range of literature has studied the regional effects of the universities' research-development potential (Ács and Varga 2002; Varga, 2004). Not only has the direct support of universities increased significantly, but for regional governmental budgets the subsidisation of projects involving universities in various forms with the support of university-industry links are the biggest items of expenditure (Varga, 2004).

This paper provides an overview on the ERAWATCH regional benchmarking surveys—in which the Southern Transdanubian region participated—on innovation potential and investment into research surveys concentrating on the role of innovation networks, within them highlighting the special role of regional universities in collaborative research networks. The introduction will be followed by a demonstration highlighting the role of universities in national and regional knowledge transfer, emphasising the fact that the spatial (regional) structure of innovation is very much determined by the transformation of university potential and their widening innovative functions during the economic transition in Hungary. The next section will introduce the findings of the ERAWATCH survey (2006) on the role of universities in regional network building and university—industry links and will discuss those factors that are necessary for the establishment of a research university model.

THE ROLE OF UNIVERSITIES IN REGIONAL INNOVATION

Higher education has a potential influence on regional development, not only because of its place in the R&D sector, but also because of its dominant position in the training of experts responsible for producing technologically-developed products and competitive services. From this point of view, the rapid development of tertiary education, especially outside Budapest, plays a balancing role. The number of students has been growing rapidly since 1990, especially in the newly-established provincial tertiary education centres (Table 1).

Table 1. Share of Higher education in the Hungarian RTD indicators

INPUT	OUTPUT
RTD units: 70%	Published books: 77%
RTD expenditure: 25%	Published studies: 70%
RTD personnel: 57%	Patents: 32%
RTD personnel (FTE): 38%	Patents at EPO & USPTO: 16%
Share of doctorates: 72%	
RTD investment: 12%	

Source: CSO publications

Universities can have an impact on the economic development of their own region in two ways (Forax, 1992): on the one hand through the multiplier effect of the purchasing of students (a so-called expenditure effect) and on the other hand through the knowledge transfer (scientific, technical, technological and economic) from the university into

the business sector (knowledge effect) (Varga, 2004). A very important side-effect of technology transformation is that industries and companies manufacturing competitive products are selecting their sites on the basis of qualitative criteria.

Higher education is an extremely significant factor the attractive force for capital of which is secured not only by creating competitive advantages in the local labour market but also by its absorbing innovative capacities. It can be seen all over Europe that while the development of large technology systems concentrated in metropolitan agglomerations was mostly determined by the research-development units of large firms, the technology innovation of SMEs, the organisation of local and regional technology clusters in the majority of cases was initiated by institutes of higher education. The engine force of regional higher education can touch upon the development of the Western European core regions (Bennett and Krebs, 1991). In several Hungarian regions (for example in Southern Transdanubia) the higher education sector is the largest knowledge potential and value generator, yet at the same time it has fewer links with the industrial sector than would be necessary. The potential links between the two sectors should be identified and the institutional background of these links should be created. Successful cooperation between the business and university sectors may secure a favourable environment for innovation.

Enablement of the higher education system to exercise its innovative functions and to be capable of performing its *integrative functions* as an element of the innovation system (Horváth, 2003) emphasizes the necessity of at least preconditions:

- 1) Research should be regarded as a primary function of higher education. This should be reflected in its financing and the development of the knowledge potentials of university research bases should also have a key role.
- 2) The structure of higher education should be adapted to the requirements of a post-fordist economy and should be capable of generating technology and economic innovations.
- 3) National innovation policy and regional policymakers should support the institutionalised co-operation of higher education and business organisations.
- 4) Higher education should territorially be decentralised, institutional developments and university integrations should be in conformity with the aspects of the economy of scale. An optimal efficiency of scale with the institutions of the core region can create equal chances, both for accessing research funds and for joining the international division of labour in research and development.

Higher education, which is placed among the R&D performing sectors is very much in the national interest as it plays a significant role in innovation processes. The economic attractiveness of the regions and spread of knowledge depend largely on a spatially-balanced network of university-based research facilities, with special regard to their relation to companies (Gál, 2002). The Act on higher education defined the tasks underpinning a dual transformation of the universities so that research might be returned to them and traditional universities transformed into research ones.

Higher education has developed into Hungary's biggest R&D generating sector and while its share of Hungarian higher education from governmental R&D spending is similar to Western European ratios, lagging behind may be observed regarding two indices. One is the very low ratio of business sector funded research departments and the other is the very weak links between university research and the business sector. While in OECD countries the average rate of corporate funded R&D is 70%, in Hungary this figure was only 38% in 2002. The ratio of R&D expenditures to Hungarian GDP is also low (0.3%), especially when comparing it with the 0.87% of Slovenia or with the 1.2% EU-15 ratio.

However, most of the university-based research units are too small to be effective both in terms of the share of researchers and overall R&D expenditure. Despite the co-operation between universities and the private sector, and participation in multilateral scientific programmes, the R&D budgets of universities are largely dependent on governmental subsidies.

DESCRIPTION OF THE REGIONAL KNOWLEDGE BASE IN SOUTHERN TRANSDANUBIA

The knowledge (RTDI) infrastructure, which includes universities and research centres, plays a significant role in the knowledge creation capacity of the regions. This infrastructure, which is easily accessible to firms, may constitute the foundations of innovative systems (using proximity arguments), but not automatically. There are many cases reported where HEIs or research laboratories operate in relative isolation from the regional productive processes, in particular when they concentrate on formal educational duties rather than covering the wider range of functions of a modern university, when they are active in sectors that lead them to have better connections with firms outside the region or when they focus exclusively on basic research.

knowledge transmission mechanisms and knowledge enhancing linkages, including university-industry and intra-industry links such as technology intermediaries, spin-offs and inter-firm research collaborations, as well as the development of science parks and technopoles are important factors in strengthening the knowledge diffusion capacity of the regions. The knowledge enhancing linkages, ideally based on a dense interaction of interdependencies between research establishments and firms and/or among firms themselves, evolve into trust relationships that characterise, for example, economies of scope.

Southern Transdanubia is not among the wealthiest regions in Hungary. Until the mid-1990s Southern Transdanubia had the poorest R&D capacities in Hungary (in 1995 only 3.5% of all R&D employees worked in the region and not more than 1.5% of the total expenditure was realised here). This setback in R&D activities was an outcome of the disintegration of those large enterprises and research institutes engaged in R&D. The Southern Transdanubian Region has the largest provincial university centre in Hungary (Pécs) in terms of the number of students (34,000), and the two universities (Pécs, Kaposvár) in the region have significant research capacities in certain fields. The HEI sector plays a dominant role in R&D performance as it accounts for 78% of total RTD expenditures. Despite these endowments RTD creation of the business sector in Southern Transdanubia is limited (3.4 M € BERD in 2003). Outputs of R&D and the uneven disciplinary structure of higher education are not very advantageous from all points of view of innovation. Southern Transdanubia's regional GERD was 22 M Euro in 2004, which is only 3.2% of Hungary's total.

Based upon the key indicators (measured as a percentage of the national average) the following picture of the regional knowledge base of Southern Transdanubia can be drawn. *the region has large public infrastructure mainly based on the two universities absorbing more than two thirds of regional* . Among them, the University of Pécs has a dominant position. It hosts 87% of the enrolled students and 84% of the research staff of the HEIs. Unlike the public RTD sector, the visibility and the performance of the business sector is very low, even in comparison with the national average. Universities are the major employers of RTD personnel. They account for three quarters of the total RTD personnel of the region. The remainder is divided almost equally between the corporate and public RTDI sectors. As a percentage of total employment with the national average (=100%), Southern Transdanubia's share of RTD personnel is 73%. However, there are huge differences

in expenditures between the different sectors. HEIs exceeded the national average (107%), while RTD personnel make up very small shares of the total in business and the government sector, accounting respectively for only 28% and 25% of the national average, (Graph 1).

the orientation of the knowledge creation activity of the region is based to a great extent on the scientific profile of its universities. Of all the knowledge creation sectors, HEIs' have the strongest potential in life science (biotech and animal cytology) research and they also have a good reputation with measurable RTD outputs in laser physics, environmental and agrarian research. At the same time, engineering and some fields of science (informatics, electronics and chemistry) are proving to be the weakest elements of the regional RTD base.

The strength of *the life science (biotech) research base* is demonstrated by its large share of total input-output indicators and also by the increase of RTD spending in this field (€4.8m in 2004). In addition, the 11 university spin-offs in the biotech sector are tightly connected to the Medical School (MS) which has 48 employees (40 of them with an HEI degree) and produces a turnover of €3 million (2004).

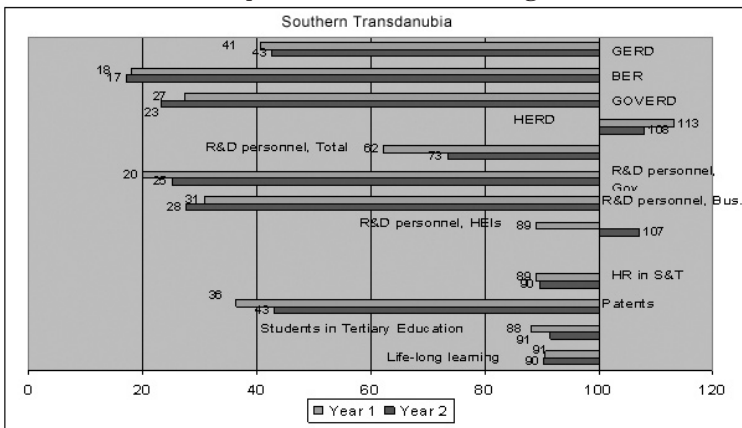
in contrast to this positive trend, the share of engineering in total personnel especially in the fields necessary for technology change (micro-electronics, informatics, automation), dropped from 8.9% to 6.9% during the short period from 2002-2004. Due to the uneven disciplinary structure of HEIs the outputs of the RTD sector in the region are not very advantageous and from the point of view of innovation are clearly characterised by lower patenting activity in the region. There was a similar decline in the proportion of researchers in natural sciences and also in agrarian science (which declined from 6.6% to 5.4%, and from 8% to 7.3% respectively). The traditional overrepresentation of researchers in social sciences and humanities is changing only slowly, and even though their share has declined from 42% to 29.5%, it is still high (Graph 1).

the lagging position of the region is best expressed by the expenditure indicators measured as a percentage of . Comparing the performance of the region in relation to the country as a whole, the GERD only improved slightly during the last decade, reaching only 43% of Hungary's average. The largest increase in R&D expenditure in the case of Southern Transdanubia can be observed in the HEI sector, illustrated by its high HERD figure of 108% (above the national average). Unlike the

¹ University of Pécs and University of Kaposvár.

HEI sector, the limited RTD activity of the business sector is the main characteristic of regional RTD performance, accounting for only 17% of Hungary's average as a percentage of GDP. *his figure is lower than the expenditure of the government sector* (23%).

Figure . Key indicators on Southern Transdanubia's knowledge base development in comparison to the national average



Source: calculated by the Author based on EUROSTAT data

Note: The following years were used for BERD, GERD, HERD GOVERD , ; R&D personnel , ; HR , ; Patents , and Lifelong learning , .

UNIVERSITY INDUSTRY LINKS: CULTURAL BARRIERS?

Through their integration into national and international knowledge bases and networks, universities and research institutes are functioning as potential knowledge bases for companies in their environment even if universities are generally less embedded into their regional context and prefer national and international co-operation (Koschatzky and Sternberg, 2000). The importance of universities compared with customers and suppliers is by far less for the business sector than as information and knowledge bases. It is obvious that small companies are co-operating with universities to a lesser extent and local SMEs particularly rarely communicate with universities for technology information, but in the case of co-operation geographical proximity certainly plays a key role in connection

building. It seems obvious that the co-operative affinity of SMEs is the smallest, yet it is they are who are most in need of co-operation. In the case of co-operation, SMEs naturally prefer establishing relations with local knowledge bases (Koschatzky and Sternberg, 2000).

In regional innovation surveys special attention is paid to universities as major sources of regional innovation. One thing that our survey assesses is the importance of universities in comparison to other actors of innovation systems with the channels of knowledge transfer and also the geographical features of knowledge flow between universities and industrial companies. In some less developed regions the university sector has no links with the economic sector.

It is clear that most Hungarian businesses do not want to collaborate with any non-business organisations. The most popular non-business organisations for past and future co-operation in the Southern Transdanubian Region are the Chambers (47%), the University of Pécs (40%), and the regional innovation centre (DDRFÜ) (37%).

The spatial extent of knowledge flows emanating from university research laboratories has attracted considerable attention in the international literature. There are theoretical arguments for localised knowledge transfers (the importance of tacit knowledge, the role spatial proximity plays in easing maintaining interactions etc) which are to a large extent supported by empirical evidence; however, substantial variation can be observed according to firm size, industrial sector or the stage of innovation (Varga, 2002).

It is clear that university research units more frequently collaborate with local (within the region) firms and the intensity of co-operation vanishes with distance. There are also notable differences across research fields. Whereas for some scientific fields we can observe that active local collaboration is followed by active domestic and international interactivity with firms (physics and surgery) for some other fields (such as informatics and construction) localised connections are more important than collaborations with distantly located companies.

Several hindering factors may be owed to universities in building regional level relations. Universities are operating by their own rules and principles, which are hard to make compatible with the objectives of the business sector. Both universities and companies are organised by their own differing logical, cultural and organisational limits, which raises difficulties in co-operation between the two parties. The majority of university research departments carry out basic or applied research, but very few

university research organisations are joining experimental development projects. The interest of universities in co-operating with business sector is much more oriented towards short-term fund-raising than towards a strategic development of the innovation chain. Universities with industrial links are rather more interested in projects involving large-scale funding than in the support of SMEs. In several cases the purchase of technology licenses from outside the region is much more profitable for companies than intraregional innovation co-operation.

Thus, the potential areas of co-operation should be identified between the two sectors and an institutional background should be created for these links (Table 1). A successfully co-operating business and university sector may secure an innovation-friendly environment. The majority of researchers is doing basic research and despite the difficulties in the financing of higher education are uninterested in direct co-operation with the business sector as yet. Research tasks are fragmented, the concentration and their corporate relation system are weak, and market-oriented research development is still a rare phenomenon. To provide an example from the University of Pécs, being one of the largest provincial universities in terms of student numbers, recently a five-year contribution by the business sector project to the university's total income was about the third of the one year total budget. Spin-off ventures originating from universities have important functions, although they are rare cases in the LDRs (Gál, 2003).

Generally, the co-operation of universities and research institutions with businesses and especially pre-competitive research have positive impacts on the business success of companies and the region's economic performance, yet large and medium-size companies have more extensive relations with universities though these links are crossing the border of their region and this seems to support the theory of the low impact of universities on their region. For all that, the building of information and technology transfer links between SMEs and university R&D bases and the co-ordination of university re-training and information courses are very important for both sectors.

Table . Motivations behind university-industry co-operation

UNIVERSITY	INDUSTRY
Decreasing state support: gain additional financial resources	Knowledge has become the main factor of business competitiveness
Increasing cost of R&D: force to co-operate	Access to knowledge base/R&D infrastructures
Developing the service & knowledge transfer function of the university	Outsourcing: involving academic expertise
Increasing researchers' practice in outer contracts	Strengthening external relations of companies
New challenges of experimental research & development	Increasing pre-competitive R&D
Direct link to the labour market; an increasing labour mobility	Acquaintance with students as potential future employees
Practice-oriented training	Influence on improving the training structure and curriculum
Strengthening Spin-off enterprises	Favourable start-up conditions
Stimulating Regional development	Stimulating economic development

Source: edited by the Author

ASSESSMENT OF THE REGIONAL INNOVATION SYSTEM IN SOUTHERN TRANSDANUBIA

Here we try to assess the efficiency and coherence of the RIS with regard to the needs and capacities of the regional economies and the extent of matching or mismatching between knowledge and economic specialization (Table 2). Southern Transdanubia is considered to be a backward region in terms of RTD and the knowledge absorption capacity in its economy, and the basic conditions for change in the technology sphere were rather unfavourable in the region during the transition period.²

ublic sector infrastructure investment, which is dominated by the local universities is much larger than the investments and the capacity of the business sector in southern Transdanubia. The orientation of the knowledge creation activity of the region is to a large extent based on the research profile of the two universities. As regards the relationship between RTD and economic specialisation, we found a stronger correlation in certain traditional fields with a considerable research background (agrarian research). Universities have also built up strengths

² Some restructuring can be seen within the industrial sector, moving towards mechanical engineering and the emergence of high-tech electronics through foreign direct investment; however, the share of labour-intensive, lower-tech sectors, such as the food, textile and leatherwear industries, is still above the national average.

in *biotechnology, laser physics and in environmental science, demonstrating the most promising and deeply rooted avenues of research for the future development of the region*. The new clusters of the biotech, health and environmental industries have been built on the expanding knowledge creation capacities of the affiliated faculties and the enterprise networks. *evertheless, the industrial bac ground of the region in these fields is still weak*. Therefore, *the research outputs from biotech (produced by the university spin-offs) are still mainly utilised outside the region*.

When comparing the matching of the *economic structure in the region with its knowledge specialisation*, some discrepancies can be observed. In contrast to the positive trends in RTD, some fields of natural science are rather under-represented in terms of the research capacity in engineering, while social sciences and humanities with less direct economic benefits are over-represented. The absence of a strong research capacity in S&E during the 1990s became one of the serious obstacles to the modernisation of industry, as it was unable to meet the demand coming from the high-tech companies located in the region. The shortage of highly skilled engineering graduates at the University of Pécs and the lower standard of RTD at the Faculty of Engineering in the fields of informatics, IT and electronics contributed in large measure to the relocation of the NOKIA plant from Pécs in 1999. In the case of engineering, both the weaker research capacities and the low demand from the underdeveloped branches of local industry compound their respective handicaps.

the private sector in the region is dominated by firms operating in low/medium-tech sectors () characterised by a lower level of innovation. The smaller number of indigenous large companies mainly specialise in traditional LMT industries (food, textile, leather). A few large enterprises in high tech electronics (mainly multinationals or locally based joint-stock companies) have been engaged in high-tech activities, but their influence on the local RTD sector is considered to be marginal, as they usually rely on the in-house RTD activities of their parent companies importing the technology from outside the region. Nevertheless, a few dozen innovative SMEs with significant RTD performances are to be found in the biotech, IT, plastic and the mechanical engineering sectors. *in general it can be said that the capacity and visibility of the business sector is still low and the region is heavily dependent on public funding*

However, the main reasons for the poorer performance in RTD activities are the following: on the one hand, the mismatch between the economic and research specialisations, combined with the low share of the business sector in RTD

investment, the high share of the traditional lower tech sectors, the small size of local SMEs and the consequent lack of resources to invest into RTD and absorb its results and, on the other hand, the lack of demand for research results from larger (mainly foreign) companies and, to some extent, the lack of the necessary knowledge supply in the region in certain fields. These factors, together with other mismatches in economic and RTD specialisation, explain why demand for research results in the region remains low.

From a study of the relationships between the regional economic structure and knowledge creation it can be concluded that establishment of the local knowledge base in some cases (e.g. laser research) did not take the existing sectoral specialisation of industry into consideration. In other cases, the extensive agrarian research base, strongly linked to the agro-food sector, is slightly loosening their sectoral background due to the structural decline of agriculture during the transition. The biotech sector, based on the Medical School research teams and university spin-offs, relies to a much lesser extent on local RTD co-operation. As a result, the players have integrated into the interregional RTD networks, establishing co-operation with companies outside the region.

Other research bases in S & E were established in order to extend the disciplinary profile of the HEIs during the 1980-90s, and their development was based on their internal dynamics rather than on local economic development. RTD processes have been speeded up recently, mainly through accelerated public investment. In the future, RTD investment ought to rely much more on the business sector contribution in order to ensure the direct economic benefit of RTD activities which can foster industrial modernisation and economic restructuring of the regional economy.

the conclusion can be drawn from the findings of the survey that RDTI intensity is not necessarily a decisive element of regional growth. It should be emphasised that the region needs to build on existing capacities rather than attempting to build their strategies by reference to as yet undeveloped or non-existent technologies, industries or fields of research. Nevertheless, an international reputation in university-based RTD activities (e.g. biotech), even without an extensive local industrial background, would make the regional knowledge centres more attractive for business sector investment, which may lead to the location of new plants in the region. Also, when making RTD investment decisions, the importance of the regional context and the established policies have to be taken into account.

Table . Strengths and weaknesses of the Regional innovation system

	Strengths	Weaknesses
Knowledge creation capacity	<ul style="list-style-type: none"> - Strong university base with wide disciplinary profile - The largest provincial university centre in Hungary in terms of the number of students (UP) - Strong RTD base at HEIs in agro and life sciences 	<ul style="list-style-type: none"> - Weak and biased RTI base, - Uneven disciplinary structure in HEIs' RTD (over-representation of social sciences, weaker S&E base) - Limited RTD activity of business sector - Lower share of national GERD indicates the lower fund absorption capacity in the region - LMT sectoral dominance in the case of SMEs - Low level of patenting activity
Knowledge diffusion capacity	<ul style="list-style-type: none"> - The region has developed technology and business park infrastructure - High-tech oriented university spin-offs with good performance in Biotech 	<ul style="list-style-type: none"> - Technology transfer/liaison infrastructure still in its initial phase and lacks resources to supply all needs of SMEs
Knowledge absorption capacity	<ul style="list-style-type: none"> - General HR endowment of the region is close to the national average 	<ul style="list-style-type: none"> - Participation rate in Lifelong Learning is half of the EU-15 average - Share of HR in S&T is below the national average - Students in tertiary education is lower than the national average
Interactions of main actors	<ul style="list-style-type: none"> - Huge variety of collaborative programmes from informal networks, clusters to the Regional University Knowledge Centres – introduced - Active participation by a few innovative firms in a variety of collaborative ventures 	<ul style="list-style-type: none"> - Difficult to orientate and choose among the forms that best fit the participants' needs - Overall low intensity of participation and low level of utilisation of results - Weak communication among the different sectors / potential partners
RTDI governance capacity	<ul style="list-style-type: none"> - Reorganised RTDI governance structure following EU recommendations, growing regional awareness 	<ul style="list-style-type: none"> - Centralised policy-making but rather weak coordination among the different national bodies - Lack of legislative and decision-making right and financial resources of the regions

Source: edited by the Author

SUMMARY

The role of universities and research institutes as knowledge centres improving and disseminating comprehensive knowledge have an increasing importance in regional development. Today the facilitation of the spatial diffusion of knowledge, the spatial mechanisms of knowledge transfer and the access of business sector to knowledge bases are priorities in support and development policies (Landabaso, 1997). A general consensus exists on innovation-oriented regional development in which, through the co-operation between businesses and universities, it continues to play an increasing role not only in regard to business success but also in the economic catching up of a certain region.

Spatial differences in economic development have serious impacts on the network relationship of universities and business organisations. The differences between the advanced core regions of metropolitan agglomerations and the most backward regions are manifested in the relationship between universities and their environment. In his research, Attila Varga points out that agglomerations are not negligible factors of the efficiency of regional development policy. With the same amount of university expenditure the impact of university knowledge transfer is significantly higher in areas of high industrial density than in smaller towns (Varga, 2000). This statement is highly important from the aspect of economic policy suggesting that the support of university researches for stimulating local economic development may be an outstanding instrument in case of advanced regions but not necessarily for the backward areas.

Most of the sample businesses still view the university as a traditional educational centre. The most significant impediment of a stronger co-operation between university units and businesses is the limited information about each other. Most firms have no information about what the university is doing besides education, while university researchers and staff have only rather dim ideas about business needs and the potential business application of their research. It is very positive that recently most university researchers now at least recognize the requirements of the practical applicability of their research, but acceptance and appreciation of business requests are still under way.

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THE EUROPEAN DIMENSION OF HIGHER EDUCATION BETWEEN THE LISBON STRATEGY AND THE BOLOGNA PROCESS

CRISTINA BOJAN

INTRODUCTION

Changes of the last 60 years in Europe and in the whole world have affected education both in theory and in practice. One of the most important changes was initiated by the Bologna Declaration. This running process presented and is still posing many challenges for higher education at the level of the national education systems. Another important element of the reform process of higher education area is the Lisbon Strategy, but this regards only the member states of the EU. The Implementation of the European Dimension in higher education is an objective of the Bologna Process, but how can/should one implement it following the concepts/policies in these two contexts? And first, what is the meaning of the phrase European dimension of education, and especially of higher education? What should be implemented?

I suggest recognising different contexts—a global one (outside of the EC/EU) within the context of the Bologna Process, and the EC/EU context within the Lisbon Strategy—to try and outline the parameters of a debate about the definition of this concept.

A global context—What does the European dimension of education mean within the context of educational policy co-operation outside of the EU?

After the Second World War many Europeans from different geographical points of the continent pronounced their wish to act against the possible repetition of a catastrophe like this. The result of this “hard lesson of history” was the foundation of many international organisations, whose common point was the trauma caused by the War, which formed objectives like economical rehabilitation, peace-keeping and the development of an education for democracy and for peace. Included among

such organisations are the UNESCO, the OECD, and the Council of Europe, whose educational profiles I would like to briefly present.

UNESCO¹ functions today as a laboratory of ideas and a standard-setter that forges universal agreements on emerging ethical issues, and helps its 192 Member States and six Associate Members to build their human and institutional capacities in various fields.

The Organisation supports governments and institutions worldwide in building capacity and formulating educational policies and strategies. The activities of UNESCO-CEPES² are focused foremost on higher education in Central and Eastern Europe. Since September 2003, UNESCO-CEPES has been a consultative member of a Follow-up Group of the Bologna Process (BFUG), which is tasked with the implementation of the Bologna Process goals.

The mission of OECD³ is to help its member countries to achieve sustainable economic growth and employment and to raise the standard of living in member countries while maintaining financial stability—all this in order to contribute to the development of the world economy. Its Directorate for Education helps member countries achieve high-quality learning for contributions to personal development, sustainable economic growth and social cohesion. It focuses on how to evaluate and improve outcomes of education; to promote quality teaching and to build social cohesion through education. It also works on the adjustment needed by tertiary education in a global economy as well as on the future of education and strategies for promoting lifelong learning.

Inside the *ouncil of urope*⁴, *ducation*, Culture and Heritage, Youth and Sport are also coordinated by the department *ducation for urope*, which has the mission of

¹ United Nations Educational, Scientific and Cultural Organisation, which was founded on 16 November 1945 with the goal “to build peace in the minds of men” through means like Education, Social and Natural Science, Culture and Communication. http://portal.unesco.org/en/ev.php-URL_ID=3328&URL_DO=DO_TOPIC&URL_SECTION=201.htm, 29.09.2007.

² European Centre for Higher Education/Centre Européen pour l’Enseignement Supérieur was established in September 1972 with a view to promoting co-operation in higher education among Member States of the Europe Region (the countries of Europe, North America, and Israel). At present, the Director of UNESCO-CEPES is the Representative of UNESCO in Romania.

³ The forerunner of the OECD was the Organisation for European Economic Co-operation (OEEC), which was formed in 1947 to administer American and Canadian aid under the Marshall Plan for the reconstruction of Europe after World War II. The OECD took over from the OEEC in 1961. www.oecd.org/pages/0,3417,en_36734052_36734103_1_1_1_1_1,00.html, 29.09.2007.

⁴ The Council of Europe was founded in 1949, to develop throughout Europe common and democratic principles based on the European Convention on Human Rights and other reference texts on the protection of individuals. http://www.coe.int/T/e/Com/about_coe/, 29.09.2007.

*“helping to incorporate the principles of human rights, democracy, tolerance and mutual respect, the rule of law and peaceful resolution of conflicts into the daily practice of teaching and learning”*⁵... To name only a few programmes and trainings run by this department, they include Education for Democratic Citizenship and Human Rights, Intercultural Education, Language Policy, Partnerships for Educational Renewal, and the Training Programme for Education Professionals.

Regarding the educational profiles of the above-mentioned international organisations, it can be concluded that the European dimension of education is defined through the activities and programmes of these organisations, meaning universal agreements on emerging ethical issues, international collaborations to sustain economic growth and social cohesion through promotion of quality teaching, education for democratic citizenship and human rights, intercultural education, promotion of linguistic diversity and language learning.

This superficial contour of the European dimension of education is important in order to see its common elements with the European dimension of higher education as defined in the context of the Bologna process.

What is meant by the European Dimension of Higher Education?—A definition in the actual context of the Bologna Process

The European Dimension of education can be defined in the context of the Bologna Process. At the outset one is confronted by one of the aims of the Bologna Declaration: “Promotion of the necessary European dimensions in higher education, particularly with regards to curricular development, interinstitutional co-operation, mobility schemes and integrated programmes of study, training and research” (Communiqué of the meeting of European Ministers in charge of Higher Education in Bologna, 1999: 4)

By the next meeting in *rague* the Ministers “called upon the higher education sector to increase the development of *modules, courses and curricula at all levels with “ uropean” content, orientation or organisation*. This concerns particularly modules, courses and degree curricula offered in partnership by institutions from different countries and leading to a recognised joint degree.” (Communiqué of the meeting of European Ministers in charge of Higher Education in Prague, 2001: 2)

⁵ www.coe.int/T/E/Cultural%5FCo%2Doperation/education/

Two years later at the meeting *in Berlin* the Ministers reported that “initiatives have been taken by Higher Education Institutions in various European countries to pool their academic resources and cultural traditions in order to promote the development of integrated study programmes and joint degrees at first, secondary at tertiary level. Moreover, they stressed the necessity of ensuring a substantial period of study abroad in joint degree programmes as well as proper provision for *linguistic diversity and language learning so that students may achieve their full potential for European identity, citizenship and employability*.” (Communiqué of the Conference of Ministers responsible for Higher Education in Berlin, 2003:6)

In the *Bergen communiqué* (The European Higher Education Area – Achieving the Goals), the promotion of the European dimension does not appear separately like an independent point in the paper, but the Ministers stress only the importance of mobility of students and staff, whose realisation will be facilitated and supported by them. “We reconfirm our commitment to facilitate the portability of grants and loans where appropriate through joint action... We shall intensify our efforts to lift obstacles to mobility by facilitating the delivery of visa and work permits and by encouraging participation in mobility programmes.” (Communiqué of the Conference of European Ministers Responsible for Higher Education, Bergen, 2005: 4)

At this year’s meeting, in the London Communiqué, the mobility of staff, students and graduates remains a core element of the process, “creating opportunities *for personal growth, developing international co-operation between individuals and institutions, enhancing the quality of higher education and research, and giving substance to the European dimension*.” (Communiqué of the Conference of Ministers responsible for Higher Education, London, 2007: 2)

Summing up the elements of the above communiqués, the European Dimension of Higher Education can be defined by its goals, which are the following:

- Development of modules, courses and curricula at all levels with a “*European content, orientation or organisation*,”
- development of the international co-operation between individuals and institutions and the joint degree recognition,
- development of the mobility schemes and integrated programmes of study, training and research,
- promotion of linguistic diversity and language learning,

- The achievement of full potential for *European identity, citizenship and employability of students, with mobility creating opportunities for their personal growth*

We can conclude that the core goal of the European Dimension is the development of mobility, seeing that this can “give substance” to the European dimension, and that the realisation of the implementation of European Dimension of Education will happen at an institutional and an individual level. Regarding the implementation reports we have to mention that at this time the implementation of the European dimension is focused primarily on the goals that can be realised at the institutional level. The goals regarding European identity, citizenship and personal growth do not have enough “substance” to be implementable. They touch the individual level: the European identity can form on the stratification of a more local personal identities of individuals; the notion of citizenship (I think what is meant here is active citizenship) presupposes a European “state”, knowledge about this “state”, an understanding of democracy and of the importance of citizens in this form of government and of the form of life in a Deweyan⁶ sense, and a personal intention to act. In the case of the non-EU member states it raises the question of what kind of European citizenship they need. What do they understand by “European citizenship” in the context of the Bologna Process?

Concerning the opportunities for the personal growth of students created by mobility, it is difficult to define exactly what it means and to find an adequate method to check the realisation of this goal. The development at all levels of modules, courses and curricula with “European” content, orientation or organisation can support the formation of an European identity and citizenship, of course only in the frame of institutional education, which has its limits. But what shall constitute this European content or orientation? Should it be oriented on common values or should it be on information and knowledge about the structures and function mode of the European Union? (This second option is more available for the EU member states).

Education for democracy and intercultural education (practiced in the form of different programmes of the Council of Europe) can help to find “European content” and its implementation methods, especially at the “individual level”.

⁶ John Dewey in his “The ethic of Democracy” makes the difference between democracy understood as a simple technique of the periodical election of leaders, and democracy as a “form of life”, which is present in all the units of society. It begins in the family and continues in increasingly larger contexts of society.

The educational policy-context of the EC/EU—The European dimension of Higher Education between the Bologna Process and the Lisbon Strategy

The Bologna Process is an intergovernmental process which began formally with the signing of the Bologna Declaration on 19 June, 1999 by the ministers in charge of higher education from 29 European countries outside the political framework of the European Union. Today, the Process unites 46 countries, both members and non-members of the European Union, all party to the European Cultural Convention⁷, that co-operate in a flexible way, involving also international organisations and European associations representing higher education institutions, students, staff and employers. Regarding the history of the development of the co-operation in the higher education area for the last 40 years, it is important to mention that events like the foundation of the *European Universities Committee* and its activities culminating in conventions on equivalence like the *European Convention on the Equivalence of Diplomas* leading to Admission to Universities (1953); the *European Convention on the Equivalence of Periods of University Study* (1956) and the *European Convention on the Academic Recognition of University Qualifications* (1959), the foundation of the *Council for Cultural Co-operation* (1962) and its aim to promote student and teacher mobility (1974-77) (Council of Europe: *Forty years of European Cultural Co-operation*) give the background for the Bologna Process of today.

The European Commission, representing the European Union, became an active participant of the Process only in 2001, at the Prague Summit on Higher Education on March 19th 2001. Here it was decided that the hosts of the evaluating summits of the Process will be the countries of the presidencies of the European Union, and they will manoeuvre the monitoring professional corpus.

One argument for the later participation of the European Union in the Bologna Process is the development of its own strategy in politics of education at the level of Higher Education, which is the Lisbon Strategy. The two processes do not weaken but fortify each other; their aims are more complementary than concurrent. (Halász, 2007: 3)

⁷ Founded after the Second World War, the European Cultural Convention is considered the earliest instrument on multilateral and European cultural matters. Its drafting in 1952 by the 4th session of the Committee of Cultural Experts, was responsible for the conduct of multilateral cultural projects, and was approved and signed in September 1954 by the Committee of Ministers and the Consultative Assembly.

The objectives of the Convention are: 1. to support to further understanding of one another among the peoples of Europe and mutual appreciation of their diverse cultural traits, particularly by facilitating the movement of persons and cultural objects. 2. to aim to encourage national contributions to the common cultural heritage of Europe. 3. to seek to promote cultural activities of European interest so as to preserve European culture. See more 50th Anniversary of the European Cultural Convention, http://www.coe.int/t/dg4/culturalconvention/Origines_en.asp, 29.09.2007.

To better understand the importance of these two processes and their role in the development of the concept of European Dimension it is necessary to briefly present *the development of the educational policies of the E and European Union*.

The development of the educational policies of the EC since the 1960s has had a programme-oriented, distributive character. A clear presentation of this development is given by Aristotelis Zmas, who presents it in its chronological phases (Zmas, 2002).

The first period, between 1957 and 1967, was a period of preparation of the common education law, and began degree recognition (in the 6 countries) for medical, dental, pharmaceutical and architectural studies.

The second period began with the Conference at the Hague in 1969 (at which the 6 countries participated) when they recognised that education could have an important role in European Integration. 1976 marked the start of the “Actions program for co-operation in the education area” with goals like the deepening of common actions in the area of Higher Education, the perfection of the education of foreign languages, the intensification of reciprocal information and the co-operation of the national educational systems. In 1975 the *edefop* (European Centre for the Development of Vocational Training) was established to help, promote and develop vocational education and training in the EC (European Community) and presently in the European Union (EU). And four years later, in 1980, the European Commission and Member States established Eurydice (the information network on education in Europe) to boost co-operation by improving understanding of systems and policies. Since 1995 *Eurydice* has also been an integral part of Socrates, the Community action programme in education.

The third period had the motto “The Europe of citizens”, and focused on the developing of different programmes to bring the United Europe into the everyday life of its citizens. A few of these programmes are Comett, Erasmus/Socrates, Petra, Lingua, Tempus, and Youth for Europe, etc.

The fourth period began with the Maastricht treaty in 1992, in which Articles 126, 127 and 128 define education, vocational training and youth, as well as the culture of the new European Union. It defines educational policy as something with limited reach, because education and culture are managed on the basis of the subsidiarity principle, meaning that the member states take responsibility for decisions about the content of education and the forming of the educational systems, and manage the multiplicity of cultures and languages (Zmas, 2002: 81-90).

A consideration of this short presentation of the development of European educational policies allows us to conclude that education from the beginning was considered as a part of economical and employment policies and that harmonisation (if we can speak about such a thing) has primarily been concerned with vocational training, general education and the diploma agreement in certain sciences. Another important point is that parallel with the economical character a “European dimension” has developed as well. Here the programmes of the “Europe of citizens” period come to mind, which have the aim to form, to make people aware in the public sphere of a common European background of everyday life which can sustain a forming European identity. Today this political slogan gives the name to a larger programme, the “Europe for citizens” 2007-2013⁸, which provides the Union with instruments to promote active European citizenship. It responds to the need to improve citizen’s participation in the construction of Europe and it focuses on the European political foundations, civil society organisations, town twinning, etc.

As a continuation of this chronology we can interpret the Lisbon Strategy as a fifth period of the development of European educational policies, which brings important changes with it. In 2000 at the summit in Lisbon educational policy was considered not only a part of employment policy as it had done earlier, but even more common political aims for Higher Education were decided upon as well and a bigger budget was allocated for this.

The core document of the strategy is the Communication of the Commission *obilising the brainpower of Europe: enabling universitiestoma etheir full contribution to the isbon trategy* which has its roots in the consultation of stakeholders launched by the Commission’s 2003 Communication *herole of the niversities in the Europe of knowledge*. According to the communication, “Europe must strengthen the three poles of its knowledge triangle: education, research, innovation. Universities are essential in all three. Investing more and better in the modernisation and quality of universities is a direct investment in the future of Europe and Europeans” (Communication from the Commission, 2005: 2). The core modernisation agenda contains three elements: *attractiveness, governance and funding*. Attractiveness and its subordinate aims like differentiation of quality and excellence, better communication between universities

⁸ Its implementation is managed by the Citizenship team of the Education, Audiovisual and Culture Executive Agency (EACEA). EACEA operates under supervision from its two parent Directorates-General: DG Education and Culture (EAC) and DG Information Society and Media (INFOS). <http://eacea.ec.europa.eu/index.htm>, 29.09.2007.

and society concerning the “value of what they produce”, etc. is the closest to the aims of the Bologna Process; the other two aims are not common with the Bologna Process (Halász, 2007:6).

The implementation method is the open method of coordination (OMC)⁹, which rests on soft law mechanisms such as guidelines and indicators, benchmarking and sharing of best practice, and its instruments are policy coordination, structural funds and educational programmes. The first two instruments can be used only by the member states of the EU, which brings with it a differentiation in the implementation of the Bologna Process among the implementing states. With the Lisbon Strategy, the EU member states have more chances so that the reforms within the Bologna Process to improve their Higher Education Systems so that in turn those would support economic competitiveness and society. In this reform process the EU member states must think about the implementation of both dimensions (Bologna and Lisbon). Halász asks how to implement the aims of the Lisbon Strategy and the concerned policies of the EU in the reform process of higher education that is developed within the framework of the Bologna process.

In the case of the implementation of the European Dimension—especially regarding those aims, whose implementation/realisation is at the individual level—the question can be inverted: how can we implement the sub-aims of promoting the European dimension of higher education of the Bologna Process within the framework of the educational policies of the EU, and may this take place within the Lisbon Strategy? Does the EU really need the European dimension of higher education in order to form a European identity?

What are the normative values that stay on the basis of a common identity of Europe? We can talk about differentiation of promoted values as conceived by the EU member states and non-EU member states (regarding the countries which implement the Lisbon strategy too) or about more general concepts (that can be accepted from the non-EU member states too).

⁹ OMC is a relatively new and intergovernmental means of governance in the European Union, based on the voluntary cooperation of its member states. This means that there are no official sanctions for laggards. The method's effectiveness relies on a form of peer pressure and naming and shaming, as no member state wants to be seen as the worst in a given policy area, and involves so-called “soft law” measures which are binding on the Member States in varying degrees but which never take the form of directives, regulations or decisions. Thus, in the context of the Lisbon strategy, the OMC requires the Member States to draw up national reform plans and to forward them to the Commission. http://europa.eu/scadplus/glossary/open_method_coordination_en.htm, 29.09.2007.

The EU supports the European identity mobility programmes at different levels of education, higher education included, and other programmes that are focused on youth organisations, civil society organisation and political foundations. It is another question whether the mobility programmes by themselves can lead to the realisation of these goals.

If we search for the values that stand on the basis of a common European identity of a Higher Education Area, they are to be found in the university itself, as the values promoted by it. On September 18th 1988 eighty universities from all over the world signed a document, whose aims were to celebrate the deepest values of University traditions and to encourage strong bonds among European Universities. This document was the Magna Charta Universitatum. Underlining the vocation and the role of the university for the future, the document contains fundamental principles concerning the autonomy of the university, the inseparable bond of research and education and its freedom, and considers it “the trustee of the European humanist tradition”, whose “constant care is to attain universal knowledge; to fulfil its vocation it transcends geographical and political frontiers, and affirms the vital need for different cultures to know and influence each other” (Magna Charta Universitatum, 1988: 1).

This most traditional, Humboldtian view on the mission of the university is frequently criticised by the promoters of the new university models like entrepreneurial, research universities in the debate about what is/should be the mission of the university in its reform process. The Lisbon strategy promotes the establishing of a new relationship of the University with the society, which brings with it changes in many aspects for the university.

The university must meet the needs of the world around it, but from the point of view of the clarification of the concept of a European Dimension of higher education is important to keep the European humanistic tradition too, because in this tradition the development of individuality is rooted, a development that can support the forming of a European identity.

To clarify the concept of the European Dimension of higher education and to find the European content, orientation of modules, courses and curricula at all levels of education—what shall be implemented—we need to debate upon it, and this is a challenge for the future.

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CHANGES IN THE HIGHER EDUCATIONAL SYSTEM AT BELGRADE UNIVERSITY IN LIGHT OF THE ADOPTION OF THE BOLOGNA DECLARATION

ALEKSANDRA TRKLJA

INTRODUCTION

A very important and equally current phenomenon today in the whole European region, the Bologna Declaration, as one of the major bearers of higher education reform represents the subject of interest in this work. To be more exact, in this work we shall focus on the implementation of the Declaration at one of the Belgrade Universities in Serbia. For the sake of a precise and clear examination of this occurrence, we decided to consider one Faculty. This is the Faculty of Fine Arts in Belgrade¹ where the target group represents the students of the first year of graphics, painting and sculpture². The research questionnaire, which I carried out in June of this year in the form of an inquiry, has three sheets consisting of thirty questions and involves twenty students from the three above mentioned groups, ten of each sex. Although the initial idea was that the research should take into account as many students as possible, favourably a full tally of fifty students, most students, thirty of them totally refused to talk about the Bologna Declaration at all. Such a reaction is most interesting and as will be shown in the work later on harmonious with the answers given from the other twenty students who accepted to participate in the research.

In order to meet present editing constraints and because of the extent of the work, I have chosen to examine the students only, leaving out the administrative staff and professors in order not to widen my research. Because of this and being aware of the imperfection of this text, I will focus only on the thoughts and reactions of the students.

¹ The Bologna Declaration came into operation in 2006 at the Faculty of Fine Arts.

² This work refers only to the first year students because the Bologna Declaration, at least for now, only involves the first year on this Faculty.

The primary objective of the study was to examine how the students perceive the reaction to the practices that the Declaration introduces. Besides studying their judgments the informedness of the students was also examined, in other words, what they know about the Declaration, what the sources of their information are etc.

However, before we present the results of the research we will present the Bologna Declaration in brief, defining it, acquainting the reader with its basic principles and presenting a brief view of its beginnings and development process. This review is given for the purpose of comparing data, which are based on the students' answers so that we could examine the extent of their acquaintance with the Declaration and how it is applied in practice.

KEY GOALS OF THE BOLOGNA DECLARATION

The Bologna Declaration is the 'Joint Declaration of European Education Ministers signed in Bologna 19.06.1999'³ and represents the School Reform for establishing a European Higher Education Area by 2010. In broad terms but very precisely, the Declaration is:

- 'a clearly defined common goal: to create a European space for higher education in order to enhance the employability and mobility of citizens and to increase the international competitiveness of European higher education;
- a deadline: the European space for higher education should be completed in 2010;
- a set of specified objectives:
- the adoption of a common framework of readable and comparable degrees, 'also through the implementation of the Diploma Supplement';
- the introduction of undergraduate and postgraduate levels in all countries, with first degrees no shorter than 3 years and relevant to the labour market;
- ECTS-compatible credit systems, also covering lifelong learning activities;
- a European dimension in quality assurance, with comparable criteria and methods;
- the elimination of remaining obstacles to the free mobility of students (as well as trainees and graduates) and teachers (as well as researchers and higher education administrators)⁴.

³ Bolonjska deklaracija (The Bologna Declaration) <http://www.unsa.ba/pdf/Bolonjska%20deklaracija.pdf>
(Downloaded 10.08.2007.)

⁴ The Bologna Declaration on the European space for higher education: an explanation <http://www.crue.org/eurec/bolognaexplanation.htm>
(Downloaded 26.09.2007.)

The aim of this project is to achieve within the European Higher Education Area by 2010 the following:

1. easier mobility from one country to another—in order to continue studying or finding employment;
2. the attractiveness of European higher education for people from non-European countries, also for the purpose of coming to study and/or work in Europe;
3. a broad, high quality and advanced knowledge base, and ensuring the further development of Europe as a stable, peaceful and tolerant community⁵.

‘Every two years a Ministerial Conference is organised where Ministers responsible for higher education of all participating countries gather to evaluate the progress and to set guidelines and priorities for the upcoming period. The last conference took place in London in May 2007. Previous conferences were held in Bergen (2005), Berlin (2003), Prague (2001) and Bologna (1999)⁶.

The development of the Bologna Declaration is based on the Sorbonne Declaration established on May 25, 1998 with the accent on ‘the central role of University regarding the development of cultural dimensions in Europe’⁷.

THE RESULTS OF THE RESEARCH

Interestingly enough, not a single student has ever read the document of the Bologna Declaration so that sources are mostly hearsay, the following being what they had heard from: the media, their professors and other people. It means that the informants have based their attitude towards the Declaration merely on these sources. Although there are some differences in their judgments they are all, generally speaking, characterised by negative appraisals of application of the Declaration. In other words, students emphasise that the implementation of the Declaration on their Faculty makes studying more difficult than it was before. In order to understand the reasons for this negative attitude, we classified all their answers in two main groups.

The first group, taking into consideration their knowledge and notion about the Declaration, refers to the definition of the Declaration, its beginning and history and

⁵ What is the Bologna Process?

http://www.coe.int/t/dg4/highereducation/EHEA2010/BolognaPedestrians_en.asp#P12_187
(Downloaded 26.09.2007.)

⁶ *ibid.*

⁷ Evropska zona visokog obrazovanja (The European Higher Education Area) <http://www.mapss.info/bolonja/deklaracija.pdf>. (Downloaded 26.09.2007.)

the relation between the Declaration and the EU. This also includes their opinion about the advantages and disadvantages of the Declaration.

The second group considers the students' reactions towards the practical implementation of the Declaration. To be exact, this group refers to their knowledge about the beginning of its application on their University, the basic elements of the Declaration applied on their Faculty, changes caused by the application of the Declaration, and their thoughts about the above mentioned as the most important issue in this paper.

STUDENT KNOWLEDGE CONCERNING THE BOLOGNA DECLARATION

The beginning and history of the Bologna Declaration

As we mentioned, students have not read the Bologna Declaration and are not acquainted with its history or with the Sorbonne Declaration and the Lisbon Convention either. Neither are they acquainted with other conventions and the meetings in Prague, Berlin, Bergen and London. They do not know either any dates concerning the constitution of the Declaration, nor who were the initiators and the signers of the Declaration. One student said that he is not acquainted with the beginning and the development of the Declaration with the words: 'I am not acquainted with it and I believe that nobody at my Faculty including our professors is'. Another student expressing revolt against the Declaration said: 'I do not know and I do not care for it!'. Such lack of interest is very common with the majority of the students included in my research and is partly caused by having no choice, as one of them stated: 'I have not heard about the Sorbonne Declaration and I am not acquainted with its development process and it is not important for me anyway since I do not have a choice!'

The Bologna Declaration and the EU

As for the notion about the relation between the Declaration and the EU, four students connected the constitution of the Declaration with the EU. They suppose that the constitution of the Declaration is linked to the EU, as a female student says, and I quote: 'the Declaration is probably constituted by a body within the EU'. The others did not offer any information regarding these relations.

Condition for entering the EU with regard to the Declaration

Two students believe that the Declaration does not have anything to do with entering the EU while five students believe it has, as one student emphasises that 'the Bologna Declaration has great significance in the international negotiations for entering the EU and if only one link is left missing, surely the whole thing will come to a halt'. Three students believe that the Declaration is: 'an extenuating circumstance' for entering into the EU, as they said, and two stress: 'it is one of the conditions but not the most important one'. The remaining eight students said they do not know anything about the relationship between the Declaration and the EU.

Defining the Bologna Declaration by the students

Concerning the question, how would they define the Declaration, four students could not define the Declaration and were not acquainted with its principles at all, as one student said: 'I do not have any idea'. Another four students relate it with Europe and the EU. One of them said, 'the Bologna Declaration is to a dying the EU without real practical improvement of the educational system'. The others propose that it has to do with the 'unification of European higher education'. In the words of one student, 'The Declaration is a test of the system which has for its goal the purpose of unifying a part of Europe's higher education' while another student mentioned that 'the Declaration is important for the sharing of knowledge'. Three students relate it with the production of a cheap work force, because of the same educational system for all European countries. As one of them stated, 'It is a system for the production of a cheap work force in Europe'. For two students the Declaration means, as they said: 'a shorter period of studying and compressing of subjects' while the others stressed the reform of the educational system but in a negative way, as one student said: 'I cannot reach a definition because it is obvious that it is not clear to anyone what it means. It is still just an overall experiment, which for the time being has the greatest effect on the first year, in a negative way, because being so unclear it disturbs the work of all individuals'.

The Goals of the Declaration

For the majority of students i.e. for eleven of them the aim of the Declaration would be the globalisation, standardisation or unifying of degrees from European Universities, as one of them said: 'unification of profession, system and knowledge everywhere'.

Another student also claims: 'I think that its goal is the establishment of universal educational standards', adding: 'as well as an international exchange of knowledge, ideas and experience'. Two students believe that the Declaration makes studying more expensive. Three students think that the goal of the Declaration is education shortening, as one student said: 'probably to disqualify long-time study, either you study or you do not'. They also added: 'easier studies and more accessible studying'. Four students do not have any clue regarding the aims of the Declaration.

Advantages and disadvantages of adopting the Declaration

More than a half of them or, precisely, eleven students believe that the adoption of the Declaration is important for the connecting of people and sharing of knowledge, although they also point out that 'the climate in Serbia is not adequate for its implementation', as one of them stressed. Two of these students favour universities abroad and believe that the quality of education is better abroad than in Serbia, so that they see a chance not only for the adoption of Western values in the educational system, but also the possibility of going abroad for further study and professional development. One student is hesitant because the lectures or courses are mandatory and he does not like pressure. Seven students are against the adoption of the Declaration because they believe that they are damaged by its use. As a reason for this, they stated a shorter period of education, higher schooling fees, a more compact programme and mandatory lectures. One student does not have an opinion of its significance.

Knowledge about ECTS

ECTS or the European Credit Transfer and Accumulation System as a credit system for mobility of students across Europe do not mean anything for the majority of students i.e. for fourteen of them. They do not know what ECTS means and one of them added that the professors are not informed either. For six students it is only a credit system or scoring system concerning their grades. More precisely, they stated that you need 60 points all together until the end of the year and they added that the Declaration changes the way of grading, meaning that it introduces besides qualitative (a grade is determined from 5 to 10), also some other different types of evaluation or quantitative scoring. They state that quantitative scoring, which for them represents a novelty, refers to attendance and activeness in class that is now also being scored. All of this has to equal 60 points and affects the final grade.

THE REACTION OF THE STUDENTS REGARDING THE IMPLEMENTATION OF THE BOLOGNA DECLARATION

The changes caused by the application of the Declaration

The majority or fifteen students express their negative attitude towards applying the Bologna Declaration on their Faculty. As reasons for their dissatisfaction, they provide the following: mandatory lectures, expensive scholarship, harder passing to budget scholarship funding, an inappropriately extensive programme in comparison with the shorter schooling period and as one student added, 'the Declaration brought stagnation in the quality of lectures'. Another student is dissatisfied because he 'is spending too much time on the Faculty' and apart from studying, does not have time for any other activities. One more student said: 'it is easier to pass exams because of numerous colloquiums'. The others said that 'everybody is confused and they do not know anything'. They also blame the professors for not being informed about the Declaration, which also brings about its poor implementation.

Conditions for passing on to the next year and the mobility of exams

Besides the important aforementioned changes conditioned by the educational reform, as to have a more precise image about the given phenomenon, we will also state other important points. First, we shall call attention to the changes which refer to the terms for passing on to the next year of study. Before the implementation of the Bologna Declaration at the Belgrade University, students had the right to enroll for the next year with the possibility of transferring some exams from the past year. However, as the Declaration has a goal to shorten the years of studying, students are obliged to meet terms by passing all the exams before enrolling into the next year of study. A majority of the respondents included in this research state that they received this announcement from their professors at the beginning of the year. Nevertheless, as the students were not happy with the application of the Declaration they went on a strike in February this year that lasted for three weeks. They asked for lower school fees, to have the right to take two exams into the next year, as did generations before them. They achieved the right to take two exams into the next year, lower school fees and that those who have an average grade of 8.5 or higher can pass automatically to budget scholarship funding (this I heard only afterwards). Because of the strike, missed lectures were to be compensated for on Saturdays

every week and the school year was extended for another week. However, three students do not know which conditions are needed for passing to the next year.

Financial system

Six students do not know if anything has changed regarding self-financing of scholarships because they are on state budget scholarships. Four students think that nothing has changed, as one of them said: 'I think that the price of scholarship has not changed by the implementation of the Bologna Declaration'. Seven students said that the scholarship is different from before and they strongly voiced their conviction that 'the ministry has cut the budget for faculties; therefore, fewer students are on budget funding'. In addition, the scholarship has gone up. Three students said that it has not, but they believe it will in the future. As one of them stated, 'for the time being it has not but I believe it will and doing so on account of the students without any significant improvement in quality' and another student thinks that the faculties will fund studying and that the budget will be cancelled.

Relationship between professors and students

To the question: whether anything had changed in the relationship between professors and students, I received many different answers from the students. Their answers are based on comparing their own experience and the experience of other fellow students from higher years. Sixteen students believe the relationship has not changed and that it is the same as before, with the words: 'I think the relationship has not changed, it has stayed the same' and 'in my opinion it has not, only that now they keep closer evidence of attendance in classes'. Four students state that some academic staffs are tense, confused, strict and more formal than before. A student confirms with following words: 'The teachers are confused and we the students are angry because they are confusing us' and another student said, that 'they are strict because they have to adapt to a program that is unknown to them'. One more student said, 'Now the staff are acting like tyrants because they are adapting to a program that is unknown to them and they do not have any work plan'.

Staff informativeness about the Declaration based upon the opinion of students

Students believe that the Declaration is not clear to staff either, because they have tried to explain it to them but they did not know exactly what the Declaration represents or

means. One of the students said: 'some of them tried to explain' while another added that 'they do not know what the Declaration is'. However, only a few staff succeeded in explaining, although only 'some aspects of the Declaration', as they stated, precisely the system of scoring and how many lectures they are allowed to be absent from, as well as that the condition for passing to the next year is to give all the exams, 'and nothing else', as students emphasised.

The absence of students from the lectures

The majority or fifteen students attend lectures regularly; two students do not, while three are trying to make an effort. They have a right to be absent three to five times in one semester, depending on the subject. Asked what the consequences were in case this number exceeds the given limit, six students do not know what the consequences would be while eight students said that they would not have the right to ratify the semester and would further lose the right for the final exam. Two students believe that it would mean less points in the activities before the final exam, and as one of them says: 'the teachers are angry at first, but later they let you pass'. One student believes that they would lose the right to go on studying while three students said it would mean lower grades. Thirteen students said that some staff allow more absence from lectures than previously defined, while one student said that 'irresponsibility is in question'. Five students stated the staff do not allow more absence and one student does not know.

Advantages of the application of the Declaration—assumptions based on student's experience

Twelve students do not see any advantages to the application of the Declaration. As one of the students stated, 'The quality of study has not improved, for now it is even more difficult to remain within the student status and keep up with the imposed pace'. Two students said that application is 'very bad' and added that 'the Declaration is probably a good idea but we do not know the right way to use it'. Three students believe it is better because the Declaration gives the opportunity for all the activities during the year to be included in the final grade and not only one final exam. Contrary to this, one student said that 'all the countries should never be the same, neither should all the people be the same, nor can they', considering an identical system of higher education throughout Europe. Another student said that the grading is obsolete and the others

think that grading harms them because it does not take into consideration individual abilities, but acts as a system of grading moderation. A student, who emphasises that evaluation is not adapted to an individual, illustrates this opinion with the words, 'because some people prefer only to work and not talk about their work'. One more student stated that he does not have time for anything but lectures, expressing this with the words, 'the lectures are mandatory and because of this I cannot earn a living and study at the same time. I do not have time for anything else!'

CONCLUSION

From the above given results we can see that students have a very poor knowledge of the beginnings, history of and principles given in the Declaration. They give several different definitions about the Declaration but as regards the aims of the Declaration it becomes clearer what the Declaration exactly means to them. For most students, the Declaration is a unification of higher education in Europe. Their knowledge is based on mere notions about the Declaration and its elements, which is further more based on 'mere rumours' and they do not even make the effort to obtain precise and authenticated information on the Declaration. At the same time they are confused and blame the academic staff for the lack of information about how the Declaration functions in practice as well as for its bad application. Generally, there is a negative attitude towards the application of the Declaration owing to the expense of school fees, mandatory lectures and extensive courses, which has not been cut down proportionally regarding the years of study.

Nevertheless, the majority of students are in favour of the acceptance of the Declaration in general at the Belgrade University, because of its significance in connecting people and the sharing of knowledge and experience, yet, in their words: 'The conditions are not yet adequate in Serbia for the implementation of the Declaration'.

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