Implication of Bologna process on the academic curriculum.
An approach focused on student’s perspective

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Abstract: - Although it is apparently a structural reform, the reform initiated by the Bologna process aimed at changes on the curricular level. The main aim of this study was to analyze to what extent the implementation of the Bologna process had implications on the curricular reform in two fields of study in Transilvania University of Brasov: technical field and medical field. As a hypothesis we presumed that the educational practices are not enough developed in order to promote a curricular reform based on student centred learning. We also consider that the students’ attitude is more favourable to the reform than the teachers’ attitude. In order to realize the preliminary research focused on the student’s perception about the changes implied by the Bologna process on the curriculum we used a questionnaire applied to a sample of 93 subjects of Medical study programme and Technical study programmes.

Key-Words: - Bologna process, curricular reform, student centered learning, attitude toward reform

1. The Bologna Process – a framework for a curricular reform in higher education

Beginning with the year 2000, higher education policies all over Europe were transformed by the launching and evolution of the Bologna Process, otherwise known as the process of creating a European Higher Education Area (EHEA), but “taking full respect of the diversity of cultures, languages, national education systems and of university autonomy’ (Bologna declaration, 1999; see De Wit and Verhoeven, 2001; Verbruggen, 2002). [8]

The three pillars of the Bologna Process are degree structures, mobility, and recognition of the quality of a degree of one institution by another.

Although a great number of European countries have adhered to the Bologna process, the reform of the higher educational system that derivers from this process rather difficult.

We will refer to only one aspect of the reform, the one concerning organizing the initial training on three levels. This change has been perceived just as only a reduction of school period. It is true that, on the whole, the time allotted for the three levels represents a shortening of the time spent in university, but we consider that the change itself was mainly aimed at the philosophy of the initial training.

The current findings in certain professional fields have signalled the risks induced by a deficit of general training in the field and by a narrow over-specialization. In this direction, the license cycle was not conceived for professionalization, but for forming certain general competencies in the specialization field and also developing cross-curricular competencies, with the role of offering the future graduate instruments for the next cycle.

The Master degree would not only enhance the skills acquired in the first degree but also prepare the student for the third cycle which would represent the capstone degree of the system and a high level of mastery of the subject field. [1]

The introduction of the three cycle structure in higher education at national level does not take place in a vacuum, but against the background of diverse inherited national higher education systems. These provide the starting point for reforms as well as the national-specific context in which Bologna reform
But, the structural reforms of the Bologna Process are only the tip of the iceberg. Not far beneath the surface there are major changes under way in curricula, the missions of universities, their relationship with national and regional authorities, and their governance. Together, these amount to a revolution in European higher education [4].

In other words, the Bologna process involved a global reform of the higher education system in many European countries. These reforms cannot always be attributed exclusively to the Bologna declaration; some have been initiated prior to the declaration so that the declaration can instead be seen as a formalized expression of a general political will and trend in Europe (Neave, 2002). However, since the Bologna declaration, much ongoing change is focused and co-ordinated in the framework of the Bologna process, by which the aims of the declaration are implemented (Haug and Tauch, 2001) [8].

In other words, although it is apparently a structural reform, the reform initiated by the Bologna process aimed at changes on the curricular level, starting with reassessing the finalities and continuing with changes on the practice level.

“Curriculum change, the definition of learning outcomes, agreement on standards of quality assurance, and credit transfer all flow from the core aims of the process as it was first defined in Bologna in 1999 … After some initial hostility, academics throughout most of Europe began to embrace the idea of totally rethinking their programs rather than merely paying lip-service to the new structures. Of course this implied determining what students should know, in terms of both content and methods of enquiry and learning [4].

2. Student centred approach – a core aim of curricular reform

Curricular orientation, focused on competencies, as an alternative to the traditional orientation, focused on contents, as well as approaching a learning demarche centred on the pupil instead of centred on the teacher are expressions of this pressure on the direction of changing the learning paradigm.

Student centred learning means reversing the traditional teacher-centred understanding of the learning process and putting students at the centre of the learning process. Theorists like John Dewey, Jean Piaget, and Lev Vygotsky whose collective work focused on how students learn is primarily responsible for the move to student-centred learning. Carl Rogers is associated with expanding this approach into a general theory of education (Burnard 1999; Rogoff 1999).

The paradigm shift away from teaching to an emphasis on learning has encouraged power to be moved from the teacher to the student (Barr and Tagg 1995). In relation to curriculum design, student-centredness includes the idea that students have a choice in what to study, how to study.

Cannon, (2000) describes the student-centred learning as a way of thinking about learning and teaching that emphasize student responsibility for such activities as planning learning, interacting with teachers and other students, researching, and assessing learning. [2]

Teachers who believe that their role is just to drive the learning process and to control student's access to information, and consider learning as an additive process are more likely to encourage surface learning approaches among their students, where retention is temporary, generalisation of knowledge is poor and learning how to learn is minimal. On the other hand, teachers who encourage student involvement in the learning process and focus on the quality of learning outcomes are more likely to encourage cognitively deeper and richer learning experiences for their students. [6]

Gibbs (1995) describes student-centred courses as those that emphasise: learner activity rather than passivity; students’ experience on the course outside the institution and prior to the course; process and competence, rather than content; where the key decisions about learning are made by the student through negotiation with the teacher [7].

It is worth pointing out that ‘teacher-centred’ and ‘student-centred’ learning are neither simply methods, nor strategies. They are philosophical paradigms that reflect different views about the contested nature of ‘learning’, ‘teaching’ and ‘knowledge’. But they are reflected in educational practices, by the defining of the learning outcome, the selecting of the contents and methodology and the conceiving of assessments tasks. But both strategies are not mutually exclusive. Rather, they constitute a continuum. The choice will be dictated by contextual factors. [3]
3. Research bases of a comparative analysis on two fields of study

The main aim of this study was to analyze to what extent the implementation of the Bologna process had implications on the curricular reform in two fields of study in Transilvania University of Brasov: technical field and medical field.

As a hypothesis we presumed that the educational practices are not enough developed in order to promote a curricular reform based on student centred learning. We also consider that the students’ attitude is more favourable to the reform than the teachers’ attitude.

In order to realize the preliminary research focused on the student’s perception about the changes implied by the Bologna process on the curriculum we used a questionnaire applied to a sample of 93 subjects of Medical study programme (52.5%) and Technical study programmes (47.5%).

The 43 items are organized in four scales: attitude (10 items to evaluate the students’ attitude and students’ perception about teachers’ attitude to the reform expressed by student centred educational practices); didactical methodology and tools (13 items), finalities and outcomes of learning (6 items), assessment (12 items). In order to measure each dimension we used a three level scale: to a great extent, to a moderate extent, to a little extent. Two items in the end aim at the teachers’ attitude towards the students and the students’ attitude towards themselves. The items were introduced starting from the premises that a valuing attitude from the teacher towards the student’s experience, resources and capacities makes the adopting of a student-centred practice more probable. The Cronbach’s Alpha is .783.

3.1 Statistical analyze of dates

In order to compare the students’ attitude towards the reform and the teachers’ attitude, in students’ perceptions, we compute the mean for the 8th item of the first scale. Graphs 1 and 2 presents the results. As we can see in the graphs below the teachers’ mean is smaller then the students’ mean and the scores are concentrated in median zone (to a moderate extent) and they are not bigger than 2.50.

The students’ score demonstrates a more favourable attitude towards the reform than the teachers’ attitude. The aspects considered by the students as being the most representative for the reform are: stimulation of students’ initiative in learning and of their involvement in this process. The most rejected assertion is the one according to which “students must be forced to work through firm requests, supervised and assessed according to strict criteria”. There is a considerable delay between the students’ attitude and teachers’ attitude, in students’ perception as concerning this assertion on the entire lot’s level. (Graphs 3, 4)
A comparative analyses emphasizes a statistically significant difference between students in Medicine and those in Technical fields \((t = 2.155, \text{ significant at the 0.03 level})\). Students in Medicine are more in favour of this attitude, centred on the teacher, than those in Technical fields.

The second category of items analyzed aimed at the learning’s finalities as they are perceived by students. Students from both areas consider that the initial training in the university contributes largely to developing competences. But we consider that this statement was valued as concerning the cognitive competences, because 34% of the students consider that learning finalities from the perspective of the Bologna reform consist mostly in acquiring scientific theories and theoretical models.

Regarding the outcomes of learning, students consider them to be formulated by the teacher based on his previous experience \((m = 2.51)\) and only to a small extent they are analyzed together with the students \((1.40)\), answer to their interests and value their previous experience.

The 13 items concerning the teaching-learning methods ask students to assess the methods used by teachers and the extent to which these are used.

Students from both fields consider that the most frequent methods used are the expositive ones, the learning strategies being established by the teacher through requests and leading to competition among students. To a small extent there are used methods that emphasize the teacher-student partnership \((m = 1.53)\), methods which offer the student the freedom to manage his own learning process \((1.60)\) or which stimulate critical thinking \((1.73)\).

Because the items were formulated so that the use of student-centred methods can be assessed, the small values of the means show their poor use. A comparative analyses between students in Medicine and those in Technical fields shows a statistically significant difference \((t = -2.335 \text{ is significant at the 0.02 level})\).

The students in Technical fields consider to a smaller extent that there are used methods which favour activism and involvement in learning, critical thinking and student-teacher partnership. (Graph 5)

As concerning the use of modern audio-video means in teaching, students in technical fields consider to a great extent \((m = 2.51)\) that these are used just in a formal way, leading to a passive reception of the information.

The methods considered as most efficient by the students in Technical fields are in the following order: brainstorming and exercises, whereas the Medicine students value conversation and exercises. Both areas think that group work is very useful for the efficiency of learning. Students from both areas consider the lecture to be the most inefficient method.

The last category of items refers to the students’ attitude towards assessment and their perception of achieving it. There is significant difference on how
students from the two field perceive the efficiency of the assessment (t = - 2.257 is significant at the 0.02 level). (Graph 6)

Students in the Technical field state that the assessment objectives are not communicated to the students (1.71), the assessment methods and requirements are not discussed with students (1.40), the assessment is not followed by a feedback or remedies. The evaluation has as main objective the assessment of knowledge and not of competences (2.42). This is why it is largely associated with stress and followed by penalty (2.67).

Students in Medicine consider evaluation to have as main objective the assessment of knowledge and not of competences (2.36) and those teachers do not practice a transparent assessment (1.80). Most results are placed in the average area.

At the end, we analyzed two items that refer to the teacher’s attitude towards the students and the students’ attitude towards learning, having in mind that a positive attitude, based on trust in students’ experience and resources favours adopting a student-centred demarche.

This two items were build based on the adaptation of X’s and Y’s theories elaborated by McGregor (1960). X theory and Y theory are two assumptions concerning the management style and they are based on empirical assumptions and believe on work and people. The central principle of X theory is founded on leading and control in a autocratic system starting from the premise that the average individual hate work, avoid the responsibilities, want to be led. Opposite the central principle of Y theory is founded on the integration and the convergent action of individual and organisational goals starting from the premise that the average individual has natural availabilities for work and he is efficient if he feels involved. Through analogy with these theories, Rogers identifies two attitudes of teachers: an attitude based on the belief that we can not trust the students with their own learning, and the other one is based on the belief that the students has the natural availability for learning and a higher level of efficiency appears in connexion with the own students’ interest. [5]

We supposed this Y theory attitude is more likely to be associated with student centred strategies.

The first item asked the students to estimate which of the following two opposite statements expressed more accurately the teachers’ attitude towards them. The alternative answers were: 1 – “the student is a young adult, with a relevant experience and capable of managing his own training” versus 2 – “the student is the raw material that must be shaped by the teacher”. The results show a significant difference between the two domains.

A significant higher number of students in Medicine as compared to the Technical field students consider that teachers value the student and consider him a learning resource.

The second item asked the students to assess their own attitude towards themselves and towards learning, selecting from two opposite assertions: 1 – „students prefer to be led, avoid responsibilities and they can not be trusted with the management of their own learning” versus 2 – „students have, by their nature, the availability and desire to learn”
We can also notice differences in terms of students’ attitudes towards themselves, students in Medicine being more confident in their resources and their availabilities to learn.

Conclusions

The analysis of the results revealed changes that can be associated with the curricular reform, especially in the medical field. There still persist conservatory practices, which reduce the reforming impact of the Bologna process. There is a significant pressure in the direction of change and this comes from the students, who have a more favourable attitude towards the reform.

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