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AGENTA ROMÂNĂ  
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CALITĂȚII ÎN  
ÎNVĂȚĂMÂNTUL SUPERIOR

# ARACIS

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## PROCEEDINGS

### of 2nd International Conference Institutional Strategic Quality Management in Higher Education

### ISQM 2010

organized by  
The Romanian Agency for Quality Assurance in Higher Education  
supported by the project:  
ACADEMIS: QUALITY ASSURANCE IN HIGHER EDUCATION IN ROMANIA  
WITHIN EUROPEAN CONTEXT. DEVELOPMENT OF ACADEMIC QUALITY MANAGEMENT  
AT SYSTEM AND INSTITUTIONAL LEVEL  
POSDRU/2/1.2/S/1, Project Manager Prof. Ioan CURTU

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- volume I -

Sinaia, Romania  
October 14 – 16, 2010

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14 - 16 October 2010, Sinaia, Romania

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- The impact of international cooperation in Quality Assurance of Higher Education;
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- New environments and challenges in Higher Education;
- The Best Practices in Quality Management, new policies and practices in Higher Education;
- Transnational Education of the Quality Assurance;
- Student contribution in Quality Assurance of Higher Education Evaluation;
- Labour market and Bologna graduates.

#### Editors:

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The content of the present papers is not necessarily the official position  
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***Development of Academic Quality Management at System and Institutional Level***  
***POSDRU/2/1.2/S/1 – ACADEMIS***

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Note: Activity of the Project Quality Assurance in Higher Education in Romania within European Context.  
Development of Academic Quality Management at System and Institutional Level

Activity No. 1 Autoevaluation and External Evaluation

Activity No. 2 Quality Assurance of Higher Education

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## FOREWORD

The ISQM2010 aims to provide opportunities for exchange of information, good practice and ideas in international university cooperation as a key condition for quality assurance in higher education. It will provide an opportunity for academics, students, educational and quality improvement administrators and researchers to promote discussions and share knowledge, experience and expertise on the developments and best practices in Higher Education Quality Assurance.

This conference will also analyze the challenges and issues pertaining to new developments, innovation, and technology based education. Policies, governance, management in education and transnational education will also be discussed.

Invited and selected papers are written by experts and practitioners from academic sector in order to find new solution and good practices for higher education. The subject of papers of Proceedings covers topics and streams in order to familiarize themselves with the trends and to work towards a common attitude with respect to quality assurance in higher education. The topics of conference are: “The impact of international cooperation in Quality Assurance of Higher Education”, “International evaluation in Higher Education Institutions”, “New environments and challenges in Higher Education”, “The Best Practices in Quality Management, new policies and practices in Higher Education”, “Transnational Education on the Quality Assurance of Higher Education Evaluation and Labour market and Bologna graduates”.

We consider that this conference will address a range of critically important themes relating to quality assurance in Higher Education.

This volume contains 68 selected papers of the 2<sup>nd</sup> International Conference - Institutional Strategic Quality Management in Higher Education. The International Scientific Committee reviewed all submitted papers and selected the best papers.

We thank all the contributors to the success of this conference.

The 2<sup>nd</sup> International Conference ISQM is supported by ARACIS under the Project: ACADEMIS “Quality Assurance in Higher Education in Romania within European Context. Development of Academic Quality Management at System and Institutional Level”, POSDRU/2/1.2/S/1, Project Manager Prof. Ioan CURTU, Ph. D.

*Editors*



## CONTENTS

- volume I -

<b>G. Augusti, C Borri, E. Guberti, I. Manoliu , J. Valdiserri, .....</b>	<b>13</b>
<i>EUR-ACE®: The European accreditation system of first- and second-cycle engineering degree programmes</i>	
<b>C. E. Băişan, J. Seiz, M. Mellberg, M. Gheorghe, .....</b>	<b>21</b>
<i>Student-centered learning / training and Quality Assurance in Higher Education</i>	
<b>A. N. Bilge, .....</b>	<b>27</b>
<i>Accreditation of engineering education in Turkey</i>	
<b>B. Birke, .....</b>	<b>33</b>
<i>Enhancing the quality of postgraduate education – developing standards and recommendations for LLL master programs conforming to the Bologna principles</i>	
<b>Ch. H. Bjerke, .....</b>	<b>39</b>
<i>Quality Assurance and student participation: The case of Norway – Best Practice or lessons to learn?</i>	
<b>K. Braathen, M. Frederiks, .....</b>	<b>47</b>
<i>Accreditation of joint programmes – The way forward</i>	
<b>S. Bumbaru, A. Pușcă, F. Postolache, .....</b>	<b>55</b>
<i>Teaching with technology: Danubius University case study</i>	
<b>C. Buzea, M. Popescu, .....</b>	<b>65</b>
<i>Student involvement in Quality Assurance and Assessment</i>	
<b>C. Cămășoiu, N. Caragea, .....</b>	<b>71</b>
<i>Quality improvement of Higher Education – A permanent objective of a private university</i>	
<b>M. Cernat, .....</b>	<b>77</b>
<i>Publish or perish: Is this famous imperative the best university guide?</i>	
<b>O. Clipa, A.A. Ignat, M. Stanciu, .....</b>	<b>83</b>
<i>Learning to learn - A key competence within Bologna educational system</i>	
<b>E.Cocoradă, A. Maican, C. Maican, S. Cocoradă, .....</b>	<b>91</b>
<i>Teaching and research in Higher Education - Dilemma or Synergy?</i>	
<b>E. Cocoradă, C. Cavaco, A.M. Maican, .....</b>	<b>97</b>
<i>Students' Assessment in Higher Education institutions – Case study</i>	
<b>C. Constantin, .....</b>	<b>105</b>
<i>Issues regarding the graduates' competences in the present context of labour market</i>	

<b>G. D. Constantin,</b> .....	111
<i>Educational evaluation by students - A problem of transparency or Quality Management</i>	
<b>S. Costreie, R. Ianole, R. Dinescu,</b> .....	119
<i>An evaluation of the Quality Assurance – Case study: The University of Bucharest</i>	
<b>I. Curtu, P. Năstase, I. Popa, C. Albu,</b> .....	125
<i>Accreditation and Recognition of the joint masters programmes</i>	
<b>C. Debeleac, S. Nastac,</b> .....	137
<i>Virtual instrumentation - An effective tool in Mechanical Engineering Master-Level Education</i>	
<b>A. M. Dima,</b> .....	143
<i>Quality Assurance of Higher Education Qualifications in Romania</i>	
<b>I. Dinescu, O. A. Pirnuta,</b> .....	153
<i>Ethical aspects of Quality Management within a Romanian Military University</i>	
<b>H. Diyen,</b> .....	161
<i>An overview of quality in Higher Education in the west and recommendations for arab universities</i>	
<b>E. Dobre,</b> .....	169
<i>Entrepreneurial behavior of Higher Education institutions in the context of the knowledge based society</i>	
<b>V. Dodiković-Jurković<sup>1</sup>, G. Briški,</b> .....	175
<i>Student participation in quality assurance in Croatia</i>	
<b>A. Dogaru, I. Talpoş,</b> .....	179
<i>All-changing university: Learn, Unlearn, Relearn</i>	
<b>L. Donath, D. Moga,</b> .....	187
<i>A decade of Bologna process. Challenges for Quality Assurance in Higher Education</i>	
<b>D. Dumitrescu, M. Duhaneanu,</b> .....	195
<i>Building mission driven curricula through international partnerships – Case study: Ibab(Asebuss) &amp; Kennesaw State University</i>	
<b>D. Emin,</b> .....	203
<i>Procedures regarding the Quality Assurance in “Ovidius” University of Constanta</i>	
<b>L. Fărnoagă, A. Grigoriu, A. Luţaş,</b> .....	209
<i>Modernization of technological disciplines’ teaching and evaluation in art education in Romania</i>	

<b>I. Felea, Șt. Nagy, C. Antal, .....</b>	<b>215</b>
<i>Aspects about the Quality Management in universities from Romania and UE</i>	
<b>F. V. Frumos, A. V. Labăr, .....</b>	<b>223</b>
<i>Metacognitive influence of state metacognition levels in academic performances</i>	
<b>C. D. Gălățanu, .....</b>	<b>229</b>
<i>Curricula design between persuasion and training, awareness and competence</i>	
<b>A. Gavra, A. Prisacariu, .....</b>	<b>237</b>
<i>Students view on the external evaluation process.</i>	
<i>Enhancing quality through student feedback</i>	
<b>M. Gheorghe, M. Mellberg, C.E. Băișan, I. Sima, J. Seiz, .....</b>	<b>243</b>
<i>Quality, creativity and competency of Higher Education Graduates</i>	
<b>M. Guranda, .....</b>	<b>253</b>
<i>The role of student-centered education in contemporary society</i>	
<b>Authors Index, .....</b>	<b>259</b>

**CONTENTS****- volume II -**

<b>I. Ianos, D. Zamfir, A. L. Cepoiu, I. V. Stoica, .....</b>	<b>275</b>
<i>Dynamics of challenges in Romanian Higher Education and the response of universities</i>	
<b>G. Ionescu, D. Ispas, .....</b>	<b>283</b>
<i>Creativity role in training skills and in Quality Assurance in Higher Education</i>	
<b>M. Kainazarova, A. Berniyazova, V. Krasnikova, M. Berniyazova, .....</b>	<b>287</b>
<i>Student involvement in Higher Education Quality Assurance: Case of Kimep</i>	
<b>M. Kozlovsky, .....</b>	<b>293</b>
<i>The Participation of the students from the faculty of arts of the Ovidius University, Constanta, to the Assurance of a high education</i>	
<b>S. Lache, D. Talaba, .....</b>	<b>299</b>
<i>Career development offices in universities – important tool for enhancing the employability of Bologna Graduates On the labor market</i>	
<b>A. Lascu, .....</b>	<b>307</b>
<i>Politics and strategies for Quality Assurance at “Ovidius” University of Constantza</i>	
<b>A. Lupu, .....</b>	<b>313</b>
<i>The HR impact on university education quality</i>	
<b>M. Mangra, D. Popescu, P.L. Rinderu, .....</b>	<b>319</b>
<i>Quality Management Systems as favourizing factors for Higher Education Institutional Development</i>	
<b>L. Măță, .....</b>	<b>325</b>
<i>Study on managerial dimension of education for privacy</i>	
<b>C. Mironeasa, C. Popa, .....</b>	<b>331</b>
<i>Assessment of academic performance</i>	
<b>L. Moldovan, .....</b>	<b>343</b>
<i>New aspects regarding Quality Management System at „Petru Maior” University of Târgu-Mureș</i>	
<b>F. Moraru, .....</b>	<b>351</b>
<i>Some aspects and Good Practices in the Quality Assessment of the Higher Education</i>	
<b>C. Moruțan, A. Sicoe, R. Oprean, .....</b>	<b>357</b>
<i>The 360-degree academic evaluation. A case study: „Iuliu Hațieganu” University of Medicine and Pharmacy</i>	

<b>W. B. Müller,</b> .....	365
<i>Reflections on Quality Assurance in the European Higher Education area</i>	
<b>V. Nastasescu,</b> .....	373
<i>Upon some available improvement ways of Bologna process in Romania</i>	
<b>Z. Ocak,</b> .....	381
<i>Evaluating service quality in Higher Education using quality function deployment (Qfd)</i>	
<b>C. Oprean,</b> .....	389
<i>Considerations regarding quality in Higher Education</i>	
<b>E. Pop, A.C. Ionica, M. Leba,</b> .....	395
<i>Some aspects concerning Quality Management System implementation at the University of Petrosani</i>	
<b>E. Pop, M. Leba, A.C. Ionica, C. Dura,</b> .....	401
<i>Erasmus cooperation in the context of transnational education</i>	
<b>M. Popescu, E. Helerea,</b> .....	407
<i>University library performance indicators, harmonization with quality requirements in Higher Education</i>	
<b>D. Potolea, S. Toma,</b> .....	413
<i>An integrated approach of the professional development. Some implications to distance – education</i>	
<b>M. Răileanu,</b> .....	421
<i>A must in nowadays education: environmental issue</i>	
<b>B. Remaud, R.P. Martin, T.Sánchez, J.C.Arditti,</b> .....	429
<i>Using industry internships to improve the Quality of Engineering Higher Education in Europe. The experience of French Graduate Engineering Schools</i>	
<b>I. Roșca, A. G. Ilie, R. Sârbu,</b> .....	439
<i>Standards and performance indicators in Higher Education in Romania</i>	
<b>Y. Rubin, E. Soboleva, A. Belokopytov</b> .....	447
<i>International Evaluation in HEI</i>	
<b>C. Rusu, B. Rusu,</b> .....	451
<i>University transformation: Differences in perceptions among university management</i>	
<b>A. M. Țăranu, Șt. Costea,</b> .....	459
<i>Quality improvement in Romanian Higher Education: Three waves for the future</i>	

<b>G. Tsokov</b> , .....	467
<i>The policy for the Internal Quality Assurance in the activities of the National Evaluation and Accreditation Agency</i>	
<b>I. Urs, S. Ivan</b> , .....	475
<i>The Bologna Graduates' Integration into the labour market and the necessity of an efficient and competitive academic management</i>	
<b>V. Văga</b> , .....	485
<i>Aircraft Higher Education: Challenges And Prospects</i>	
<b>S. E. Vârlan</b> , .....	491
<i>Semantic web-based E-learning system</i>	
<b>A. D. Zamfir, F. D. Munteanu, L. Mihuț</b> , .....	495
<i>Reintegration of Romanian scientists from abroad for Higher Education improvement in Romania. Case report: Aurel Vlaicu University of Arad</i>	
<b>D. László, Al. Szép</b> , .....	501
<i>Quality In education achieved with multimedia assets</i>	
<b>D. O. Ștefănescu</b> , .....	509
<i>Performance, Assessment and Quality in Higher Education</i>	
<b>Authors Index</b> , .....	519





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# EUR-ACE®: THE EUROPEAN ACCREDITATION SYSTEM OF FIRST- AND SECOND-CYCLE ENGINEERING DEGREE PROGRAMMES

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## Abstract

The European Network for Accreditation of Engineering Education (ENAE) is implementing the EUR-ACE accreditation system, a decentralized system in which a common quality label (the EUR-ACE® label) is added to the accreditation awarded by a national Agency, under the condition that a common set of standards (the EUR-ACE Framework Standards) are satisfied at either the First Cycle (Bachelor) and/or the Second Cycle (Master) level. Seven Agencies (CTI, ASIIN, Engineers Ireland, Ordem dos Engenheiros, RAEE, MÚDEK, Engineering Council), based in seven EHEA countries (France, Germany, Ireland, Portugal, Russia, Turkey, UK), are at present (July 2010) authorized to award the EUR-ACE label: approximately 480 programmes are EUR-ACE-accredited at the time of writing. These seven countries are already a significant and varied sample of the European Higher Education Area (EHEA) but ENAE is now committed – also with the help of the EC-supported LLP project EUR-ACE SPREAD (2008-2010) – to add to the EUR-ACE system several other countries, including Romania, Belgium, the Netherlands, Italy, Poland, Switzerland, etc.

**Key words:** keyword accreditation, Bologna Process, engineering Bachelor and Master programmes, Qualification Frameworks, quality assurance.

## 1. Introduction

EUR-ACE is a Europe-based system in which a common quality label (EUR-ACE® label) is awarded to engineering educational programmes that satisfy a common basic set of standards (EUR-ACE Framework Standards for the Accreditation of Engineering Programmes [1]) and are accredited by an Agency fulfilling appropriate Quality Assurance (QA) prescriptions, in particular the “European Standards and Guidelines for Quality Assurance in Higher Education” (ESG) adopted in 2005 within the “Bologna Process” by the Bergen Ministerial Conference [2]. The EUR-ACE label ensures the suitability of the accredited programme as entry route to the engineering profession (“pre-professional accreditation”).

At the ICEE 2007 held in Coimbra, EUR-ACE and ENAE (the European Network for Accreditation of Engineering Education, established in February 2006 to run the EUR-ACE system) were presented in a panel discussion at a Plenary Session [3]-[4]. Since that time, EUR-ACE started its implementation throughout the European Higher Education Area (EHEA). Six Agencies (‘Commission des Titres d’Ingénieur’ [CTI], France; Engineering Council [EngC], UK; Engineers Ireland; Ordem dos Engenheiros [OE], Portugal; ‘Accreditation Agency for Study Programs in

Engineering, Informatics, Natural Sciences and Mathematics' [ASIIN], Germany; Russian Association for Engineering Education [RAEE], Russia) are authorized since November 2006 to award the EUR-ACE label; a seventh Agency ('Association for Evaluation and Accreditation of Engineering Programs' [MÜDEK], Turkey) was added in January 2009. At the time of writing (May 2010) a total of approximately 480 labels have been awarded, while several contacts and initiatives – illustrated in a later Section - are open to spread EUR-ACE in other countries (Belgium, Denmark, Italy, Lithuania, the Netherlands, Poland, Romania, Switzerland, ...) either by authorizing other (possibly newly created) Agencies to award the EUR-ACE label, or thanks to the activity of already authorized Agencies (CTI, ASIIN, EngC, RAEE) out of their own country. EUR-ACE has been quoted as an example of good practice of QA in Higher Education in an official report by the European Commission [5] and in an EU publication issued on the occasion of the March 2010 "Bologna Anniversary Conference" [6].

Both the EUR-ACE Framework Standards and the EUR-ACE system will be described in this paper. However, since the initial stages of EUR-ACE and ENAEE have been already illustrated in Journals, books and Conferences [7]-[14], this paper, albeit being self-contained, focuses on the latest developments.

## 2. The EUR-ACE Framework Standards

At the very beginning of the EUR-ACE exercise, a preliminary detailed survey of the standards used by the specialized engineering accreditation agencies throughout Europe revealed striking similarities behind different façades. This made the compilation of a set of shared accreditation standards and procedures comparatively easy: the result was the first draft of the "EUR-ACE Framework Standards". Unlike the old national rules that prescribed inputs in term of subject areas and teaching loads, the EUR-ACE Framework follows the trend of the most recent Standards, and define and require "learning outcomes". This approach that has several direct advantages, like: 1) it respects the many existing traditions and methods of engineering education in Europe; 2) it can accommodate developments and innovation in teaching methods and practices; 3) It encourages the sharing of good practice among the different traditions and methods; 4) it can accommodate the development of new branches of engineering.

The EUR-ACE Framework Standards were finalized in 2006 together with an explanatory "Commentary", after successive versions had been commented on by the project partners and other stakeholders, both academic and non-academic, and trial accreditations were run in a number of EHEA countries to test their efficacy. Minor modifications have been made in 2008 [1]-[15]. A thorough revision is currently (2010) under way, together with a check of their consistency with other significant Standards and prescriptions. In accord with the European Qualification Frameworks QF-EHEA [16] and EQF-LLL [17] the EUR-ACE Standards distinguish between First and Second Cycle degrees: indeed, they address the five generic qualification dimensions defined at each level in [16]-[17] by specifying and expanding them with regard to engineering [18], taking also into account the EU Directive on the Recognition of Professional Qualifications [19]. In particular, the EUR-ACE Standards identify 21 programme outcomes for First Cycle degrees (FCD) and 23 for Second Cycle Degrees (SCD), grouped under six headings: 1) Knowledge and understanding; 2) Engineering analysis; 3) Engineering design; 4) Investigations; 5) Engineering practice; 7) Transferable skills.

The EUR-ACE Standards also contain guidelines and procedures that include the assessment, among other requirements, of the human resources and facilities available for the programme. In

order to be as flexible and comprehensive as possible, and not to exclude any European-compatible accreditation system, the EUR-ACE Standards encompass all engineering disciplines and profiles, and distinguish only between First and Second Cycle degrees (FCD, SCD). However, the Standards are also applicable to the accreditation of programmes leading directly to a degree equivalent to a Second Cycle Degree (conventionally termed 'Integrated Programmes'), which constitute an important part of European engineering education, especially but not only in the oldest continental Technical Universities and Schools.

In some European countries, in addition to the distinction between FC and SC degrees, engineering degrees are characterised by profiles; moreover, accreditation distinguishes between engineering branches (disciplines) in some countries, and not in others. The EUR-ACE Framework Standards can accommodate all these differences but they must be interpreted, and, if necessary, integrated to reflect the specific demands of different branches, cycles and profiles. However, they leave to Higher Education Institutes (HEIs) the freedom to formulate programmes with an individual emphasis and character, including new and innovative programmes, and to prescribe conditions for entry into each programme.

A major difficulty in establishing and verifying the actual achievement of learning outcomes, and of differentiating between cycles, is that of specifying an absolute standard. This is true for any outcome-based Standard, but particularly so in engineering because the standard must apply consistently to the many different and overlapping branches, and should also be applicable to new branches that continuously emerge as a result of scientific and technical developments. The EUR-ACE Framework expresses the learning outcomes to be achieved by FC and SC graduates in the three direct engineering requirements ("Engineering Analysis", "Engineering Design" and "Investigations") by the phrase "consistent with their level of knowledge and understanding", and this level is described using the concept of the forefront of the particular branch of engineering. It would be extremely difficult, if not impossible, to obtain an agreed specification of the forefront for all engineering disciplines, and, even if this could be obtained, a fixed specification might inhibit innovation in programme design and teaching methods. Nor would it be relevant or applicable to new and emerging technologies. The identification of the forefront of the branch is the responsibility of the members of the accrediting panel who are experts in that particular branch of engineering, while the body responsible for the final accreditation verdict will review and assess the rationale for their decision. Note finally that the EUR-ACE Framework has been taken, together with the ABET criteria [20], as the basis of a "Conceptual Framework of expected/desired Learning Outcomes in Engineering" developed by the OECD-sponsored Tuning-AHELO project [21], that in turn should be the starting point for the further developments of the very ambitious OECD-supported AHELO initiative.

### 3. The EUR-ACE system

The EUR-ACE Framework does not intend to substitute for national standards, but to provide a common reference framework as the basis for the award of a common European quality label. Consequently, the EUR-ACE accreditation system was envisaged as based on a bottom-up approach involving the active participation of national accreditation agencies and leading at the end to a multilateral mutual recognition agreement. A supra-national European Engineering Accreditation Board was considered, but soon discarded and never proposed: accreditation is and will remain the task of national (or regional) agencies; the EUR-ACE label will be a complement to the national accreditation, aimed at giving them an international value. This decentralized approach appears to be rather novel in the world-wide panorama of programme accreditation systems. Indeed, the variety of educational situations and of degrees awarded in Europe makes trans-national

recognition of academic and professional qualifications still rather difficult. The already quoted “Bologna Process” is working towards the creation of a *transparent system* of easily readable and comparable degrees in the European Higher Education Area (EHEA), but as far as professional accreditation and recognition are concerned, no generally accepted system or agreement exists on a continental scale: notwithstanding the prestige of national systems and academic titles, this deficiency weakens the position of the European engineer in the global employment market.

The importance of ‘accreditation’ has been felt for quite some time, although the term ‘accreditation’ did not appear in European documents. As early as 1994, the European Commission issued a communication on the possible synergies between the recognition of qualifications for academic and professional purposes [22]. In 1998-99 the EC-supported Thematic Network “Higher Engineering Education for Europe (H3E)” organized three ‘European Workshops for Accreditation of Engineering Programmes’, that lead to the establishment in September 2000 of the ‘European Standing Observatory for the Engineering Profession and Education’ (ESOPE). ESOPE promoted the EUR-ACE project, and in order to run the system, was transformed into the international not-for-profit association ‘European Network for Accreditation of Engineering Education’ (ENAE), founded in February 2006 by 13 Associations and Agencies interested in engineering education throughout Europe. ENAE has registered the EUR-ACE<sup>®</sup> trademark and authorizes national Agencies to add the EUR-ACE label to their accreditation (this authorization might be defined “meta-accreditation”). Further up-to-date information is available at [www.enaee.eu](http://www.enaee.eu).

In November 2006, ENAE assessed that six Accreditation Agencies (CTI, ASIIN, Engineers Ireland, Ordem dos Engenheiros, RAEE, EC-UK) from six countries (France, Germany, Ireland, Portugal, Russia, UK), all active partners of the EUR-ACE project, already fulfilled the requirements set by the Framework Standards; hence, they were authorized to award the EUR-ACE label for a period of two years. Their meta-accreditation has been renewed in December 2008 after a rigorous re-assessment process including site visits by multi-agency teams. Two other EC-supported projects (EUR-ACE IMPLEMENTATION and PRO-EAST) have been active between 2006 and 2008, and greatly helped to start up the EUR-ACE system, respectively in the EU and in Russia. Seventy-three (73) programmes obtained the EUR-ACE label in the first year (2007), although only three agencies (ASIIN, Engineers Ireland, RAEE) contributed; at the time of writing (May 2010) the number of awarded labels has raised to about 500.

#### 4. Spreading the EUR-ACE system: current initiatives

Although the six countries constituting the initial core of the EUR-ACE system were a significant sample of the European Higher Education Area (EHEA), their number was only about one-seventh (1/7) of the total number of the EHEA countries (grown to 47 with the addition of Kazakhstan in 2010). Therefore, ENAE is committed not only to strengthen the EUR-ACE system in these six countries, but also to spread it into other EHEA countries. A document indicating the conditions to be fulfilled and the procedure to be followed by an Agency in order to join the EUR-ACE system and the relevant application form have been elaborated [23], and another two-year EU-supported project with the self-explanatory name of EUR-ACE SPREAD has started on 1<sup>st</sup> November 2008. This project is targeted mainly to Turkey, Lithuania, Romania, Italy and Switzerland: a “national” partner in each of these countries participates in the project, while ENAE is the coordinating partner.

The first concrete achievement of EUR-ACE SPREAD has been the addition of the Turkish “Association for Evaluation and Accreditation of Engineering Programs” (MÜDEK) to the initial six

EUR-ACE Agencies. MÜDEK had begun accrediting programmes on behalf of the Turkish Engineering Deans Council in 2003, joined ENAEE in 2006, became an independent Association in 2007, and in 2008 applied to be EUR-ACE-accredited. After a careful evaluation of the application and site visits by an ENAEE-appointed panel, on 21 January 2009 MÜDEK became the seventh Agency authorized to award the EUR-ACE label and within that year awarded 29 FCD labels. It is expected that Agencies from the other four concerned countries will also apply before the end of the project (31 October 2010).

The formal conditions of Romania and Lithuania with regard to quality assurance in higher education are rather similar to each other. A national Agency for the whole higher education has been recently established (respectively the 'Romanian Agency for Quality Assurance in Higher Education' (ARACIS) and the Lithuanian 'Centre for Quality Assessment in Higher Education' (SKVC). ARACIS and SKVC have joined the EUR-ACE SPREAD project with the ultimate aim of being admitted into the EUR-ACE system for what pertains to accreditation of engineering programmes. Two teams of three foreign experts ('mentors') have been entrusted by EUR-ACE SPREAD to follow and advise respectively ARACIS and SKVC in order to bring them to satisfy the ENAEE Standards. A first two-day meeting of the mentors with ARACIS took place in Bucharest in February 2009. As of May 2010, ARACIS is finalizing the revision that should make its standards and procedures for engineering wholly compatible with the EUR-ACE Framework Standards. SKVC had submitted a pro-forma application to join the EUR-ACE system already in December 2008. Comments on this application have been exchanged between the mentors and SKVC officials; a three-day visit of the mentors to Vilnius took place in December 2009; final adjustments of the SKVC provisions are presently in progress. For both ARACIS and SKVC, it is hoped to conclude the process and include the Agencies into the EUR-ACE system within the two-year lifespan of the project.

In Italy, the "Agenzia Nazionale per la Valutazione dell' Università e della Ricerca" (ANVUR) was the object of a 2007 decree, that however has not been implemented yet; thus, no quality assurance system or accreditation body for Italian Higher Education exists yet. However, the 'Conference of the Deans of the Italian Engineering Faculties' (CoPI) has been concerned with accreditation for a long time: indeed, in the late '90s CoPI elaborated a "National System for Accreditation of Engineering Study Programmes" (SINAI), that unfortunately remained at the stage of proposal. CoPI was one of the founders of ESOEPE in 2000, and one of the most active partners of the EUR-ACE and EUR-ACE IMPLEMENTATION projects: as a matter of fact, the general model behind the EUR-ACE Standards coincides with the model behind the pilot projects of HE evaluation 'Campus' and 'CampusOne', run between 1995 and 2004 by the 'Conference of the Italian University Rectors' (CRUI) with CoPI's collaboration. The EUR-ACE proposals have been summarized in a Volume published by CoPI [24] and illustrated in a two-day Workshop held in May 2008 [25]. Now, CRUI and CoPI, together with the Italian Engineers' Association 'Consiglio Nazionale degli Ingegneri' (CNI), the Industrialists' Association (Confindustria) and the Association of Commerce & Industry Chambers (Unioncamere), are working to set up an Agency dedicated to the EUR-ACE accreditation of engineering degree programmes. EUR-ACE SPREAD is following closely and supporting this initiative.

Several among the EUR-ACE-accredited Agencies accredit engineering programmes also outside their own country: they have been authorized to award the EUR-ACE label to these programmes as well. This has allowed to award the EUR-ACE label, thanks to an accreditation by ASIIN, to a few FC programmes in the German-speaking Switzerland, while some programmes in the French-speaking Switzerland are already accredited by CTI and can now obtain the EUR-ACE label too. However, EUR-ACE SPREAD is trying to set up and implement a more systemat-



ic way to spread the EUR-ACE system into Switzerland: a grant with this specific objective has been received from the Swiss Government, and concrete proposals – that should involve the Swiss National Quality Assurance Agency (OAQ) - are being elaborated.

In March 2010 the Dutch-Flemish official Accreditation Organization NVAO (the only body legally authorized to accredit HE programmes in the Netherlands and in Flanders, i.e. the Dutch-speaking part of Belgium) has formally applied to join the EUR-ACE system. The application is now under scrutiny: it is to be noted that NVAO accredits the programmes on the basis of an assessment by independent Agencies, therefore, ENAEE should be satisfied that in this assessment the EUR-ACE Standards are taken into due account. Anyway, it is expected to conclude positively this procedure within a few months.

As for the French-speaking part of Belgium, CTI has been contacted both by some Faculty Deans and by AEQES (the agency in charge of quality assurance in that region), and will run accreditation visits from 2012, including the award of EUR-ACE labels. Indeed, CTI has already awarded the EUR-ACE label to a programme of the Belgian Royal Military Academy in Brussels. Also KAUST, the Polish Committee for Accreditation of Technical Universities, has decided to apply for joining EUR-ACE: their application form is expected in the Summer 2010. Finally, several programmes have been accredited in Kazakhstan (the 47<sup>th</sup> and latest country to join the “Bologna process”) by RAEE. They will get the EUR-ACE label, while efforts to set-up National Engineering Accreditation Agencies in Central Asia countries have started.

Anyway, single HEIs from any EHEA country can apply, either to a specific Agency or through the ENAEE Secretariat, to have their programmes awarded the EUR-ACE label. This may be another way to start spreading the system into some countries. The EUR-ACE label may also be awarded outside the EHEA. Indeed, signals of interest for this possibility have already reached the ENAEE Headquarters and may be followed in the near future by concrete initiatives. Another EU-supported 3-year project, called EUGENE (EUropean and Global ENgineering Education), started in November 2009 and is expected to contribute to further strengthening and spreading of EUR-ACE. In fact, within the general objectives of “improving the impact of European Engineering Education on competitiveness, innovation and socio-economic growth in a global context”, the EUGENE workplan devotes the whole “Activity Line C”, lead by ENAEE, to the aim of “improving trans-national mobility of engineering students, graduates and professionals, also through contacts and synergies with the International Engineering Alliance and the Washington Accord”. ENAEE is also active, either directly or through “experts”, in the successive stages of the OECD global initiative for “Assessment of Higher Education Learning Outcomes (AHELO)” aimed at “assessing Learning Outcomes on an international scale by creating measures that would be valid for all cultures and languages”. In the preliminary stage of the AHELO initiative, the experts indicated by ENAEE have been instrumental in formulating the “Conceptual Framework of Expected/Desired Learning Outcomes in Engineering” [21], that draws heavily from the EUR-ACE Framework Standards.

## 5. Concluding remarks

If coupled with rigorous Quality Assurance rules, as it should always be, programme accreditation assures that an educational programme is not only of acceptable academic standard, but also that it prepares graduates who are able to assume relevant roles in the job market. The participation of non-academic stakeholders in the process is a guarantee to this effect. An internationally recognized qualification like the EUR-ACE label, added to the national accreditation, will facilitate job

mobility as well [26]. It is fair to state that the EUR-ACE system, compared with other existing trans-national engineering accreditation systems and in particular with the Washington-Sydney-Dublin accords [27], is at the same time simpler and more flexible. In fact, contrary to the Washington and Sydney accords, EUR-ACE does not create a rigid barrier between 'engineers' and 'technologists', which would be against the spirit of the Bologna Process and in many languages even not understandable; at the same time, EUR-ACE allows national differences and appropriate distinction between the cycles. Benchmarking the two systems will indeed be a major challenge for EUR-ACE; another will be testing the consistency and actual applicability in our specific discipline (engineering) and in its different "branches" of Dublin Descriptors, EQF and EU Directive on professional qualifications [18]. But, apart from technical and operational difficulties, creating a pan-European scheme like the new-born EUR-ACE system certainly finds major difficulties in the great differences between educational practices, legal provisions and professional organizations across the different European countries. These are, however, the typical difficulties encountered in building a unified, but not homogenized, Europe. The fact, that common Standards could be written and can be now implemented from Portugal to Russia, in continental and Anglo-Saxon countries, is a matter of great pride for us, the initiators of EUR-ACE.

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AGENȚIA ROMÂNĂ  
DE ASIGURARE A  
CALITĂȚII ÎN  
INVĂȚĂMÂNTUL SUPERIOR

# STUDENT-CENTERED LEARNING / TRAINING AND QUALITY ASSURANCE IN HIGHER EDUCATION

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## Abstract

*The student-centered learning/ training development is depending of several main factors, among these being the quality assurance as an essential one. Some views on teacher-centered learning and student-centered learning are debated. The concepts and specific characteristics of student-centered learning/ training are presented in a synergism approach, correlated to other related issues. The student-centered activities increase access to training/ learning, in a more flexible and faster way. Some development matters are strengthened, i.e. communication, academic staff, online platforms, international environment, special workplaces for students, etc. A case study exemplifies a model of a stimulating academic environment, in favor of quality assurance, by developing working conditions for student-centered learning. Final relevant conclusions are presented.*

**Key words:** student-centered learning, online platform, quality assurance, higher education

## 1. Introduction

The expectations of employers from universities' graduates are becoming higher and higher. This is the reason why the student period of future graduates should be considered as an investment made to increase their competency and employability as much as possible, by the time they graduate.

The competency and other major attributes of the higher education graduates are achievable, pedagogical and economic, by different methods. One important method is the so called student-centered learning.

The student-centered learning/ training could be characterized with respect to a number of considerations. Some views are presented as follows.

Student learning is the results of curricular and co-curricular experiences designed to provide students with knowledge and skills [1]. Learning/ Study outcome is an objective result of certain teaching/study programme, the achievement of which by each learner or student is an inevitable precondition to award an appropriate qualification. A specific feature of learning/ study outcome is measurability [2].

*Student-centred learning* is an approach to education focusing on the needs of the students, rather than those of others involved in the educational process, such as teachers and administrators. This

approach has many implications for the design of curriculum, course content, and interactivity of courses. Student-centred learning is focused on the student's needs, abilities, interests, and learning styles with the teacher as a facilitator of learning. This classroom teaching method acknowledges student voice as central to the learning experience for every learner. Teacher-centred learning has the teacher at its centre in an active role and students in a passive, receptive role. Student-centred learning requires students to be active, responsible participants in their own learning [3].

A synthesis of some views on teacher-centered learning/ traditional and student-centered learning is presented in Table 1.

**Table 1.** Some views on teacher-centered learning/ training and student-centered learning [4, 5, 6]

Teacher-centered learning / traditional	Student-centered learning
<ul style="list-style-type: none"> <li>- low level of student choice</li> <li>- passive student (without role in learning)</li> <li>- power of teacher (decisions)</li> <li>- emphasis on learning the present subject only</li> <li>- emphasis on receiving information</li> <li>- teacher is the controller of activities</li> <li>- extrinsic motivation (grades)</li> <li>- individual learning and competition</li> <li>- teacher responsible for assessment</li> <li>- short-term perspective (emphasis on completing assigned work and learning for exams)</li> <li>- the teacher is in front of the teaching classroom, while the students are listening</li> <li>- students are working in worksheets created by the teacher</li> <li>- students reading a whole group setting, the teacher is asking questions to the class</li> </ul>	<ul style="list-style-type: none"> <li>- high level of student choice (what and how to learn)</li> <li>- active student (responsible and active role, autonomy)</li> <li>- power of student</li> <li>- emphasis on integrating learning across the curriculum</li> <li>- emphasis on enquiry-type activities</li> <li>- teacher is a guide, mentor and facilitator of learning</li> <li>- intrinsic motivation (curiosity)</li> <li>- focus on cooperative learning</li> <li>- learning can occur anywhere</li> <li>- self and peer assessment more common</li> <li>- long-life perspective (emphasis on life-long learning / deep learning and understanding)</li> <li>- the teacher walks around, while students learn into groups</li> <li>- students are working into groups, by their own choice of technology</li> <li>- students working at their laptop individually, doing research</li> <li>"Everyone could affect the learning of a student, so everyone should have a role" [5]</li> </ul>

Student-centred learning is about helping students to discover their own learning styles, to understand their motivation and to acquire effective study skills that will be valuable throughout their lives. To put this approach into practice, teachers need to help students set achievable goals; encourage students to assess themselves and their peers; help them to work co-operatively in groups and ensure that they know how to exploit all the available resources for learning. ... The students' environment, both in the class and outside must be considered in how much a teacher can facilitate vs. direct. There are no "best practices" that apply at all times in all places with all students. ... Teachers wishing to ensure a student-centred approach must know their students and their backgrounds in order to help them develop appropriately. Clearly there are cultural and personal issues to be addressed, as student-centred learning will be different for each group. [7]

Student-centered methods have repeatedly been shown to be superior to the traditional teacher-centered approach to instruction, a conclusion that applies whether the assessed outcome is short-term mastery, long-term retention, or depth of understanding of course material, acquisition of critical thinking or creative problem-solving skills, formation of positive attitudes toward the subject being taught, or level of confidence in knowledge or skills [8].

## 2. Development matters

The actual state of student-centered learning/ training applications, at different higher education institutions (see above, too), represents a base to strengthen some matters associated to the perspective of the considered method - *communication, academic staff, online platform*, etc., as follows.

### **Communication**

The direct communication between teachers and students should be based on respect, openness, flexibility and promptitude.

During the teaching / learning activities, it is important to assure a relaxed and friendly atmosphere, and interactivity, involving each student, not just a simple exposure of information. The case studies and simple examples should be treated, making correlations with real life and the other subjects. The student should be encouraged to respond to questions, but also to be confident to ask for more explanations, and to express new views.

During the seminars, laboratory and project works, the students should be grouped in teams and do practical works. If some fresh students, in their first study year, have not enough prerequisites in a certain subject, then an older student, not teacher, should train these students, being paid by the university.

In the perspective of a better communication between teachers, students and administration of a university, the online environment becomes of significant value, as well. Technology could help students to express easily and to be more responsible, with the help of some specific tools, such as: discussion forums; internal e-mail; chat, including video chat; file transfer.

### **Academic staff**

The teachers should be models for students, regarding their competence, but also as human beings. Even they explain about complex things, they should do that in clear words and good correlations, in order to be understood by the audience. It is also beneficial to have teachers from industrial areas or research, who could present the matters related to their practice, and facilitate visits to companies, if possible.

### **Online platform**

An online platform should include all the courses, tutorials, applications, homeworks, etc., depending on every student's curricula, but also information about the subjects, the requirements of the exams, projects etc.

It should have several features: possibility of downloading the courses, and uploading documents; calendar with marked deadlines; timetable of the current semester; possibility of viewing their academic situation; information about the location of faculties and classrooms; news from teachers, etc.

### **University website**

The official website of the university should be very accurate, with the newest possible information for students and for possible interested people, presented in an attractive and user friendly way, in the national and foreign language(s). Here, it is important to find pieces of information about: every faculty and department; subjects; news; contact details of the university staff; accommodation, etc.

### **Assessments / Assignments / Feedback**

In order to observe the evolution of students, the teacher could test continuously their level of understanding and the ways of improving the activity, using the following tools: class assignments; internet assignments; feedback for improving the activity.

**Teamwork**

Teamwork is a key point to focus on, because most of the time, after graduation, persons work into groups, with people they do not know. It is important to make them understand that you can obtain better results working with somebody else; the progress is more relevant with more people involved. Of course, teamwork does not exclude individual work.

**International environment**

International multi-cultural diversity gives the opportunity to work and know foreign students and teachers, to improve their level of foreign language(s), and to learn more about other cultures, as well. A good improvement in the universities' curricula, especially on the level of master programs, would be to introduce much more subjects in foreign language(s).

**Special workplaces**

It is essentially for students to have places, inside the university area, where they could be able to work for their projects, both individual and with their teams. This involves having: open laboratories; wireless internet; small rooms for group meeting with sockets and writing board; large spaces with tables, benches, and sockets.

**Accommodation**

A good accommodation could be a stimulant for students, as well. If they have their nice place, a quiet and an attractive corridor, they will be definitely tempted to study more. They have all the prerequisites necessities to do that and they feel comfortable there.

**3. Case study**

An example of a stimulating academic environment in favor of quality assurance and student-centered learning is the Linköping University (LiU), and, in particular, its Institute of Technology (LiTH), from Sweden [9].

LiU is dedicated toward developing models for student-centered learning, with approaches such as problem-based learning and project orientation. This, together with an ongoing dialogue with industry and society at large, has been essential for the university's ability to combine basic and applied research in thematic and innovative contexts.

**Counseling students**

This is about how to take care of students, especially in their first year at the university.

There is a limit of students being accepted to LiU programs, and the students have to work hard to be successful. If a student has a successful first year, then he/she will have much bigger chances to get successful in his/her studies, and to get a Bachelor degree after 3 years or a Master degree after 5 years.

At LiTH, the fresh students, in their first study semester, have a class mate, an older student who helps them to know the university, how to study and other necessary information. The class mate is responsible for about 30 students being in a class, and he/she is paid for his/her work by the university.

The students' results are checked after the first semester, and after 3 semesters. In case of low, bad result in what the student has done in his/her studies, the student counselors will do study planning to help the students to be more successful.

The student unions receive financial aid from the university, as well, to get involved when the new students arrive to the university in August, for their first year.

### ***Problem Based Learning***

The problem-based learning (PBL) is a method that assumes to find ways to motivate and stimulate students to be curious to know more about an issue. It is essential to start with finding things that students will recognize and attract them, being based on the student's own way of solving problems.

PBL has been introduced in Sweden in 1986 on the Health Sciences in Linköping. The reason was to renew the teaching methods of the courses, so that students would then collaborate in groups around different "kind" scenario. This method is used very much at the University's Hospital and in the psychology program.

### ***Questionnaire to students***

After the result of 2008 survey, LiTH has been focused on some areas, to take specific measures, as follows.

#### ***(1) Feedback from teachers regarding student performance***

A workshop on the subject of the examination process was provided for teachers at LiTH in 2009 in conjunction with the Center for Teaching and Learning (CUL). The aim was to ensure that the examination process is legally secure, clear in form and a useful tool for assessment and learning, where feedback to the student is a part of the learning.

#### ***(2) Relevance of education to future working life***

Every program committee will submit, at an agreed time, a "Where the education leads" which will include former students' accounts of their working lives after graduation and/or the results of alumni surveys. At the program committee level, the course will be analyzed in order to ensure that connections to working life are made clearer. New courses have also been developed where the content is more work oriented.

#### ***(3) Study plans and discussions***

In order to increase the accessibility of Study Counseling, a general reception has been instituted during application periods and at the start of term. Evaluation shows that the reception has significantly increased the opportunity to give students the answers to questions of a more general nature and in that way to give a better service and provide a place for those students who need a longer discussion with the counselor.

#### ***(4) Information or discussion regarding study or work practice abroad***

A timetable for the provision of information regarding study abroad has been developed. The work is underway to improve the information on study periods abroad on the LiTH web pages.

## **4. Conclusions**

The system based on teacher-centered learning has the teachers with a full control of the class: they are the ones who transmit information and those who are taking most of the decisions, students having a passive role in learning. As a result, the motivation of students is extrinsic, like grades.

The student-centered learning has appeared, on the international level, to be a much better approach to students. More and more teachers and universities are starting to implement this method for some noticeable reasons: students are having an active role in learning and they are more responsible, they are having the option of making choices, the teacher being like a guide and a facilitator of learning. This way, the motivation is intrinsic, such as curiosity.

There are still obstacles in large developing this system, related to resources, conservative attitude of academic staff and students, etc. The case study has highlighted that a student-centered learning/teaching system can bring a continuous progress not only during the university studies, but also to workplaces and society, in general. Therefore, even it is hard to implement a student-centered learning system, involving time and financial efforts, it is important to take into consideration the benefits on long term: students' increased levels of performance and creativity after the graduation, their increased employability, the possibility to adapt easily in the labour market, etc.

### Acknowledgement

Our thanks to Professor Dr. Helen Dannetun, Dean of the Institute of Technology, Linköping University, Sweden, for openly sharing information with us.

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AGENȚIA ROMÂNĂ  
DE ASIGURARE A  
CALITĂȚII ÎN  
ÎNVĂȚĂMÂNTUL SUPERIOR

# ACCREDITATION OF ENGINEERING EDUCATION IN TURKEY

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## Abstract

*There are one hundred forty five Universities in Turkey and around fifty of them are the foundations universities. Most of them have engineering faculties and they are occupying so many varieties of the engineering fields. Of course those educations in the field of Engineering should be standardized and accredited. In order to solve this problem MUDEK has established in 19th January 2001 with the decision of the Council of the Deans of the Engineering and Architecture faculties of Turkey. The aim of MUDEK was to evaluate and solve the problems of engineering education and standardize the system as Europe. MUDEK is than approved by the Council of Higher Education of Turkey as a national accreditation body for engineering and architecture education in 2007. Since, MUDEK worked so effectively within the same scope as European standardization, now, MUDEK is the member of the "European Network for Accreditation of Engineering Education"(ENAAEE). Since 2009 MUDEK is also able to give EUR-ACE certificate. In this presentation, MUDEK functions and its accreditation procedure and EUR-ACE procedures is going to be explained for Engineering Education in Turkey*

**Key words:** Accreditation, Engineering, Turkey.

## 1. Introduction

Higher education is so important and should be standardized not in one country but for all countries. As far as the engineering education concerns quality and standardization are the main parameters should be considered. In fact engineering education should match the industry and companies need. Education system should be tuned as learner centered and innovation should be as culture driven by the actual conditions. Therefore universities should say what they do, and do what they say and prove it and improve it. That is, there should be standardization and accreditation of this type of engineering education. On the other hand accreditation should be based on "learning" and focused on students. In this procedure outcomes are important rather than incomes.

Deans of Engineering Faculties of Turkey have recognized the importance of standardization and accreditation of the higher education in 2003 [1] and decided to have one independent body to control and inspect the education to those applied for their education programs. The name of independent body for accreditation became deans of engineering faculties committee (MUDEK). Evaluation and accreditation of engineering programs were started. Since 2007 MUDEK is recognized by the Higher Education Council of Turkey as the National Quality Assurance Agency in accrediting the engineering programs since 2008. In 2009 MUDEK was accredited for first cycle engineering programs by European Net Work for Accreditation of Engineering Education (EUR-ACE)



[2,3]. Now MUDEK is acting as an international independent accreditation agency for engineering education programs. MÜDEK is also provisional member of Washington Accord, which is an international agreement among bodies responsible for accrediting engineering degree programs.

## 2. Engineering Accreditation Committee (MUDEK)

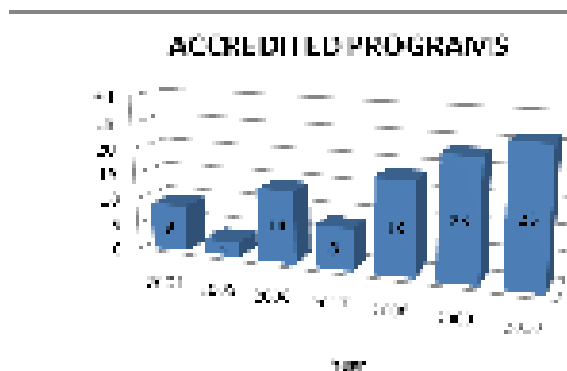
The main aim of MUDEK is to accredit the engineering programs according to international principles. Therefore the first consideration was the engineering education should be evaluated from industry perspective. Engineering programs must give the ability to identify, formulate and solve the engineering problems to the students. The purpose of accreditation program can be classified as;

- Identifying engineering programs that meet minimal evaluation criteria in order to inform society, future students, student counselors, parents and legal guardians of students, educational institutions, professional societies, prospective employers, and public organizations.
- Fostering the advancement and continuous improvement of existing programs in engineering as well as the development of new programs.
- Encouraging the development of engineering education in Turkey.

The criteria used by MÜDEK in evaluating programs determine the minimum accreditation requirements to be met by engineering programs which are an ability to function on multidisciplinary approach, team work, and ability to communicate effectively, globalization, and increase in learning environments by information technology.

### 2.1 Situation in Turkey

As it was mentioned before, MÜDEK has started the accreditation programs at 2004. They accredited 101 engineering programs up to now, as it is shown in Figure 1. Evaluation of

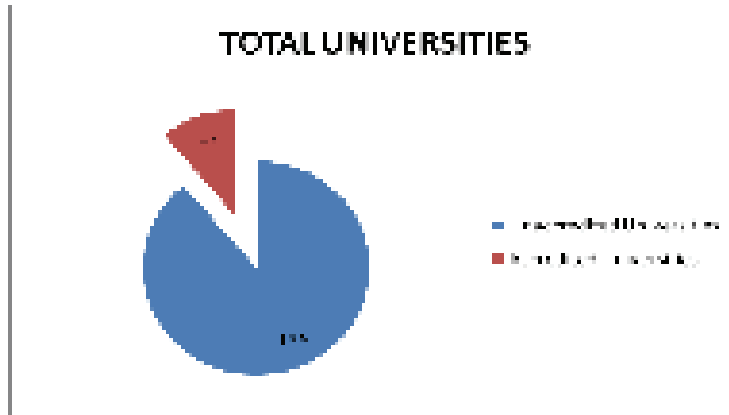


**Figure 1.** Distribution of accredited engineering programs within years

Figure 1 shows that after the year 2006 the amount of the programs accredited increased because of the recognition of MÜDEK by the Higher Education Council of Turkey[4]. In addition to this when MÜDEK was accredited for first cycle engineering programs by European Net Work for Accreditation of Engineering Education (EUR-ACE) than the applications for the accreditation of engineering programs increased noticeably [5]. There are 95 state universities and 58 private

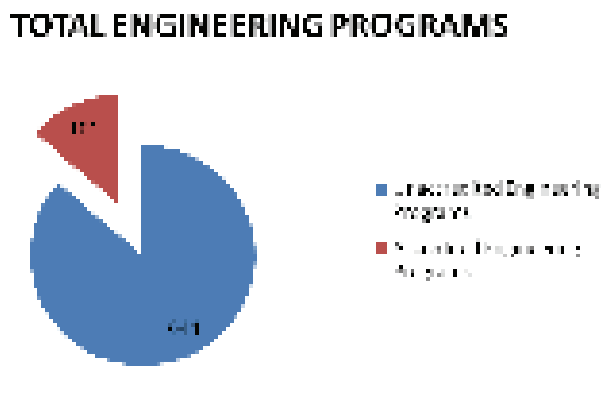


universities in Turkey which make the total of 153 universities recognized and approved by the Higher Education Council of Turkey. In all these universities there are 745 engineering programs which are still active. Total of 101 engineering programs are accredited in 17 universities. Details of unaccredited and accredited universities can be seen in Figure 2. There are 745 engineering programs in higher education in Turkey and only 14% of the programs accredited.



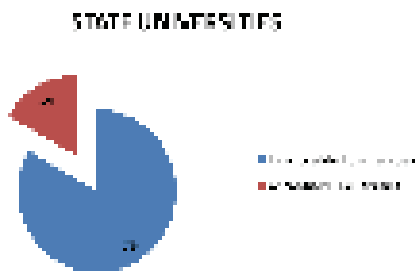
**Figure 2.** The number Universities with accredited and unaccredited engineering programs

Evaluation of these programs can be seen in Figure 3.

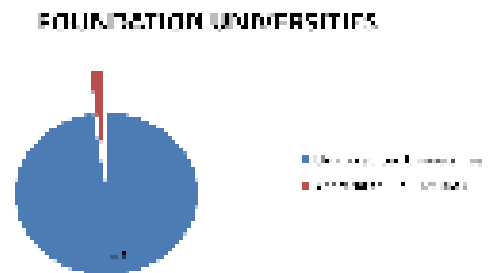


**Figure 3.** Total accredited and unaccredited engineering programs in Turkey

Detail evaluation of state and private universities as far as the accreditation concern shows an interesting picture as it can be seen in Figure 4 and Figure 5. Important point is that 70 state universities out of 95 has an engineering programs and only 16 of them were accredited their engineering programs. Considering the 38 private university total of 44 private universities has an engineering program, only one of them was accredited with 6 engineering programs in which two of them were EUR-ACE labeled.



**Figure 4.** Accredited and unaccredited state universities in Turkey



**Figure 5.** Accredited and unaccredited private universities in Turkey

Another interesting approach will be which engineering branches are popular for accreditation. Classifying of the engineering branches accredited till July 2010 shown in Table 1. Evaluation of Table 1 shows that the most popular engineering education programs are Civil Engineering, Mechanical Engineering Electrical and Electronic Engineering and Chemical Engineering. In other words classical engineering education programs are still effective as far as accreditation concern.

**Table 1** Engineering programs accredited in TURKEY

Programs	Accreditation Number
Computer Engineering	6
Environmental Engineering	8
Chemical Engineering	11
Civil Engineering	16
Materials Science and Engineering	1
Food Engineering	4
Electrical and Electronics Engineering	11
Geological Engineering	6
Mechanical Engineering	12
Industrial Engineering	5
Geodesy and Geophysical Engineering	6
Mining Engineering	3
Metallurgical and Materials Engineering	5
Textile Engineering	2
Engineering Map	3
Genetics and Bio Engineering	1
Systems Engineering	1

### 3. Conclusion

Briefly, engineering education play an important role for the young generation in Turkey. Considering the 70% of the universities have engineering education programs emphasize the importance of the engineering education. One of the important points is that the higher education should be global and standardized. Therefore accreditation of the programs is so important in order to be recognized by EU countries and USA. Accreditation history of Turkey shows that the

increase after the recognition of MÜDEK by higher council of Turkey and became the full member of European Network for Accreditation of Engineering Education (ENAAEE). This means that MÜDEK is internationally approved an accreditation body and the applications for accreditation increases. In 2010 for 6 months the accredited engineering programs are more than the whole year of 2009. This is a promising development.

In addition to these remarks looking for Table 1, new engineering education programs are not yet at the accredited state as it was expected. Those programs should be encouraged to be accredited .Hopefully starting from 2010 accreditation of the engineering programs will be increased tremendously.

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# ENHANCING THE QUALITY OF POSTGRADUATE EDUCATION – DEVELOPING STANDARDS AND RECOMMENDATIONS FOR LLL MASTER PROGRAMS CONFORMING TO THE BOLOGNA PRINCIPLES

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## Abstract

*In light of the increasing significance of postgraduate education, the Austrian Agency for Quality Assurance has developed a concept for a project, which supports higher education institutions in the planning, design and realization of education at Masters levels and in which standards for internal and external quality assurance are drawn up. The standards are supposed to promote the awareness of high-quality postgraduate education offers and contribute to its transparency. The project financed by the responsible ministry is being carried out in a project group consisting of seven to ten higher education institutions from all higher education sectors. The standards are being jointly drawn up by the project group at several workshops, in which external experts are also participating. From a methodological standpoint, the project builds on self-analyses, the exchange of experiences between the participating higher education institutions and with external experts, the analysis of examples of (national and international) good practice and an analysis of literature and documents.*

**Key words:** postgraduate education, quality standards, recognition of informal competences, transparency.

## 1. Background

In recent years the issue of postgraduate education has become increasingly important. In view of the discussion on life-long learning and the implementation of the Bologna reforms, the demand for postgraduate education programs has increased and issues regarding the permeability of the education system (in particular the opening of the higher education system for vocationally qualified applicants) have gained significance.

The Bologna Process has added new dynamics to the discussion on life-long learning and postgraduate education in the tertiary sector. The access to the higher education system for employed target groups is to be facilitated. The recognition of professional competences is supposed to increase the attractiveness of continuous further learning at higher education institutions, while the creation of a structured offer aimed at employed persons shall allow older employed persons to partake in academic studies. An important future target group of higher education institutions will be Bachelor graduates wishing to acquire further education after an initial career phase for the sake of specialization or reorientation. Modularization, the associated greater flexibility, and the expansion of recognition options (accreditation of non formal and informal prior learning) as well as the awarding of ECTS points/the calculation of workloads facilitate the development of programs tailor-made to these target groups. However, in view of the increasing offer, it is also crucial to place special emphasis on the transparency of the postgraduate education offers. In light of the market orientation of the

postgraduate education offers and their funding function [1] [2] for the higher education institutions, the quality of the offers must not be overlooked for the sake of greater profitability.

International studies show that, compared to other countries, higher education institutions in the German-speaking countries have little experience in the organization of such programs, which are aimed at particular target groups and are positioned at the interface between vocational training and academic higher education. Problems exist with regard to:

- The professional development of learning arrangements. The professional planning, development and implementation of programs requires substantive and corporate cultural suitability, efficiency and effectiveness of the learning arrangements, and organizational forms, which are independent of time and location.
- The fulfilment of didactic and methodological demands of employed persons with regard to learning processes. Project work and case studies, which draw on the work experiences of the students, are usually taken for granted in further education. Students demand the incorporation of their skills and wish to directly benefit from the expert knowledge of the teaching staff. This applies, in particular, to executives, who place high expectations on the efficiency and effectiveness of teaching and learning processes.
- Deficits in support and management structures. From the program planning phase, to program development, and on to program management, postgraduate education requires participant-oriented support structures. At the same time, framework requirements and standards as stipulated by the ESG (European Standards and Guidelines for Quality Assurance in the European Higher Education) are to be fulfilled [3] [4] [5].

## 2. Project objectives

Against this background, the AQA - Austrian Agency for Quality Assurance - has developed a project aimed at the quality enhancement of postgraduate education programs.

Since above all the awarding of academic degrees should be strongly linked to standards, which are valid throughout the higher education system, the project focuses on those postgraduate education offers, which lead to an academic Masters degree, follow the Bologna guidelines (in particular the modular study structure) and have defined concrete learning outcomes. 'Smaller' programs (e.g. certificate of advanced studies) will only be considered with regard to the Master, e.g. with regard to recognition.

The standards shall

- support the higher education institutions in the design, planning and realization of postgraduate education programs with regard to the aspects mentioned above and
- support them in the design of the internal quality management of postgraduate education
- and serve as a basis for external quality assurance (e.g. accreditation),
- promote the awareness of high-quality postgraduate education offers (e.g. certification) and
- contribute to the promotion of the transparency of postgraduate education offers at higher education institutions.

### 3. Methodology

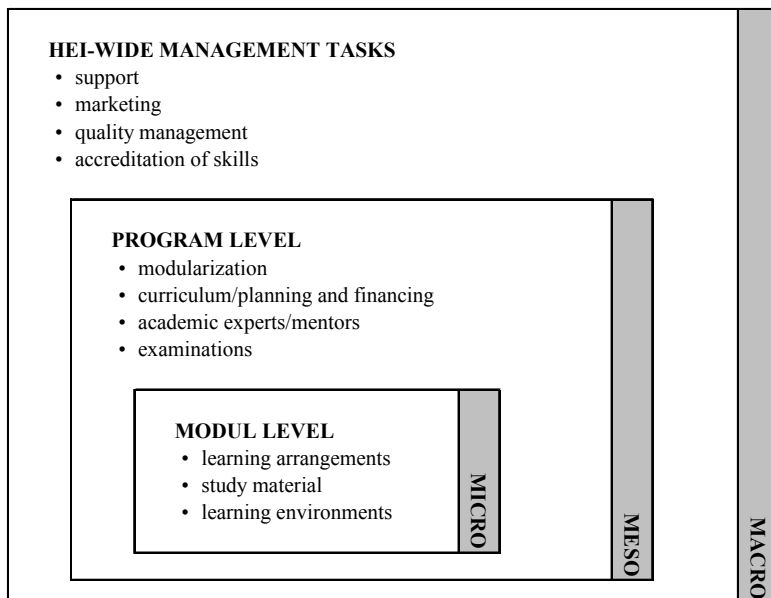
The standards will be jointly drawn up in a project group, which consists of several Austrian higher education institutions from all three sectors (public and private universities, universities of applied sciences [Fachhochschulen]) with a broad and diverse offer of education at Masters level. The group, which also includes international members representing examples of best practice, forms an expert network.

The methodological focus is placed on the comparative analysis of practices for developing, designing and organizing exemplary offers of the higher education institutions within the project group as well as the analysis of international examples of good practice outside the project group. The analysis and development activities also are carried out with external international experts, who are regularly incorporated into the project. The third main methodological pillar is the analysis of literature and documents, which involve existing standards, position papers, recommendations and specialized literature (e.g. from EUCEN – European Association for University Lifelong Learning, EUA – European University Association, Standing Conference of the Ministers of Education and Cultural Affairs of the Länder in the Federal Republic of Germany).

The process is carried out in a project group consisting of ten higher education institutions and spans over a time period of one to one and a half years. The comparative analysis and the exchange of experiences are supported by regular workshops.

The analysis pertains to the following levels, which are highly relevant for the organization and management of further education offers [6].

The macro-level refers to the overarching management functions, the meso-level to the study offers themselves, and the micro-level to the didactic designs of the individual modules. Particular attention is dedicated to access to study programs and the transition to doctoral programs as well as the transparency of the offers.



**Figure 1.** Levels for the analyses of program evaluation [7]

The analysis of the offers is based on criteria-based self-reports and the analysis of them (SWOT analyses) in joint workshops.

The methodological approach is structured according to the following work phases and processes:

- Literature and document analysis
- Research and analysis of postgraduate education offers of higher education institutions not participating in the project

Development of a catalogue of criteria on the basis of the structure described above

- Self-analysis of micro, meso and macro level on the basis of the catalogue of criteria comprising
- Compilation of materials (on an exemplary basis for each course), handouts, information material, brochures ...
- Evaluation of the submitted materials and the self-report in workshops
- Development of standards/guidelines and best practices

Even though the project focuses on the development of standards for Master programs, guidelines for other (preceding or shorter) further education offers, which do not lead to a Master degree, will also become apparent.

The overview of international developments (incorporation of examples of good practice, international experts, literature and already existing standards) ensures from the beginning that the international status quo and developments are integrated into the standards. Furthermore, it is crucial to engage in cooperation with comparative initiatives (e.g. SIRUS [Shaping Inclusive and Responsive University Strategies], a project of the EUA) and to come to agreements on the standards.

#### **4. What determines the quality of Master programs? – A first stocktaking**

An initial analysis of literature, conference articles, present standards and recommendations allows us to present some brief findings on problematic areas and challenges for further education at higher education institutions and to draw up potential quality criteria.

The following list, which makes no claim to be complete, reflects several aspects and potential quality criteria from the current discussion [8] on the design of postgraduate education programs.

Compatibility of the programs, permeability, and linkage of the programs, modularization

Recognition of professional skills/access paths for non-traditional students

International orientation (English-language modules)

Orientation towards Bologna criteria (outcome orientation, skills orientation, ECTS)

Awarding (number) of credit points

Quality management commitment

Service orientation, support

Participant and market orientation



Research and science orientation, scientific transfer  
Adult-compatible instruction and course design  
Academic feasibility  
Teaching personnel  
Transparency

While drawing up the standards and quality criteria the following questions will be dealt with:

What criteria can be defined as quality criteria? (For instance, many discussions have made it clear that the number of ECTS, e.g. Master degree with 90 ECTS, which must be awarded to obtain a degree, must not necessarily be regarded as proof of quality.).

What aspects particularly define the quality of Master programs? Does the criterion apply to Master programs, in particular, and do certain special requirements have to be taken into account? (for example, adult-compatible instruction and course design is necessary for every extra-occupational program. What special demands arise during Master programs and how should they be designed in view of these demands?)

How can the quality criteria be operationalized?

One challenge of the project consists in understanding the analyzed programs as independent, coherent offers that are aligned with the profile of the respective higher education institution, and to take the legal frameworks of the three higher education sectors into account (remark: higher education in Austria is divided into three sectors – public and private universities and Fachhochschulen, each of them acting on the basis of their own legal frameworks and very different regulations and provisions as regards external quality assurance). Another challenge is to develop a common understanding of quality for growing fields of activity of higher education institutions.

The practical benefit of the standards is two-sided – for consumers, they promote the transparency of what is still a confusing market of academic offers and they provide orientational and innovative guidelines for higher education institutions.

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# QUALITY ASSURANCE AND STUDENT PARTICIPATION: THE CASE OF NORWAY – BEST PRACTICE OR LESSONS TO LEARN?

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## Abstract

*Norway has gone from being a rather cautious reformer to taking the lead among Bologna-countries in terms of implementation of the various action lines, among them quality assurance. This article presents how QA has been implemented at two Norwegian universities, and how new features in legislation have been added on top of already complex institutions. In addition it presents how students are represented at every level in QA and how this constitutes ‘best practice’. The article aims at pointing out some of the pitfalls that stakeholders might encounter when implementing QA systems, and also underlines how difficult the task of implementing these policies are. In the article we are presented with two Norwegian universities with vastly different strategies in terms of QA and implementation; in the end they both failed to penetrate to the bottom line and be relevant for students and academic staff at the program level. This development presents a unique insight into why implementation of QA systems might fail and how this can be avoided.*

**Key words:** student participation, implementation, interpretation, QA-policy

## 1. Introduction

### 1.1. Topic and aim of this article

“A stupid man learns from his own mistakes - a clever man learns from the mistakes of others”.

This article aims to describe how QA-systems have been implemented at two Norwegian universities, and try to give some clue as to the status of QA in Norway. I will especially elaborate on the parts regarding student participation in QA and also describe how students participated in the design and revision of QA-systems when these systems were first introduced in Norway. Throughout the past decade the face of Norwegian higher education has changed, and student participation in quality assurance has been a feature of this development. Norwegian students play a key role in the continuous development of QA policies, and are represented at all relevant levels in Norwegian QA; both at the national and at the institutional level.

Yet, as this article will show, this development is not without flaws and there are several aspects of QA that have not been properly implemented. Norwegian students have also criticized several aspects of the Norwegian QA system.

This article relies heavily on an unpublished article by Professor Svein Michelsen<sup>iv</sup> titled “*Quality assurance and accreditation in Norwegian higher education. A tale of two universities in times of change*” (Michelsen 2010a). His article draws upon a vast amount of data and presents useful insights into the implementation of QA at the two oldest universities in Norway. I will use Michelsen’s article as a basis for many of my analyses and I will try to supplement it with my own experiences as a student representative in Norway. Having been involved in Norwegian QA for several years as a student I also feel it is useful to rely upon my own experiences as well as referring to discussions and issues that has been dealt with by the National Union of Students in Norway. This article is therefore quasi-scientific and I make no claim of this article representing any other views than my own.

## 1.2. Is this article too critical?

I have no wish in presenting and overly negative view of the Norwegian QA system; on the contrary I would strongly argue that several aspects of Norwegian QA are definitely ‘best-practice’. This is especially true in terms of student participation. It is however both relevant and interesting to analyse the shortcomings, and challenges facing, Norwegian QA practices. By doing this I hope to enable readers of this article to be able to avoid certain pitfalls; or in case they are unavoidable give some clue as to how they should be dealt with.

## 2. Norwegian higher education (HE) and quality assurance

### 2.1. Norwegian HE and the Quality Reform of 2003

The Norwegian HE system consists of 29 Higher Education Institutions (HEIs) of which 7 (soon to be 8) are universities. Norwegian HE is free; Norwegian students do not pay tuition fees and the amount of Norwegian students has increased (and continue to increase) dramatically over the past 25 years. During the late 1990s severe shortcomings in the Norwegian HE system was identified through the Hernes’ Report<sup>v</sup> and these findings resulted in the parliament adopting the Quality Reform in 2003<sup>vi</sup>. A central feature of the Quality Reform was the emphasis on quality assurance and at the same time the Norwegian QA agency, NOKUT, was set up. As Michelsen also notes: “[the] *expansion of higher education has become closely related to mechanisms for Quality Assurance (...)*” (2010a:6). The need of QA is therefore strengthened as the size of the HE-system increases. One explanation for this might be to ensure the public’s confidence in HE.

### 2.2. About NOKUT

NOKUT undertakes institutional audits and accreditations to ensure that institutions follow Norwegian legislation in relation to quality assurance. Set up as an independent governmental agency NOKUT also has the responsibility of recommending whether or not university colleges should be granted university-status. NOKUT is therefore the deciding body on the level of qualification an institution might confer; for instance must university colleges apply to NOKUT in order to set up second and third cycle studies. These privileges might be revoked following an institutional audit that shows the college breaching NOKUT’s guidelines. Universities can set up study programmes within all three cycles (Ba, Ma and PhD.) without applying to NOKUT although these study programmes must still comply with NOKUT’s guidelines and Norwegian law.

## 2.3. Student participation in QA

As mandated by Norwegian law the students' representatives make up 20% of NOKUT's executive board. The National Union of Students in Norway can therefore appoint its own representatives to the executive board in order to ensure the students' view even on the top level of Norwegian QA. Decisions on whether or not to grant university status to a university college must be unanimous; this gives the students the power to block any such action (in theory). This has not happened yet but it gives a clear indication on the amount of influence Norwegian students have in NOKUT and Norwegian QA. NOKUT is also mandated to include students in all institutional audits and to include them as equal partners to the other experts.

At the institutional level students make up 20% in all deciding bodies, from the university board and all the way down to the individual department. All Norwegian HEIs must have a clearly identified QA unit, as well as a clearly defined QA system. Most universities have set up separate educational committees headed by the pro- or vice-rector; this committee is usually the one which oversees and coordinates the QA work at the institution. Students have 20% of the representatives in this committee. Another peculiar feature of the Norwegian legislation relating to universities and university colleges are the learning environment committees that all institutions are mandated to set up. These committees must consist of 50% students and 50% high ranking academic and non-academic staff (usually university leadership). The chair of this committee rotates between the students and the staff, and the main function of this committee is to coordinate and ensure the quality of the institutions learning environment (and thus assuring that other issues then the strictly 'academic' or pedagogical can be addressed).

## 3. Implementation of QA systems in Norwegian HE

I will now shift my focus to the issue of implementation of QA systems at two Norwegian universities. Since this article does not claim to present a comprehensive and thorough analysis of the status of the entire Norwegian higher education system in relation to QA I find it useful to narrow my scope down to only two universities; hopefully these two 'cases' (or stories) might still present useful insights into the status of Norwegian QA. As noted earlier this section relies heavily on the article *"Quality assurance and accreditation in Norwegian higher education. A tale of two universities in times of change"* (Michelsen 2010a).

### 3.1. Short presentation of the two universities

#### 3.1.1. The University of Oslo (UiO)

Being both the oldest and largest university in Norway, UiO was for many years the most archetypical 'Humboldtian' institution in the country (Michelsen 2010a & Michelsen 2010b). The UiO is also considered the most prestigious institution in Norway, scoring higher on the international rankings than any other university in Norway. As a consequence UiO for a long time considered itself to be the centre for 'Bildung' in Norway; both in research and teaching (Michelsen 2010a).

#### 3.1.2. The University of Bergen (UiB)

Tracing its academic roots to Bergen Museum (founded 1825) the University was founded in 1946 and is Norway's second oldest university; with an institutional profile that matches the UiO. Aimed at being a more 'modern' university, the UiB has a longstanding tradition of having very

strong university directors that has “(...) contributed to the formation of an administrative culture and a strong institutional-administrative leadership (...)” (Michelsen 2010a:20). This has been enhanced by the relatively high degree of self-recruitment that has led to strong informal networks among the academic and non-academic staff (ibid.). A long-standing joke among UiB employees is that the university is a huge family-run enterprise, although this situation has changed over the later years.

### 3.2. Implementation of QA systems at UiO and UiB

Being a key feature of the quality reform of 2003 all Norwegian HEIs had to implement QA systems. The different ways in which this was done provides very useful insights into both how institutions might adapt to new initiatives and how they react to change. The short presentation in the previous paragraphs points out some rather significant differences in terms of organizational culture; especially in terms of university governance and academic traditions.

#### 3.2.1. The University of Oslo

After a thorough self-evaluation exercise published in 2002 the university leadership started to realize that the institution was too complex and that the current practice failed to address issues regarding quality in education. Numerous evaluation exercises had also concluded that the university suffered from significant weaknesses in relation to teaching quality. UiO had (and still has) high ambitions and wanted to be in the international elite in higher education; these ambitions were incompatible with the reality that faced the university leadership. The UiO therefore grasped the opportunity provided in the quality reform to use the QA system as a strategy for recentralization and radical change; QA was considered “(...) a strategic issue of considerable importance” (Michelsen 2010a:15). Successful implementation of QA was very high on the agenda and received strong support from the students’ organizations and representatives (ibid.).

The implementation quickly encountered problems when QA was introduced at the faculty-level. Faculties had an important role in designing and implementing QA in a way that was useful at the individual faculty (Michelsen 2010a). The relatively cool and ambivalent reception at the faculty level can be contributed to a number of causes according to Michelsen; fear of bureaucratization, putting the middle management in a squeeze between university leadership and academics and perhaps most importantly that the staff responsible for implementing this measure at the faculties did not have sufficient knowledge on QA. “*The QA recipe became entangled in the internal complexities of the university organization (...)*” (Michelsen 2010a:18). As an obvious consequence few aspects of the new QA-paradigm reached the program level, and “[T]he academic staff in general was considered hostile terrain for notions on quality assurance, mostly for ideological reasons” (ibid.). The latter standpoint reflects the nature of the UiO staff as being very ‘Humboldtian’, and this clearly affecting their reaction to the Bologna process and the implementation of QA in this instance (Michelsen 2010b). Michelsen describes the situation at the program level as ‘academic silence’, giving clear indication that central parts of the QA system did not penetrate to the bottom line of the organization (2010a).

#### 3.2.2. The University of Bergen

Given its strong institutional-administrative leadership and powerful university directors combined with the importance of informal networks the implementation of a QA system at UiB followed a very different path then at UiO. Whereas the UiO QA system was rolled out as an

important tool for strategic change and caused considerable discussions, the UiB approach was far more quiet and ‘superficial’ - reflecting a culture of “(...) *conflict avoidance and unitary action* (...)” (Michelsen 2010a:20). It is important to note some similarities to UiO; most importantly that UiB also faced severe challenges in terms of teaching quality and a lack of systematic knowledge in this regard. This was increased by the high drop-out rates of new students. In spite of this the university considered it self to be very well-managed, and most faculties felt that they had “(...) *fairly good systems to ensure the desired quality in most study programmes* (...)” (Michelsen 2010a:21). The new QA system was considered to be more like a description of the current practices than a radical new tool; the new system sought to fit together as much as possible under the new heading of a QA system.

The university leadership acknowledged from the start that lower levels of the university (most notably the program level) had limited knowledge of the QA system. An information campaign was devised and several new measures were introduced (most notably the positions of vice-rector and vice-deans for education, in addition to the setting up of an ‘education committee’ to oversee the implementation and running of the QA system). At the faculty level the ‘new’ QA system gained little attention since it mostly dealt with the administrative staff. Just as at UiO “(...) *the main reaction [at the program level] was silence*” (Michelsen 2010a:23). Academic staff noted that time spent on teaching had increased and that this ended up going out over time to do research; there was also some criticism that more and more responsibility was put on the existing (and new) administrative bodies (ibid.). The implementation of QA at UiB therefore failed to engage the academic staff; just as at the UiO the implementation of QA at UiB did not penetrate to the bottom line of the organization. In stead the ‘new’ QA system was a description of current practices centralized into a ‘system’. The UiB quality assurance handbook was for instance an unpretentious booklet of only 6 pages (Michelsen 2010a).

### 3.3. The learning environment committees

As noted in section 2.3 all Norwegian HEIs must have learning environment committees (LMU) and these must consist of high ranking staff and students. This was one of the new measures that were introduced through the quality reform of 2003 and these committees constitute important functions in QA at the institutional level. In this section I draw upon my own experience as chair of the learning environment committee at UiB as well as my experience in the national union of students in Norway where learning environment and QA were important and hotly debated topics.

#### 3.3.1. UiB: Going from ‘paper tiger’ to a real arena of decision making?

In the years 2007 to 2009 the learning environment of students emerged as one of the most important (and neglected) issues in the Norwegian student movement. An accreditation of UiBs quality assurance system<sup>vii</sup> criticized the fact that the learning environment committee (LMU) was almost invisible and known among neither students nor staff. When I took over as chair of the committee I went into dialogue with both the rector and other high ranking university staff in order to address this issue. The LMU was internally considered to be a fully operational ‘paper tiger’ - hosting meetings and having some degree of activity. The problem was the complete lack of impact it had in terms of the issues it addressed. Considered marginal and too ‘student friendly’ (due to the fact that students often had the majority since all of the staff rarely attended every meeting) very few decisions were delegated to the committee.



During the work on an action plan to enhance LMUs importance and function within the QA system it became more and more obvious that LMU had been set up only to fulfill the requirements in the quality reform. LMUs recommendations and decisions had (until 2008/2009) not been given any significant weight in the university governance. When formal elements of an organization are 'decoupled' from its day-to-day activities we are dealing with a phenomena in which formal elements might be considered as 'myth and ceremonies' (Meyer & Rowan 1991). As Meyer and Rowan also notes: "*Many elements of formal structure are highly institutionalized and function as myths*" (1991:44). As we (The other student representatives in the committee and me) were working on LMU at UiB we grew more and more convinced that the function of LMU was decoupled from other activities at the university. The limited attention given to the committee by the university leadership (as well as the complete lack of funds to make it operational) drew a rather grim picture of LMU. We therefore came to the conclusion that LMU was a 'paper tiger'; lacking both relevance and influence and being 'kept alive' only to fulfill legal requirements.

When this issue was raised at the national board of the national union of students in Norway I was surprised to learn that the challenges facing LMU at UiB were almost identical to the situation at most other Norwegian universities. In almost all cases the learning environment committees had been superficially implemented and not been given either influence or delegated authority. The committees had been added to an already complex organization, and not included in the day-to-day management of the universities.

### 3.3.2. Implications

The learning environment committees were (and still are) key features of legislation relating to HE and QA in Norway. I cannot on the basis of the learning environment committees alone conclude that implementation of QA systems have been a failure. The fact that these committees seem to have been added on top of already confusing and complex organizations and not been given sufficient weight to function properly does however point to an unsuccessful implementation. It is also wrong to give the learning environment committees too much importance compared to all the other functions and feature of a QA system. However, when core elements of QA systems are superficially implemented this undermines the legitimacy of the entire system and should be cause for concern.

### 3.4. Status of implementation

In this chapter (3) I have presented the status of implementation of QA at (two) Norwegian universities, and supplemented this with my own experience as chair of the learning environment committee at UiB. It is obvious that QA is not in any way properly implemented, the learning environment committee gives clear indications that there are still significant issues yet to be tackled. The most important lessons to learn from this chapter is how QA has yet to penetrate to the lower level of the institutions and how it is being met with a mix of hostility and ignorance by academic staff. The main reaction at the program level at both UiO and UiB has been silence among academic staff. I would strongly argue that unless QA is relevant for teachers and learners, in the individual classroom, the entire system loses legitimacy. This should be a major cause for concern and readers of this article should take whatever measure available in order to confront this threat.



## 4. Lessons to learn

Going back to the introduction I would like to repeat the following: “A stupid man learns from his own mistakes - a clever man learns from the mistakes of others”. It has not been my intention to try to present an as negative view of QA in Norway as possible; on the contrary I have strived to present a balanced view on the status and challenges facing QA in Norway. I do however strongly believe that many of the issues that I have raised in this article are relevant in other contexts than the Norwegian one. Based on the previous chapters I would like to present the following lessons that I hope can be useful for the ISQM conference and other readers of this article.

### 4.1. Institutions interpret QA legislation and guidelines differently

As this article has clearly shown, differences in organizational culture and context vastly influence how institutions define and develop their QA systems. The UiO/UiB cases are a good example of how institutions use their academic freedom to adapt legislation and guidelines to ‘fit’ organizational practices. The consequence of this is that QA systems (even within countries and among similar institutions) might be vastly different.

### 4.2. Proper implementation of QA is a critical part of establishing QA systems

As the UiO/UiB cases have clearly shown how hard it is for QA ‘ideas’ and practices to penetrate to the lower levels of institutions. In both cases we have seen how QA systems are mostly implemented on the top-level and fail to have relevance for the lower levels. As the case of the Learning Environment Committees (LMU) has also shown there is a risk of adding to many new features to already complex organizations. The consequences of setting up elaborate QA systems, that fail to be part of the decision making processes, are that they become decoupled from the actual practices at the institution.

### 4.3. Give students a mandated right to be part of decision making processes

A QA system is not successful if it does not put the learners in the centre; after all it is precisely that quality which any QA system is out to assure and enhance. Unless learners are included on every level and given influence over the QA system it will almost certainly fail; primarily because the learners does not have any influence to improve the system from their perspective, and secondly because a system in which learners are not properly represented will gradually undermine itself since it loses legitimacy and learners ‘lose faith’ in the system. The ‘case’ of Norway illustrates how students are influential stakeholders and are included on every level of governance in HE. When students are in a position to improve QA from within this is a great contribution to both the efficiency and relevance of such a system.

## 5. Conclusion and final remarks

Have QA in Norwegian institutions been a complete failure? A cynical reader might draw such a conclusion from this article but I would strongly oppose such a conclusion. It is my personal belief that far too many stakeholders brag about best-practices; I feel that we from time to time would learn a lot more from studying elements of our policies that fail, and why. This is of course difficult in a context where it’s in the interest of most stakeholders to present themselves as beneficial as possible. Hopefully this article will be a useful contribution in this regard. Any policymaker must however from time to time face the truth and realize that not all policies are implemented in a successful way every single time; the only way to improve is to analyze why certain aspects of policies fail.

The 'case' of Norway is in this regard interesting since Norway has gone from being a rather slow and cautious reformer to fully embracing the Bologna process and rapidly implementing the various action lines (Bleiklie 2009). Norway is now one of the countries that has come the longest in implementing 'Bologna' and this article has tried to show the backside of the medal in this regard. The 'scorecards' of the Bologna stocktaking exercise might therefore paint a somewhat un-nuanced picture. The goal of this article has been to highlight how (seemingly) successful implementation of QA in reality is far from perfect. Another central point has been to show the importance of student participation and how Norway in this case is 'best practice'. I would argue that in order for QA to realize its potential as a tool for quality enhancement, a continued focus on implementation is vital. It is my impression that many academics does not have a lot of 'faith' in the system; viewing QA as a bureaucratic exercise undertaken by administrative staff. This threat should not be taken lightly.

## 6. Acknowledgements

This article relies heavily on the writings of Svein Michelsen and especially the article "Quality assurance and accreditation in Norwegian higher education. A tale of two universities in times of change". I take full responsibility for the conclusions and opinions that I present in this article but want to fully acknowledge that large parts of the data are gathered from Svein's aforementioned article.

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# ACCREDITATION OF JOINT PROGRAMMES- THE WAY FORWARD

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## Abstract (Times New Roman 11 pt bold, 6 pt space before and after titles)

*Joint programmes are on the top of the European higher education agenda. These programmes facilitate some of the core elements of the Bologna reforms related to cooperation and mobility of staff and students in Europe. In the Bologna Process Stocktaking Report 2009 from the European Commission it is stated that there are around 2,500 joint programmes in Europe, and that the number is still increasing. However, even if there is a political will to support the development of such programmes there are still significant hurdles to overcome before these programmes can easily be set up, especially in the domain of recognition and quality assurance. The European Consortium for Accreditation in higher education (ECA) is currently exploring these issues. Within the framework of the TEAM II project ECA member agencies carried out five pilot accreditation procedures of joint programmes during autumn 2009 and spring 2010. Based on these and similar experiences ECA has proposed a way forward regarding accreditation of joint programmes. This may involve the establishment of a European coordination point for external QA and accreditation of joint programmes and the development of a multilateral recognition agreement between agencies regarding the mutual acceptance of the results of accreditation of joint programmes.*

**Keywords:** Joint programme, accreditation, ECA, coordination point, multilateral recognition agreement

## 1. Background

### 1.1. Joint programmes<sup>1</sup>[1] on the rise

Joint programmes have been on the European political agenda, with ever increasing attention, for the last decade. They are thought to stimulate main aims of the Bologna agreements such as mobility of staff and students, cross-border cooperation and promotion of European higher education. According to the Bologna Stocktaking Report 2009 [2] there are now about 2,500 joint programmes in Europe of which almost 150 are Erasmus Mundus programmes supported by the European Commission. These numbers show that there is an increasing interest from higher education institutions to cooperate on offering joint programmes.

With the increased attention on joint programmes, there is also an increased focus on finding purposeful methods for the external quality assurance of these programmes. Main stakeholders<sup>2</sup>

<sup>1</sup> "Joint programmes are programmes offered jointly by different higher education institutions irrespective of the degree (joint, multiple and double) awarded." (European Consortium for Accreditation in higher education" Principles for accreditation procedures regarding joint programmes, 2007, p. 1)

<sup>2</sup> See the TEAM II Conference publication "Joint programmes: Too many cooks in the kitchen? Challenges for Accreditation, Recognition and Transparency"

within the European higher education area have expressed the need for quality assurance agencies to find ways of carrying out external quality assurance procedures which limit duplication, but which still ensure that these programmes have the required quality.

Accreditation is an important method for external quality assurance in Europe and has become the most common way of carrying out external quality assurance procedures in many European countries. The European Consortium for Accreditation in higher education (ECA) defines accreditation as *"a formal and independent decision, indicating that an institution of higher education and/or programmes meet certain predefined standards."*[3]

Normally, accreditation procedures are carried out by one quality assurance agency and focusing on how institutions are offering programmes nationally. However, since joint programmes are, per definition, offered jointly by different higher education institutions it is necessary for quality assurance agencies to make sure that the quality of the totality of the programme is up to standard. Consequently, QA agencies need to look into how accreditation procedures can be done in a feasible manner which meets the expectations of stakeholders. The ENQA project; Transnational European Evaluation Project II (TEEP II) [4] which was finalised in 2006 covered such issues. One of the main conclusions of the project was that it is important to develop methods for evaluation/accreditation of joint programmes that do not involve unnecessary duplication, but rather focus on building mutual understanding and trust. It was suggested that two QA agencies could cooperate on a single accreditation procedure for a joint programme.

In the European Commission's report on progress in quality assurance in higher education (September 2009) it is stated that *"National quality assurance agencies should be encouraged to develop activities beyond their borders and to seek the recognition of their decisions in other countries, e.g. through conventions of mutual recognition. [...] There may be a need to clarify the portability of national accreditation within the EHEA and also the issue of quality assurance for cross-border higher education within the EHEA. Given the growing importance of joint and double degree courses in Europe, clear principles might be useful to avoid the need for multiple accreditations."*[5]

These and similar topics have been explored by ECA in the TEAM II project.

## 1.2. TEAM II

ECA has, as a reaction to the increase in the number of joint programmes offered in Europe and as a response to the calls for more focus on external quality assurance of these programmes, been exploring different ways in which accreditation procedures of joint programmes can be carried out.

In the period from autumn 2008- autumn 2010 ECA was carrying out the EU funded project *Transparent European Accreditation decisions & Mutual recognition agreements II* (TEAM II). The main aims of the project were to develop a European methodology for accreditation of joint programmes; to explore recognition of qualifications awarded by joint programmes; and, to improve and extend the website Qrossroads which contains transparent information on quality assured higher education programmes.

In order to develop a European methodology for accreditation of joint programmes ECA member agencies coordinated five experimental single accreditation procedures of joint programmes during autumn 2009 and spring 2010. These would function as empirical material for discussions on how to carry out single accreditation procedures of joint programmes. After the completion of each of the procedures feedback from experts, coordinators of the joint programmes and

representatives from the quality assurance agencies was gathered and analysed. The results were presented and discussed at a TEAM II dissemination conference in June 2010 in Graz. Finally, a Methodological report showing all the findings was published autumn 2010. The main reflections presented in the report will be summarised in the following chapter.

## 2. The search for a European methodology for accreditation of joint programmes

### 2.1. Five pilot accreditation procedures of joint programmes

During autumn 2009 and spring 2010 ECA members coordinated the five pilot accreditation procedures. In total 24 higher education institutions<sup>3</sup> from 12 different European countries and 9 quality assurance agencies were involved in the procedures. Table 1, below, gives an overall overview of the procedures.

**Table 1 : Overview of the five pilot procedures**

Name of the programme	Full partner institutions*	Need for accreditation	Coordinating QA agency	Other QA agencies involved	Place of site visit
Research Master Geosciences of Basins and Lithosphere (BASINS)	<b>VU University Amsterdam (NL)</b> Uni Bergen (NO) Uni Rennes 1 (FR)	NL	NVAO	CTI, HAC	Amsterdam, NL
Joint European Master in Comparative Local Development (CoDe)	<b>University of Trento (IT)</b> Corvinus Uni (HU) Uni Ljubljana (SI) Uni Regensburg (DE)	DE, HU, SI	HAC	GAC, SQAA	Trento, IT
EM Master Journalism and Media within Globalisation (EMMA)	<b>The University of Aarhus (DK)</b> School of Journalism, DK Uni Amsterdam (NL) Uni Hamburg (DE) Swansea Uni (UK) City Uni (UK)	DE, NL	ZEVA	NVAO	Hamburg, DE
Bachelor European Teacher Education for Primary Schools (ETEPS)	<b>University College Zealand DK)</b> Stenden Uni (NL) Linneus Uni (SE) Buskerud UC (NO)	NL, SE, DK	NVAO	HSV	Leeuwarden, NL
Joint European Master in International Humanitarian Action (NOHA)	<b>Deusto University (ES)</b> Uni Cathol.de Louvain (BE), Uni Bochum (DE) UC Dublin (IE) Uni Groningen (NL) Uppsala Uni (SE) L'Université Paul Cézanne (FR)	ES, DE, NL	ANECA	AQAS, HSV, NVAO	Deusto, ES Louvain, BE

<sup>3</sup> This only refers to the full partners of the participating joint programmes.

An accreditation procedure of any higher education programme normally follows the following steps:

1. self-evaluation or documentation is submitted by the unit(s) undergoing accreditation;
2. external assessment by independent experts
3. the accreditation decision.

These steps were the basis for the procedures. Additionally it was agreed that the procedures would be organised according to the following principles:

- One quality assurance or accreditation organisation would be responsible for the procedure
- The totality of the joint programme would be assessed in accordance with the ECA Principles for accreditation procedures regarding joint programmes
- The accreditation frameworks of the respective accreditation organisations would be compared, and the differences taken into account
- There would be a focus on learning outcomes
- Observers from quality assurance and accreditation agencies of other countries involved in the programme would be included in the procedure.

Another underlying premise ensuring that it would be possible to agree on one single accreditation procedure is that almost all of the quality assurance agencies involved in the five pilot procedures are full members of ENQA and/or members of ECA. This means that their activities comply with the European Standards and Guidelines for Quality Assurance in the European Higher Education (ESG) and thus that their procedures are executed in a comparable manner. It also means that the agencies who are ECA members have been building up trust in each other's procedures through mutual observation missions and sharing of information.

In practice all the procedures followed the normal steps of an accreditation procedure. However, on a more detailed level the procedures varied according to which institutions and agencies were involved in the procedures. In all the pilot procedures the scope of the submitted self-evaluations was the totality of the joint programme. However, in some pilots the self-evaluations were written according to only one set of criteria whilst in others the criteria of all the involved agencies were compared and assessed. In most cases existing criteria functioned as the scope of assessment, while in one a totally new set of criteria was developed. The expert panels were mostly composed jointly by the involved QA agencies, although it varied how this was organised in practice. In all the assessments discipline-specific expertise, quality-assurance and international expertise and a student were included. Additionally, an expert from the professional field was included in most of the procedures. The external assessment included in most cases only one site visit, but in one of the procedures there were two site visits. The pilots also varied concerning the actual accreditation decisions. In most of the cases separate (coordinated) accreditation decisions were taken based on the same assessment. In one case a decision taken by one agency was recognised by another agency, and in another case the pilot was a true pilot procedure where no formal decisions were taken.

More detailed information on the various procedures can be found in the TEAM II Methodological report [6].



## 2.2. Main messages from the 5 pilot procedures

After the completion of each of the procedures questionnaires were sent out to the coordinators of the joint programmes, the experts and the representatives from the quality assurance agencies. They were asked to share their experiences with the various steps of the procedures, and to specify strengths and weaknesses. In the end the multiplicity in approaches allowed for common elements of the accreditation procedures to be identified, such as self evaluation reports, expert panels, site visits, final reports and decisions to be seen from a variety of angles and thoroughly evaluated.

The feedback showed that the participants were generally content with the work of the joint expert panels, how the site visits were carried out and the outline of the final reports. Especially jointly composed expert panels were viewed as a valuable asset when assessing a joint programme. Nonetheless, the feedback also showed that there are some areas which require special attention when carrying out single accreditation procedures of joint programmes. Firstly, when more than one set of criteria was used it was reported to be challenging to agree on the level of details and information required in the assessment. Variations in national regulations result in a situation where quality assurance agencies to some extent have to focus on different aspects of a study programme. This influences the interpretations of criteria and the focus of the assessment. Secondly, in almost all the pilots comments were made regarding the self evaluation reports. In most cases these reports were too descriptive, and with a disbalance regarding the information presented about each of the participating institutions and on the various criteria. This shows how important it is to give clear instructions on how to write a self assessment report. Another potentially challenging area is the composition of the expert panel. The QA agencies have different practices regarding the composition of the expert panels. In some countries it is required to include an expert from the professional field in the panel, while in others it is not. When carrying out single accreditation procedures it is thus very important to monitor the composition of the expert panel closely. Finally, there were no unified ways in which the accreditation decisions could be taken. The decision making is affected by national regulations and needs to be taken into account when planning single accreditation procedures. The importance of making sure that the final report fulfills the requirements of all agencies involved in the procedure was emphasised as this will facilitate the decision making process.

Thus, one of the main conclusions derived from the feedback is that it is indeed possible to assess whether a joint programme meets the requirements of several quality assurance agencies through one single accreditation procedure. The challenge is rather to agree upon the essentials needed in such a procedure, and find ways within the national legal frameworks to carry out single accreditation procedures. Following up on this, ECA is currently exploring how these findings can be implemented into practice.

## 2.3. Future ways of accrediting joint programmes

The pilot procedures showed that QA agencies can indeed cooperate on single accreditation procedures of joint programmes and that this can lead to successful outcomes. The agencies involved in the pilots generally agreed on how the procedures should be carried out. Nonetheless, it also became clear that for the time being is it not realistic to propose procedures for accreditation of joint programmes where all agencies will follow one set out of criteria. The compositions of joint programmes are very different from one another. This will affect the

possible outlines of a single accreditation procedure. Quality assurance agencies have to check that joint programmes fulfill national standards and these requirements will vary according to the composition of a joint programme consortium.

Hence, to take a modular approach to accreditation procedures of joint programmes can be a solution for the future. This means that one should identify the essential core modules which can be agreed upon by all agencies involved in an accreditation of a joint programme, and add to this the additional modules requested by the individual agencies, if needed. Such a procedure would limit duplication and ensure that the totality of the programme is assessed according to agreed upon standards. It would also provide the national agencies with the possibility to adjust the procedure according to national requirements. Each procedure would have a different outline according to the composition of the programme, but at the same time comply with the preset standards which ensure that the quality of the totality of the joint programme is assessed. The strength will lie in the flexibility of the procedures. By limiting standardization of the procedure there will be enough freedom to encourage diversity and to appreciate the peculiarities of the higher education institutions and the quality assurance agencies. Hence, such an approach will make it easier for the parties involved to show how national requirements are met, and to be able to appreciate cultural differences instead of interpreting them as obstacles. Accordingly this could be a way forward towards meeting the requests made by stakeholders in EHEA regarding quality assurance of joint programmes. It will reduce duplication, appreciate diversity and at the same time ensure that stakeholders can trust that the quality of the totality of a joint programme is up to standard.

ECA is currently searching for ways in which this can be facilitated and has come up with the following two initiatives for facilitating single accreditation procedures of joint programmes.

One way forward is to establish a European coordination point for external QA and accreditation of joint programmes. The coordination point would give coordinators of joint programmes the opportunity to consult a specialised information centre when they need to undergo external quality assurance and/or accreditation of their joint programme. The coordination point would administer a knowledge base which contains useful information for accreditation, external quality assurance and recognition of joint programmes. They could turn to the coordination point for advice on how their joint programme can be accredited or quality assured through a single procedure. The coordination point would additionally provide quality assurance and accreditation agencies with assistance and specialised expertise on accreditation and external quality assurance of joint programmes. The coordination point could thus bring agencies together and apply a methodology that enables a single procedure.

Another way forward is to develop a multilateral recognition agreement between agencies regarding the mutual acceptance of the results of accreditation of joint programmes. One of the aims of ECA is to build up sufficient trust between the member agencies so that they can mutually recognise each other's accreditation decisions. So far only bilateral mutual recognition agreements between accreditation agencies have been signed. Since joint programmes have a wider scope and involve many different countries, multilateral mutual recognition agreements are necessary. Multilateral recognition agreements would give support to the single accreditation procedures. If agencies have entered into a multilateral recognition agreement it is a lot easier to facilitate that the results of the single accreditation procedure will be accepted in each of the countries that are part of the multilateral agreement.



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# TEACHING WITH TECHNOLOGY: DANUBIUS UNIVERSITY CASE STUDY

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## Abstract

Integration of technology (IT) into the university classrooms has become a significant part of student-centred education. An important aspect of student's engagement in educational research is the ability to effectively communicate one student's ideas to groups or to communities who may have different background knowledge. To gain valuable work experience in this kind of teaching, the students in this interaction will also participate in an interconnect-group nucleus hosted in Danubius Online and e-Danubius platform. Students are given the opportunity to interact between them, with teachers and also with the members of a different education course and to also answer student's questions in the other course about how technology can support teaching and learning.

**Keywords:** Danubius Online, e-Danubius, teaching and learning.

## 1. Introduction

One of the main ways of improving the quality of higher education is the increase and improvement in using information and communication technology (ICT). The great majority of our students currently use the mobile phone, and the number of those owning a computer connected to the Internet and currently using not only text editors and spreadsheets but also the techniques based on web, such as email, instant messaging and social networks is continuously rising.

Higher education has to evolve as well adapting to the requests of the 'digital generation' to which our students already belong to. There are different forms of ICT implications in education: computer assisted learning, e-learning, online learning, web based learning, virtual learning etc. Without getting into details regarding the difference between these techniques, we mention that currently, the education systems based on web are continuously increasing. In these conditions in which web 2.0 provides the user with an interactive working environment, facilitates the collaboration and creates virtual communication, the education systems based on web can incorporate all the other techniques of computer assisted training existent. The great advantage of the web based techniques is that they ensure the access to resources for the students and teachers anywhere and at any time. The impact of ICT in higher education is not limited to its use for training students but also for teacher training in scientific research projects, different organization activities etc.

Most of the universities currently use web based learning not only for distance learning but also for the one in the campus. In the latter case, the blended learning is practiced, in which the face to face learning is combined with the web based one. In a survey taken in the European states in 2005 and presented in [Punie] it has been noticed that the use of Internet in learning was very spread among students: 76% of the full time formal students use the internet in the course of organised learning. Still, we can notice that the students' skills for online education are not 'inborn' and they have to be formed [Lorenzi]. A study in the United States of America in 2009 by Sloan consortium [SloanC] indicated that in the autumn semester on 2008, over 4.6 million students took at least one class online, with 17% more than in the previous year.

The extension in the use of ICT in education has its implications in what regards the pedagogic theories applied. We can notice a move from face to face courses using teacher centred pedagogy to online and blended (hybrid) courses using constructivist, collaborative student-centred pedagogy [Hiltz]. We cannot neglect the economic aspect of using ICT in education. Both the creation and the maintenance of the technical base of online learning, as well as of the pedagogic content (courses and other, didactic materials, tests etc.) require important investments. We can notice still that these investments can be recovered if the number of students taking the classes online is sufficiently large [10].

The universities use in the present, for online learning, the Course/Learning Management Systems (C/LMS), called also Virtual Learning Environments (VLE). C/LMS provides the platform for the enterprise's online learning environment by enabling the management, delivery and tracking of online and blended learning [8]. These type of platforms can be accomplished only by using sophisticated commercial software, open-source, community source or can be locally developed.

Currently there are numerous software products for C/LMS. Among these, the ones with the most spread use in higher education are Blackboard, Moodle and Sakai. Blackboard Learning System, which included also the WebCT, is an online VLE proprietary that offers verified solutions of achieving courses in the campus (hybrid) as well as distance ones. In 2004, over 2000 universities in the world used it. Moodle is an online CMS open source, distributed under GNU General Public License and has currently the highest number of installations and users. Sakai is a Collaboration and Learning Environment (CLS) that can be used both as CMS, LMS or VLE and is distributed under Educational Community License (community source, which is a form of open source), being created by a group of universities.

In general, it is considered that the use of a proprietary software offers important advantages, such as obtaining a professionally made product, of good quality and ensuring the technical assistance and upgrade during the entire period of exploitation. As a disadvantage, it is considered that the price can sometimes be very high. As main disadvantage it is considered that this type of software products cannot be modified by the user to meet their own necessities, any modification being made only by the manufacturer with additional costs. On the contrary, the open source products are free of charge or cheap and can be modified by the user, but necessitate a bigger effort from the user.

In case of C/LMS systems, a special importance is represented by the extent in which they satisfy the requests of the students and teachers. A comparison from this point of view between Blackboard and Moodle at California State University [Machado] led to the conclusion that 75%

of the students working with both systems considered that Moodle was preferable, being easier to use and more efficient.

Out of 208 installations of Sakai, it has been indicated that 34 higher education institutions used Blackboard before. Among these there are universities with a very rich experience in C/LMS systems with a high number of students, such as Cambridge University, University of California, Berkley, University of Delaware, Rice University, Texas State University and others.

In Romania there are sites and e-learning portals created using different software products. We can list as examples the Blackboard Academic Suite platform at the Suceava University and CFCID Portal from Babes Bolyai University in Cluj Napoca (based on Microsoft Learning Gateway) as use of commercial software products and from the open source ones we list Virtual Campus at the Polytechnic University in Timisoara, Educational Portal at the Technical University in Cluj Napoca, Online Courses at 'Vasile Goldis' Western University in Arad, E-learning Platform at 'Titu Maiorescu' University from Bucharest and others, using Moodle. As far as we are aware of, the only installation of Sakai in Romania is the Danubius Online Portal at the Danubius University in Galati.

By analyzing the arguments presented above, the Danubius University decided that in order to create an online education system, they have to use an open source software product. It has to choose then between Moodle and Sakai.

## **2. Danubius Online**

In the university year 2007-2008, the management of Danubius University in Galati adopted the strategic decision to develop an integrated computer system that would include Student Information Systems (UMS), a platform of e-learning, the system of research management, administrative management, computer system for the library, anti-plagiarism system (Ephorus).

For the e-learning platform the adoption of an open source system was decided. From the comparative analysis of the open source C/LMS existent, it has been noticed that the main candidate were Moodle and Sakai.

It is observed that mostly, the two systems introduce similar facilities regarding the online learning and learning management. Both are open source and can be obtained free of charge. Both can be installed on any type of server and can function with different operation systems, as Moodle is designed in PHP and Sakai in Java. They both offer facilities of upload and sharing documents, create online HTML documents, student submission of documents, online tests and surveys, self/assessment, online discussions, online grade-book, online chat, embedded glossary etc. Still, from our point of view, Sakai presents some additional facilities that are very important. Sakai is very flexible, offering a series of tools that allow the creation of a better adapted portal for the university's requirements. On this portal, the teachers, students and scientific researchers can create their own web sites. The teachers can create teaching web sites and the students' registration on these web sites can be made in a centralized manner, being connected to the computer system of the students (UMS). Sakai is oriented towards the collaboration for education purposes as well as for projects of scientific research. Project sites can be created, used at once by the members of the group of research of the project. Portfolio sites can also be created where the students and teachers can present their activity. Teachers have the possibility to control the permission students have in using different tools and resources on their course site.

It is true that these additional facilities require a bigger effort from the teachers to accommodate to using the portal. Considering all the advantages, Danubius University in Galati decided to adopt the Sakai System. Based on that, a collaboration portal was created, named **Danubius Online**.

In view of developing communication between students and teachers, the learning platform was completed by the communication platform named **iDanubius**. The series of Google Apps for Education applications was used which is a package of Google applications for communication and collaboration available online and unlimited, for the students and employees of Danubius.

The iDanubius platform comprises:

- **Danubius Email**, a powerful, secure and convenient email solution: spam control, up to 25GB available, POP/IMAP access and mobile connection;
- **Danubius Calendar** helping to arrange meetings, insertion of Danubius schedule, program setting and publishing events of general interest;
- **Danubius Docs** offers the possibility to create documents online and offline and provide them to the other members of the team for working together in real time (up to 200 editors of the same document); documents can be imported, exported and saved in general formats: doc, .xls, .csv, .ppt, txt, html, .pdf etc; there is access to the original versions of the documents and the modifications can be checked.
- **Danubius Sites** help organizing the own Intranet Portal, secured zone in which all the information of interest can be added;
- **Danubius Talk** is an instant messenger service that can be accessed directly from the email.

### 3. Sakai CLE - concept and terms

Unlike Moodle, that is designed for all education categories Sakai was designed for universities thus it meets the requirements specific to using ICT in higher education. According to the necessities, Sakai can be used in order to create Course Management Systems (CMS), a Learning Management system (LMS) or a Virtual Learning Environment (VLE) but the frame of these systems can be exceeded by creating a collaboration portal between all the members of the university (teachers, students and scientific researchers) in order to accomplish the objectives of education and research.

The portal is a series of web sites. Given the specificity of the activities in a university, a portal designed using Sakai can contain three types of sites: course sites, project and portfolio. These sites can be created not only by the administrator of the platform but also by the teachers or by some students.

The designer of site has the possibility to register other members on his site, establishing the role each has. On the course sites, the roles are of instructor, teaching assistant or student and on the project sites, maintain or access. The owner of the site can establish permissions granted for each of these three roles. In case of course sites, the students' registration can be made in a centralized manner by the administrator of the platform using a program that takes over the students from the UMS.

The Sakai system offers the site designers tools they can use to reach the objectives. We will present next the main tools:

*Syllabus* is the tool used by the instructor (discipline titular) to introduce the students with the objectives and content of the discipline and the obligations they have in order to promote. In Sakai, the syllabus is made by a sequence of items. If the instructor wishes, some of these items (for example the objective of the discipline, the resume of the content) can be made public being visible to anyone on the Internet, while others are destined only for the students registered at the specific discipline.

*Resources* allow the creation of a folder and files tree that contain different didactic materials the instructor offers the students. If the instructor wishes, any of these resources (for example, the lecture notes) can be made public. *Grade-book* is the tool that centralizes the grades received by the students at a certain discipline. The content can be exported by the instructor as an Excel file that can be processed and used for passing grades in the official catalogue of the discipline.

*Assignments* are the tools used for the assignments given to students. The instructor publishes here the contents of the assignment, specifying the deadline. The student fulfills the assignment and sends the teacher the paper. It can be edited by the student (the tool includes an incorporated text editor) or it can be executed in the personal computer of the student and sent as attached file. The instructor can make observations and annotations and resend them to the student. This process can repeat itself as many times as the instructor finds necessary. Finally, the instructor gives the grade that is automatically transferred in the Grade book.

*Tests and Quizzes* is the tool that allows the online examination of the students. The instructor edits the questions which can be placed in *question pools*. When creating a test, the instructor can introduce the questions directly or can extract them from the question pools. The extraction can be made manually or automatically. In the latter, the instructor indicates only the number of questions being extracted from each pool and the extraction is made randomly when the testing occurs. Accordingly, each student receives other questions and in other order than his colleagues. There are different types of questions. At some of them, the testing and grading is made automatically: questions with 'yes' or 'no' answer, with multiple answer or one or more correct answers, questions with a blank space the student has to fill in, questions with approximate numeric answer (any number in a given series is considered to be true), questions for which the students has to compose pairs of terms from two given groups. There are also questions for which the verification and grading are made by the instructor: questions for which the student answers with a short text edited by him online or questions for which it can send a file attached (for example a computer program designed during testing). The instructor has the possibility to limit the response time for the test. There is also the possibility that the submission of the test is possible from certain classes. In this case, the instructor indicated the IP addresses of the computers in that class, or the access can be established using a password the students receive in the exam room. Besides the tests for exams, there are other different self evaluation tests. In this case, the student can take tests anytime and from any computer with Internet connection and the grades are communicated to the student but they do not appear in the grade book. Each question has a feedback included, with observations from the instructor that are sent to the student after the completion of the test and depend on the answer provided by the student.

*Forums* tool is used for organizing discussion forums on different topics. For example, a student presents a professional work and the colleagues analyze it. There are answers for interventions and answers for answers for each subject of the participants. The instructor can give grades to students (synopsis) for the interventions they have on the forum and on the specific subject and the grades automatically into the grade book.



*Chat Room* is the tool through which chat rooms can be organized. We mention it here because it can be used by the instructor also for online indications and assistance given to the students. *Glossary* is the tool that allows the students to access a dictionary of terms used in the course. *Web- Content* is the tool that can include the content of another web site in the course site. For example, if the teacher's course is already published on the web, it can be added as a component for the course site on Danubius Online (Sakai).

*Announcement* allows editing and publishing announcements on the site. For each announcement, the period of time the announcement will be on the site is mentioned. These announcements can be seen by all the members of the site but it is possible that some announcements can be public so they can be seen by anyone with Internet access.

*Messages* is a tool that allows editing and transmitting messages. Each member of the site can transmit messages to another member, a group of members or all of them. It is possible that the messages are transmitted not only using the site but also the email.

*Podcasts* allow transmitting the members of the site a multimedia content (audio and video recordings of slide shows) and site members' subscription to these transmissions through RSS connections. *Pools* allow the obtaining of votes of the site members regarding certain questions. *Schedule* allows the creation of a calendar of the events on the site. *Wiki* is a tool used by the members of the site to collaborate in order to create documents presented as a list of interconnected web pages (a hypertext).

On the portals created using Sakai, the users can create portfolio sites on which they can present their works. For this end, they can use both tools mentioned above, such as *Web Content*, *Glossary* or *Podcast* as well as specific ones like *Portfolios*, *Wizards*, *Forms* or *Evaluation*.

On the portals designed using Sakai, each user has a personal site (not shared with other people) named *My Workspace*. The user can create a personal file system and create a personal calendar using the *Resources* and *Schedule* tools mentioned above and can also use tools like: *Account*, *Membership*, *Worksite Setup*, *Preferences*, *Profile*.

There are also administration tools at the disposal of the site owner as well as at the disposal of the portal administrator.

#### 4. Solution Approach. Training and survey

Following the study on choosing the LMS platform that would suit the best to the necessities of the university and the discussions with the management, Danubius University began the installation of Sakai 2.5.0. A 6 months trial period followed in which the incompatibilities of Sakai CLE with the operating systems and the hardware platforms were tested. Also, several course sites were created where the students experimented and use the instruments available through Sakai collaborative environment. After the trial period, the conclusions reached were in favour of beginning the pilot period so that the team of T&L was established (*T&L WORKING GROUP*). A very important role in the positive scoring of the collaborative Sakai environment was the fact that we are active members of the Sakai community and Opened Practices Community- a community of practice for teaching and learning with open/community source tools (<http://openedpractices.org/institution/danubius-university>).



The portal functioned in the pilot phase with a relatively small number of courses, both from bachelor as well as for masters, the main objective being the using experience in real exploitation conditions we could make. All the types of activity from all the education forms (daily, distance and reduced frequency) specific to the course sites were performed: communication of discipline objectives, obligations of the students and activity schedule, transmitting homework, receiving the students' papers, verification by the instructor (discipline titular), review of papers by the students and communication of given grades; self evaluation tests performed by students during the semester with feedback from the instructor, online support offered to the students by the instructor, chat and forum discussions, online exams in supervised classes.

The use of Danubius Online Portal (as well as all other designed with Sakai) requires the preparation of the instructors and the information of students. For the training of the instructors (teaching and assistant) a series of practical courses were held at Danubius University in September 22-29 2009, with the participation of 49 people. Also, a project site named "Danubius Online Guide" was created, containing a use directory, a forum of participants and a chat room.

The use directory is designed as wiki, so all the participants at the site can contribute to editing it. In this way, the mentioned project site permanently functions as a collaboration forum and experience exchange between all the teachers using the Danubius Online portal.

For the information of the students on the way to use the portal, the project site "Student's Guide" was made available, containing indications on the way to perform different activities online on the course sites: study the syllabus of the discipline, study the didactic materials made available on the site, receiving and submission of homework, participation at chat and forum discussions, completion of self evaluation tests, online exams. This site is joinable so it can be consulted by all students and any other person that have access to the portal.

In order to receive an objective assessment regarding the way in which the students and teachers received the Danubius Online portal and in order to compare ourselves with other universities using Sakai, in April- May 2010 the MISI (*Sakai Multi- Institutional Survey Initiative*) 2010 survey was conducted at Danubius University. This is a multi institutional survey with the participation of 29 universities in different countries. The participants' table and the map positioning can be found on <http://confluence.sakaiproject.org/display/UDAT/2010+MISI>. All these universities use education and collaboration systems based on Sakai software product <http://sakaiproject.org/>, similar to the *Danubius Online* platform <http://online.univ-danubius.ro/>.

The purpose of the survey was to find out the opinion of the teachers and students at the participant universities regarding the use of computer technology in their activities as well as the training system based on *Sakai* in the specific university. The results of the survey will be used to improve the education and collaboration computer systems (eLearning) in each university and for the development of the Sakai software product.

24 teachers and 177 students from Danubius University in Galati participated at the survey. The survey contained questions both questions regarding the skills of the responders towards the use of ICT in higher education in general as well as their appreciation on the experience accumulated using the Danubius Online portal. We here present the results obtained.

At the questions regarding their opinion on using ICT instruments in higher education, such as online collaboration tools or document sharing (for example Google Docs), online group calendars, instant messaging and chat systems, online transmission of audio and video recordings, use of blogs and personal web sites, online testing and examinations, plagiarism prevention systems (for example Ephorus), online surveys and others, the big majority of teachers answered that they agree. Only about 5% of the teachers and 3% of the students expressed disagreement and only 12% of the teachers and students declared themselves neutral.

The results reflects the fact that both for students as well as for teachers, the most important benefits are the possibility to access materials anytime and from any place and the improvement in the way both categories perform their activity. The students underline the importance of the possibility of a better management of the working time. We notice that none of the respondents considered that the use of ICT does not bring any benefits.

## 5. Conclusions

The experience accumulated by the participants at the pilot stage of implementing the Danubius Online portal and the results of the survey within MISI 2010 allow us to draw the conclusion that we are on a right path that has to be continued.

From a technical point of view, the Sakai system allows the development of a flexible VLE that fulfils the requirements of blended learning on campus as well as the distance learning ones.

The course sites that functioned in the university year 2009-2010 were well appreciated by the students. They noticed advantages resulted from making didactic materials necessary and necessary information for study available on the site, the significant improvement in the communication between teacher and student in different ways (discussion forum, chat, messaging). It was noticed that the students accommodate very easily to the online working environment and there weren't any cases in which they claim to have had difficulties in this matter. As noticed from the results of the survey, the students consider that the use of the portal has increased their efficiency in activity and allowed a better use of working time.

The teachers working on the Danubius Online portal as course site creators or assistants have also noticed that the contact with the students and the possibility to guide their activity has increased. We point out however that for the didactic personnel the use of the sites did not result in a better time management but it was more like an intensification of their activity. Efforts are necessary both for learning to use the ICT as well as for the theory of pedagogic methods specific to online education. Also, each teacher has to make systematic and daily efforts to maintain contact with the students on course sites and offer them the necessary information and guiding.

## 6. Future Work

Starting with the university year 2010-2011 the Danubius Online portal will function with the version Sakai 2.7.0. This version brings improvements in the *Profile* tool that allows now establishing contacts between students based on common concerns, after the social networks model. It also contains a new tool named *Statistics* that provides the administrator of the site with the number of daily accesses, members accessing the site (globally and for each tool) and

events on the site. Improvements have been made regarding the access mode and system security and some improvements for all the tools included.

We intent to move forwards to Sakai 3.0 in 2012, meaning to move towards a new generation of Sakai that takes in consideration the new requirements of online education. The possibilities of content authoring and content management are taken into consideration, the application of Social Networking facilities are developed, the architecture is improved and the activity of the developers is facilitated thus better possibilities to adapt it to the necessities of the university.

This year we are intending to go from the pilot stage of Danubius Online portal to the production stage in which most of the courses will be performed on the portal for all the forms of education.

At the same time, Danubius University created a transition strategy towards the new concept initiated by MIT of open courses (OpenCourseWare). Actually all the higher education system explores new possibilities made available by the web: publishing scientific works with minimum expenses, the possibility to immediately update and distribute materials and the possibility of developing an online global community.

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AGENȚIA ROMÂNĂ  
DE ASIGURARE A  
CALITĂȚII ÎN  
ÎNVĂȚĂMÂNTUL SUPERIOR

# STUDENT INVOLVEMENT IN QUALITY ASSURANCE AND ASSESSMENT

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## Abstract

*The paper aims to examine the involvement of students in quality assurance and assessment in universities and to identify key actions and mechanisms to increase their involvement. The authors examine the involvement of students in achieving quality from two different perspectives, treated separately: one, aimed at knowing the requirements of European and national standards and good practices on involving students in quality assurance and assessment in universities; the second approach consists of a descriptive-exploratory sociological study on student involvement in quality assurance and assessment, conducted at an university from Romania. The research techniques used in the sociological study are focus groups conducted with students and in-depth interviews with students' representatives involved in quality assurance process. The research results showed that most students do not relate to quality assurance in a systematic way. The conclusions of the study summarize the main ways of action, proposed by the authors, in order to increase student involvement in quality assurance and assessment. These proposals may be directions of future research and changes on improving quality management.*

**Key words:** student involvement, quality assurance and assessment, qualitative research.

## 1. Introduction

Staff involvement in problem solving within the organization is one of the basic principles of modern management, whose application ensures high performances by using the individual skills for the benefit of the organization. Arguments are multiple: processes performers know the real problems of the area in which they operate; the employees' ideas are valued in order to achieve economic benefits. Equally important are also the social effects associated with the participative management: improving communication and relationships system, enhancing motivation and increasing employee satisfaction [1].

The principle of staff involvement is applied in higher education in specific ways, its importance being accentuated by the increasing of complexity and by the rate of change that universities need to in order to remain in competition. This paper primarily aims to examine the ways and the level of student involvement in quality assurance and assessment processes in universities.

The student involvement in quality assurance and assessment is one of the key factors for the development of a democratic and high quality system in higher education. Starting from this premise, the second part of the paper presents the requirements of European and national regulations on student involvement in quality assurance and assessment as well the main ways

to materialize this principle. Comments on this topic in literature emphasize the differences in this respect between the countries of the European Higher Education Area (EHEA), Romania being at an unsatisfactory level.

Given that improving student involvement is dependent on individual and group behaviour and attitudes of academic community members, in the third part of the paper are illustrated the results of a sociological research conducted at Transilvania University of Braşov, in order to establish the students' knowledge about issues relating to quality assurance and assessment and to identify the ways of improving their involvement. The research techniques were focus groups conducted with students and in-depth interviews with student representatives in Faculty Quality Assurance and Assessment Committees (CEAC-F).

## **2. Requirements and achievements regarding student involvement in quality assurance and assessment**

Quality assurance and assessment in higher education in recent decades has become an important element of the strategies promoted by worldwide universities. In this regard, universities have implemented quality management systems, including structures, mechanisms and tools for planning, control and continuous quality improvement of services and processes performed. The effectiveness of these systems do not automatically result from the introduction of rules, procedures and specific instruments, universities must demonstrate their ability to continuously improve performance, both by eliminating deviations and adapting to new requirements [2]. The involvement of all categories of staff is important in this respect and students have a very special role, given their major interest in improving education and training which they participate in their double role, as customers and partners.

Student involvement is one of the basic principles of university management which is reflected explicitly in the regulations on quality assurance in education and is focused both on students participation in actions conducted in university and on external quality assessment. Thus, the Standards and Guidelines for Quality Assurance in the EHEA [3] states that student involvement in quality assurance and assessment must be reflected in university policy on quality; also it includes student participation among the characteristic elements of the external assessment procedure in higher education in the EU. These requirements are contained also in Romanian regulations on Quality Assurance in Education (harmonized with European ones), the most important being the Methodology and Guidelines [4] developed by the Romanian Agency for Quality Assurance in Higher Education (ARACIS).

Although student involvement is a widely accepted principle, the degree and manner of participation varies from one country to another, from one university to another. The main forms of students' participation in internal quality processes, emphasized by this study are: student representation in collective management structures, student participation in evaluation and quality assurance committees, student involvement in evaluation and quality improvement actions (feedback from students).

Currently, students are represented in management and quality assurance structures in all European Countries, both at institutional and faculty level, but student participation is often formal. Synthetic data on this issue provides a survey conducted in 2009 [5], which shows that in 36% of cases the student involvement in internal quality assurance processes is high, in 33%

the involvement is missing or extremely reduced and in 24% of countries, including Romania, there is some involvement of students, but far from being sufficient.

The degree of student involvement is an indicator that measures the maturity of quality management system, effective involvement of students in activities regarding quality being an important and innovative part in order to improve the performances of the quality system. The way of actions may be different, as there is illustrated in the examples of good practice from Scotland universities [6], where students are encouraged to play a proactive role in ensuring the quality for educational services, using a variety of mechanisms such as: effective training and support for student representatives through structures and mechanisms both internal and external; awards designed to recognize contributions to quality improving of student representatives from college / university, various forms of obtaining feedback from students, the development of relationships with student organizations, etc.

Knowledge of these practices can help universities to identify ways for improving student involvement, but the change process is not limited to this aspect and requires several steps: assessing the situation, creating improvement strategy and the strategy implementation. Following the prospect of achieving such an approach, the case study conducted at the Transilvania University of Brasov has covered the first step.

### **3. Case study**

#### **3.1. Methodology**

The sociological research conducted at Transilvania University aims to provide data regarding student involvement in quality assurance and assessment. The research objectives were two fold: first objective sought to identify dimensions of students' cognitive map on quality assurance and assessment, and the second aimed to identify the methods and directions of increasing student involvement in this process.

Given the above objectives, a qualitative and descriptive-exploratory study was conducted. This methodological option was determined by the fact that the investigation of the subjective symbolic dimensions, as cognitive maps, is subscribed to a qualitative research approach. Research methods used were in-depth individual interviews and focus groups.

There were conducted three focus groups with a total of 36 students, selected by applying the theoretical sampling procedure. Selection criteria were derived from the research objectives, being applied two criteria: the program of study and the year of study. Participants were students in second year from the following programs: Communication and Public Relations, Sociology and Social Work. It was designed homogenous groups in order to facilitate communication and data complementary in each group. Individual interviews were conducted with students from Faculty Quality Assurance and Assessment Committees (CEAC-F). There were applied 12 individual semi-structured face to face interviews, with CEAC-F student members from 12 faculties.

A common set of items was applied for focus groups and individual interviews. Interview guide was divided into four dimensions: student representation on the concept of quality, perceptions on the role of Quality Assurance Department (DAC), representation on assurance and quality assessment and ways to increase student involvement and participation. Data analysis and interpretation was based on transcripts of interviews, applying thematic coding procedure [7].



### 3.2. Results and commentaries

Free association exercise "What is the first thing you think when you hear the word quality" have the role of icebreaker and introducing the interview theme. Relying on a stimulus-response scheme, the answers were focused on the general characteristic of the goods or services: ... *valuable, useful, professional, something very good, durable, well done*.

Although the research has not been targeted to measure students' awareness about quality assurance system in university, it could be made a series of findings, based on focus groups answers and especially on CEAC-F student responses. Thus, focus groups participants said that they do not know that there is a Quality Assurance Department in university or associate DAC exclusively with the student evaluation of teaching process.

Regarding the CEAC-F students' awareness was found a continuum of responses extent with an extreme *"I don't know very much and is better to don't speak"* to *"the department is dealing with quality assurance system in our university"*. Also, answers on how the students are assigned in CEAC-F indicates a weak involvement of students in this process, decisions being taken by teachers and after this being communicated to prospective CEAC-F members.

These findings on students' level of information and practices regarding CEAC-F designation must be treated with caution, because qualitative research methodology does not allow data extension or generalization across the university, without a quantitative study for confirmation.

Regarding students' projections and expectations about the role and activities of Quality Assurance Department, the answers were concentrated as a hard cognitive core. Thus, students consider that the main role of DAC should be the assessment of teaching process. It could be noted that from the respondents view, the DAC projected activity involve a participative approach, based on direct and continuous communication with students.

As regarding the ideal portrait of student representative in CEAC-F it is seen primarily as *"a person with very good results in school and extracurricular activities"*, but also being *"resourceful, who knows to criticize, having the courage to say our discontent"*. Several other features complete this portrait: *"to be well informed about everything that happens in university, to want to change something .... To go to speak for all students, not in his name, who ask colleagues about their opinion... this is very important."*

Involving students in quality assurance and assessment is subscribed to the broader process of student involvement in university life. In this more general plan, there were identified a number of ways and means of intervention that are likely to increase and strengthen the students organizational citizenship behaviour [8]. Thus, identifying students within university life and strengthening their identity can be achieved on several levels. A first direction is the visual identity, indicated by: *"a badge, a jacket, a sweatshirt... Yes, a wrist, a bow tie, a tie, a hat, something small that each student will receive... You are one of us, be proud"*. A second way is focused on communication improvement through several means: *"I will setup a radio station and I broadcast music and news. A short news radio broadcast about university. And the Dean to hear... and the Rector... and when he hears it... to drop his pen...; editing a journal exclusively for students and booklets, brochures..."* A third possible way to increase student involvement and participation is based on extracurricular activities: presentation catalogue of graduates, contests, student clubs, mentoring programs.



As regards quality assurance, the core element which may promote the growing of student involvement level is the improvement of the information level on quality system. An essential role is played by the student representatives, who are seen as a hub of communication networks, which involves teams of students in quality assurance process: *"I would see her as having students from all years backing up her and with which to work and collaborate. I don't think that only one person would be able to stand up for all issues if no collaboration exists at all. He/she has to ask students about various issues, to be among them and to lead discussions with them."*

Given that the teaching assessment of students is done in a systematic way in Transilvania University of Brasov, respondents provided a number of ways to increase participation and student involvement in this process. Thus, the first step is given by assuring a better visibility of the evaluation process through information materials. A second step aims at making by the student the main activities that can generate doubts about the confidentiality of evaluations: the distribution of evaluation questionnaires, data processing, communicating the evaluation results. Also, the development of group discussion is considered appropriate, underlying that *"it is very important who applies the collecting data instruments, especially if the interview technique is used... it can be done by the third year students or master students, but under the supervision of a teacher."* Although the paper and pencil questionnaire is the preferred tool, other methods have been proposed: SWOT analysis and start-stop-continuous model.

Increasing student participation in the evaluation process is conditioned by the explicit presentation of corrective measures that were taken and especially by the way they were implemented and the way they generated results: *"We have given some suggestions, but are taken into account or not? Does it make any sense or not? Because if I told them just to complete a list, I do not think it's useful..."*. Organizing internal training sessions for CEAC-F members is considered appropriate: *"training, perhaps information regarding activities, what concerns them, what means the Quality Department..."*

The issue regarding attracting and rewarding students for engaging in quality assurance and assessment is explicitly associated with symbolic rewards. Respondents said that the main benefits are related to the possibility of interaction and communication with other students, developing new skills and achieving work experience that can be useful for career development. Symbolic benefits are: *"the confidence that what you do can be materialized the possibility of putting into practice what you learn and the possibility to make changes."* In addition, symbolic reward schemes have been proposed: *"It can be done a separate score for each student involved in extracurricular activities and can be made a top 10 with those who were the most involved students in extracurricular activities; to have such a silver card, gold card, a bronze one... some VIP levels of involvement and achievement in university. For example, one card can save you the tax at the library; one can give you a discount at the library. More recognition..."*

#### 4. Conclusion

Given the above findings it can be said that the issue of student involvement in quality assurance and assessment is not an isolated or specific item on respondents' cognitive map. Interviewed students placed the concept of quality in the broader field of academic life, which has in its centre the teaching activities. Student expectations and projections show that increasing participation is a complex issue, a nuanced one that cannot be reduced just to identifying a list of methods or activities.

Student involving in quality assurance and assessment is a behaviour that can be subscribed and interpreted in the light of the concept of citizenship behaviour. This concept was introduced

in literature in 1980 and was defined by D.W. Organ [8] as "individual behaviour that is voluntary, not directly or explicitly rewarded by the formal reward system and that, overall, support the effective functioning of the organization. By voluntarily we have in mind that this behaviour is not an express requirement of the specified job (...), this behaviour is rather a matter of personal choice and that his absence is not generally punishable".

The results of sociological research underlie improvement actions, which primarily aim changes in information process and communication with students regarding quality assurance in university, structures and activities, students' involvement in quality. As the data shows, is not sufficient to publish information about quality system on the website, it is necessary to diversify the methods of information and increase the dialogue regarding the actions and their results, in order to help students to understand what it was designed and to make them to engage in these actions. Creating a discussion forum on DAC website, organizing activities at college level and at study programs level are priority actions in this regard.

A specific aspect of the study was the involvement of CEAC-F members who should play a key role in quality assurance process in university. It was emphasized the importance of communication and quality management skills, and also the lack of reward mechanisms; in relation to these matters, the internal training programs and the use of rewarding tools which can lead to student motivation are defined as priority directions for action.

Although the principle of student involvement in quality assurance is widely accepted, differences exist in the EHEA, Romania being placed on an unsatisfactory position in this regard. Qualitative sociological research, conducted at a university in Romania, sustain the above statement, revealing that students who participated in exploratory study do not relate to quality assurance in a systematic way.

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ÎNVĂȚĂMÂNTUL SUPERIOR

# QUALITY IMPROVEMENT OF HIGHER EDUCATION – A PERMANENT OBJECTIVE OF A PRIVATE UNIVERSITY

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## Abstract

*Education is one part of young people's lives. It enables the individual to understand and study the real life situation and to develop an opportunity for creating confidence in the minds of younger generation, and provide a strong base for rational and value oriented and nation building progress. Higher education faces a new era as a result of changes in the way people view colleges and universities. Expectations for better performance in terms of teaching and producing competent college graduates are increasing.*

*This paper examines the need for continuous quality improvement in higher education, making an investigation of the current situation of the quality of higher education in Romania and focusing on the quality of the education provided in a frame of a Romanian private university, namely Ecological University of Bucharest.*

**Key words:** higher education, education quality, private education, improvement, private university.

## 1. Introduction

The educational needs of the nation and the world will be best met by monitoring and advancing quality in all settings in which higher learning is provided. Education quality is a strategic factor for competition and cooperation among universities. A quality-aware organization is not created spontaneously—it requires a committed, visible leadership that promotes the relevant issues. For this, it is important to engage the staff in work on quality evaluation. Interest should focus on whether and how universities follow up their quality, regardless the university is public or private one.

The higher education institutions have a key role to play in national development and the enhancement of global competitiveness of the national economy. Their mandate includes knowledge generation and human capital development. The decision to invest in education quality means connecting the individual to the values of society, the rules of social conduct and long-term positive effects of obtaining the economic, cultural, personal, etc. Education enables the individual to understand and study the real life situation and to develop an opportunity for creating confidence in the minds of younger generation, and provide a strong base for rational and value oriented and nation building progress [9]. From the society side, the lack of education means lost opportunities to individual and company level, economic and social development. Time for education is thus a resource that provides individuals, such as factor and the effect of its development. Innovation and growth will be weak without a broad foundation of knowledge, skills and competences which promotes talent and creativity from an early age and is updated throughout adulthood. Education is thus one of the fundamental factors of development. During

this century, education, skills, and the acquisition of knowledge have become crucial determinants of a person's and a nation's productivity.

There is a substantial literature that shows that people with higher levels of education are more likely to participate in the labour market, face lower risks of unemployment, and have greater access to further training.

This paper examines the need for continuous quality improvement in higher education, making an investigation of the current situation of the quality of higher education in Romania and focusing on the quality of the education provided in a frame of Romanian private university.

## **2. The quality of higher education in Romania**

In any country higher education is the *key of truth* for the entire society. With many pressures from technical developments, a deficiency in designing higher education is a very costly endeavor paid by a country. The qualified job market suffers directly and one of the numerous direct consequences will be the decreasing number and quality of teachers and professors involved in the educational system. Unfortunately, this is the case in Romania, where the educational system still has many gaps. Even though, the quality of education and training is considered in Romania, as well as in all Member States to be a concern of the highest political priority. High levels of knowledge, competencies and skills are considered to be the very basic conditions for active citizenship, employment and social cohesion. Lifelong learning is an important means of shaping one's future on a professional and personal level, and high-quality education is essential in the light of labor market policies and the free movement of workers across the European Union. On the other side, the success in higher education is not only a question of academic excellence. Despite the development of mechanisms promoting equity in education systems, the level of education of parents still has an impact on success in higher education. People whose parents have a high educational level have better chances of accessing and completing tertiary education than others.

### **2.1. Academic evaluation**

In Romania, the academic evaluation and the accreditation procedure are based on an assembly of general criteria and obligatory standards. The criteria refer to the fundamental organizing and functioning domains specific to higher education: teaching staff, educational content, material basis, research activity, financial activity, and institutional, administrative and management structures. The standards refer to each criterion and specify the minimum obligatory levels during the evaluation and accreditation period (these levels are differentiated for the provisory functioning period and for the period subsequent establishment through the law). The general criteria and the basic obligatory standards are set by the law whilst the specific criteria by reference domain and specialization of study are established by the evaluation commissions subordinated to ARACIS.

The Romanian higher education needs an evaluation based on the international standards. The Minister of Education, Research, Youth and Sport underscored the need to use the final results when evaluating the universities and stressed he would back financing the universities based on their scientific results. But it should be said that the evaluation of the quality in higher education is – almost always – a subjective issue, even though the evaluation method is based on the

statistical data. The subjectivity should be viewed as a perception of the various actors participating into the educational system.

The first statistical indicators used in order to evaluate the quality of youth education have been set according to the Bologna Process recommendations.

Regarding the formal implementation of the principals of Bologna Process, the image of higher education in Romania is not only a positive one. In this sense, a weakness is given by “the delays registered on the implementation of the national framework of qualification”[16].

### 3. Institutional quality improvement processes in a private university in Romania

Quality of education concretely deals with in three ways:

**Quality:** The pursuit of the principle of quality means maintaining and applying academic and educational standards, both in the sense of specific expectations and requirements that should be complied with, and in the sense of ideals of excellence that should be aimed at. These expectations and ideals may differ from context to context, partly depending on the specific purposes pursued. Applying the principle of quality entails evaluating services and products against set standards, with a view to improvement, renewal or progress.

**Effectiveness:** An effective system or institution functions in such a way that it leads to desired outcomes or achieves desired objectives.

**Efficiency:** An efficient system or institution is one which works well, without unnecessary duplication or waste, and within the bounds of affordability and sustainability. It does things correctly in terms of making optimal use of available means.

There has been a concerted effort in recent times to set up quality processes within many institutions. This has led to the development of student feedback systems which individual teachers and course teams may use to improve the next offering of the subject. Thus the institutional quality processes need to be such that the culture and procedures encourage the clearly defining the educational purpose, flow of information across subject, course, departmental and faculty boundaries. In this context, there is some issues related education quality: the content of development programs, the level of interactivity of courses, the professional development and training of the didactic staff, the student induction and access issues, the intellectual property issues, and resources available.

Ecological University of Bucharest was founded in 1990, as a first private university in Romania. In April 2010, we celebrated two decades of existence, in fact a trouble youth. In a large view, we could indentify three periods of the state of academic quality. The first is related to the organization process and implementation of the study programs, all the concepts being harmonized with the ecological concepts and the mission of the university, but subordinated quasy-total to authorization requirements of CNEAA<sup>1</sup>. Preoccupation for respecting rules and requirements was predominant.

Interesting of the tertiary education increased since in Romania was established the private universities. That had a real contribution to diversify the offer of educational services and the flexibility of the new requirements of the national economy. In this view, Ecological University of Bucharest initiated new academics programs for the new qualifications and occupations in the

<sup>1</sup> National Council for Accreditation and Academic Evaluation

labour market, as the followings: diplomat ecologist, environment evaluator, environment inspector etc. Implementation of some courses, completely new for the Romanian tertiary education, like *Environmental Economics and Management*, *Intern and International Environmental Law*, *Urban Ecologies*, drew up a valued academic staff and also reputed researches from certain institutes of Romanian Academy. In this way, there was open the fundamental and applicative research laboratories area in the frame of UEB.

As a conclusion, for an “overview picture” of that stage of academic activity, we can say that state of university is predominant a positive one using the base of indicators set up in the frame of „Quality Barometer of ARACIS”. Although, accomplish of the input indicators enclosed in the accreditation methodology imputed by CNEAA reflect a minim level of quality, a selection mechanism exercised certain correction in order to follow the next step of academic activity.

In that circumstance, the second step, in the line of institutional consolidation and creation of conceptual balance could be linked by the official UEB recognition, trough the foundation law no. 282 from 2003 and also implementing the Bologna Process. There are necessarily to underline some specifications:

- UEB is the first Romania private university that implemented the transferable credits system since 1998, being considerate the pilot tertiary institution unit in the frame of a UNESCO project for Central and East Europe;
- The academic programs (4 years – daily programs and 5 years – reduce frequency programs) developed in certain faculties as *Financial Management*, *Accounting and Administration Faculty*, the length of study was broken in two parts, the specialization programs carrying out in the last four semesters. That is the reason for the pass to Bologna Process had been easy, the efforts being concentrate especially in assimilation of European standards and also for consolidation of internal tools used in order to assure and to improve the quality of activities in academic field.

The contradiction effects of the last year's period, as the *mass lot* of tertiary education and the expansion of continuous educational and formation programs could be viewed on the academic staff in our university, and also in the necessity of increasing the space for the educational and research activities. Three new buildings supply now large amphitheatres, seminar classes, laboratories, gym sale, sport area, all buildings being a substantial effort of investments. That investment replaced the opportunity to increase the level of salary for the academic personnel in UEB.

The migration of youth teachers to better paid domain of national economy and the negative impact of the economic and financial crisis on the population earnings are the main reasons of the start of the third developing stage of the UEB.

We appreciated that UEB has a positive imagine in the national system of education between other institutions supplying tertiary education services since the ARACIS evaluated the academic activity and awarded it with “trust”.

Looking to the future, we agree that new concrete and fast actions are necessary in order to follow the ARACIS recommendation and to improve the mechanisms for the distance and reduce frequency educational programs. Other aspects to be improved are referring to the diversification the social services for students, as well as the feedback from the students and employers in the labour market. In other words, the quality must be focused on academic output and educational results. In the same time, the longer stage of recession of the national



economy, financial input of the university will raise again the problem of austerity measures, the role of financial quality becoming more and more significant.

#### 4. Conclusion

The love for nature and environment is translated in a modern ecologic view, representing the pillars of the affiliation of Romanian citizens to Europe. As success records and future prospects, over 15000 graduates tell the story of achieving excellent results, many of them being already experts in various fields. But the start of the private education in Romania was not so easy. There was barriers related the foundation of the strong infrastructure of the private universities that could be expected to compare to the public tertiary institutions. Other limit of the private education was finding professional personnel to teach in the new created university. The professors were formatted in a view of public education and their approach had to be changed, the younger academic personnel looking forward to better paid jobs.

Finally, the flexibility of the new education system, the new law of education and the professional frame of initiators of the Ecological University of Bucharest have facilitated the opportunities to create a strong and high skilled team of didactic personnel, mostly of them being formatted in the own institution.

Other barriers in the way of developing the private system of education are still the level of taxes. They are very low comparing with the private university across the world. In that circumstance the university is only able to cover the current expenditure, the investment level being still under expectations. Here are also constraints related to the standards of authorizations and control.

Generally, other points of view on the level of quality in higher education are presented below:

- (1) Until now, the academic quality of the national system of education is mostly focused on the input indicators (participation to higher education as a number of students), not on the education results; the most important risk is to inflation of graduates that are not in to a positive correlation with their professional competencies;
- (2) Although the higher education in Romania has a good image at European level, the academic policies should be elaborated an applied in order to assure the control of education quality. The current institution (ARACIS) is still perceived as a agency that not resolve that problem;

The higher education is full of divergences and differences between views of students and academic staff regarding the education quality. The employers have also different opinion on quality of higher education. These divergences conduct to confusions about the quality standards of education.

Developing education quality is indispensable to economic development. No economic development is possible without good education, especially for young population. A balanced education system promotes not only economic development, but productivity, and generates individual income per capita.

On the individual side, acquiring education and training that is relevant to the job market improves an individual's employment opportunities. This often leads to acquiring a better paying

job, increasing savings, and ensuring economic security. Developing new skills and knowledge relevant to the job market, enables a person to apply to a wider variety of jobs.

In Romania, increasing the education quality of higher education should be a major objective of the educational policy. Some of measures should be taken into account by institutions to increase their efforts to widen participation in higher education. We need everyone who has the ability to participate in higher education if we are to expand to meet our future economic needs without sacrificing quality. But all those engaged in higher education will recognize that there is more to be done to realize this ambition.

As a particular conclusion, Romanian Higher Education is often a field of great contradictions and high volatility as government after government completes a never ending cycle of reforms and amendments on present laws. Of course, not all of these reforms affect the interests of students, but most are beneficial to overall quality and to student welfare.

The exit of the current situation of higher education should be correlated with the economical and social situation in Romania at the present, but the economic crisis should be viewed as a driving forces and key features.

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AGENȚIA ROMÂNĂ  
DE ASIGURARE A  
CALITĂȚII ÎN  
ÎNVĂȚĂMÂNTUL SUPERIOR

# PUBLISH OR PERISH: IS THIS FAMOUS IMPERATIVE THE BEST UNIVERSITY GUIDE?

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## Abstract (Times New Roman 11 pt bold, 6 pt space before and after titles)

*This paper addresses an issue that has been the subject of intense debate over the last decades: what is the main activity that university professors should perform? In other words, the question we are trying to answer is this: what is the university professor supposed to do: to teach or to do research? The famous imperative „publish or perish” is now under an intense scrutiny by those who fear that Max Weber was right to warn us against the risk of becoming „highly trained barbarians”, or in his own words „specialists without spirit, sensualists without hart”. My hypothesis is that nowadays academic careerism is far more important than teaching and this can lower the quality of higher education. The method I shall use to prove my point consists in examining the present laws and regulations concerning the criteria of getting promoted in Romanian University. I will try to show by analyzing those regulations that the teaching activity is not truly encouraged or rewarded. In other words, in order to become a professor you have to prove yourself capable of doing important research. But if someone is indeed an excellent researcher does not necessarily mean that he/she is a good teacher. I will try to suggest that the two main activities, teaching and researching, are not to be conceived as mutually exclusive. On the contrary, the desire to assure the quality of higher education should lead to a way of making them equally important.*

**Key words:** teaching, researching, university careerism, quality of higher education.

## 1. Introduction

This article is about the evaluation of academic performance. The goal is to show that the actual criteria of evaluating academic workers could not guarantee the quality of higher education. Thus the quality of the work done by faculty staff is not necessarily related to the quality of the education system. This is because although the main purpose of higher education is passing on knowledge (teaching), the most rewarded activity of academic workers is finding of new knowledge, that is, research. There are mainly three important activities that count in academic evaluation: teaching, researching and service to the institution. Ideally, the academics should be good professors and good researchers. But given the limited time and energy resources, those activities are almost always in competition with each other. Thus, all academic workers, regardless of their rank (the teaching assistant, the lecturer, the visiting professor or the full professor), find themselves in the difficult position of choosing between the two. This way, they will neglect research in order to prepare the classes because the topic of research does not mach the topic of the classes he/she is about to teach or they will neglect the classes in order to do better research. As we all know, most of academic institutions value research more than teaching.

There are several reasons that make this practice seem legitimate. First of all, teaching is an activity that is intended for less informed people – the student – while research is targeted at higher-status audience, that is, the other professors and researchers. Most of us would think that

this is enough to prove that research is more intellectually demanding than teaching, but this is not always the case. Sometimes explaining the established truths proves to be more difficult than finding new ones. The second argument for this particular preference is related to what our society values most. In an effort of analyzing today's ethical problems in the academic world, George Robinson and Janice Moulton showed that "contributing new knowledge is likely to be valued more than organizing and transmitting old knowledge. This occurs not because new knowledge is intrinsically worth more than old knowledge. Older knowledge has stood the test of time and is likely to be more valuable than new research results, many of which are trivial or will be revised or discarded later. Rather it is because our culture values newness, originality and creativity far more than oldness loyalty to tradition or faithful preservation".<sup>1</sup> If we accept this argument it means that appreciating research more than teaching is relative to nowadays culture and not an objective and immutable fact. But this is not enough to discard this perspective as ill founded. Rather faculty members are seeking ways to boost productivity and to publish more and more articles. There are several problems related to this academic habit:

1. First of all, the quality of higher education has more to do with the actual process of educating people, that is teaching, that it has to do with the number of publications and of citations. The actual purpose of an academic institution is transmitting knowledge so there is an enormous responsibility towards the student attending classes.
2. Secondly, this way of evaluating academic achievements has important consequences on the institutional hierarchy. That is, the less trained faculty members are assigned to do most of the teaching activity.
3. Thirdly, the actual criteria of getting a promotion do not involve the teaching activity.
4. There are several problems concerning the evaluation of research. The peer review system is now facing important challenges and there are several attempts to replace it with other evaluation methods (the open peer review system).

I shall address all this problems in the following part of my article.

## 2. The difficulties of defining "quality"

Any analysis of a certain topic should begin with a definition of the main concepts it aims to investigate. The famous philosopher Bertrand Russell said almost a century ago that the main purpose of philosophy is to accommodate our common sense intuitions with the latest scientific discoveries. Assuming this objective, this part of my paper is aiming to accommodate our common sense understanding of "higher education quality" with some of the definitions proposed by the Romanian law concerning higher education quality. There are many ways the term "quality" is used, but in the context of the higher education system it receives a specific meaning. The Webster Dictionary indicates there are almost twenty different meanings of "quality": "An essential and distinguishing attribute of something or someone"; "the quality of mercy is not strained"; "A degree or grade of excellence or worth; "the quality of students has risen""; „Of superior grade; "quality paper"<sup>2</sup>; etc. We selected only a few, but this versatile concept has a large variety of differed understandings. This is the reason why those in charge of elaborating the laws had to give a clear and specific definition of "quality". Thus, this concept means "the degree to which some intrinsic elements in a system are compliant to certain standards"<sup>3</sup>. This way the quality of higher education is defined through the standards, that is, "an official document that provides for repeated and several uses the

<sup>1</sup> George Robinson, Janice Moulton, *Ethical Problems in Higher Education*, IUUniverse, 2005

<sup>2</sup> <http://www.websters-online-dictionary.org/definitions/quality>

<sup>3</sup> Nicolae Drăgulănescu, *Asigurarea Calității Educației în România – între necesitate confuzii și obstacole*, online document found on <http://www.supradotati.ro/resurse/Nicolae-Dragulanescu->

organizing guidelines and specific attributes concerning different activities and their outcomes in order to obtain the maximal order degree in a given context". Thus, quality of higher education means the conformity to certain officially established norms. One of the first documents that clearly states what does "quality" mean for higher education is the 2005 Romanian Law concerning the higher education quality. After analyzing this law we shall investigate some of the criteria that ARACIS, the Romanian institution created especially for defining and evaluating quality in higher education, is formulating in order to define "the education efficiency". The 2005 Law of higher education states the following rules and criteria:

"In the higher education institution, the quality assurance system contains besides the organizing structure mentioned above a set of rules (criteria) and principles regarding the following aspects:

- the policies the strategies and the procedures for quality assurance
- the approval, monitoring and evaluating methodologies for the study programs and awarded qualifications
- the student evaluation methodologies
- the quality assurance for the faculty members
- the evaluation of learning resources and support offered to the students during their training
- the organization of the data base allowing an internal evaluation
- the recurrent publication of information regarding the offered study programs quality"<sup>4</sup>

I used this law text in order to prove that none of the mentioned definitions or criteria regarding the quality of higher education addresses only the individual merits of the faculty members but the relation that they have with their students. Let's analyze it step by step. The first criterion regards the exact procedures of quality assurance. Each institution has to design the right strategies for an efficient quality management.

The second criterion regards a very controversial aspect: the study program. Although there are certain limitations imposed by the law concerning the design of a study program the academic autonomy puts the considerable burden of elaborating the study program on the shoulders of the college managers. There are important ethical debates surrounding this particular aspect. The most important one regards the underling moral values guiding this study program design. Nowadays the principle of the knowledge useful by itself is replaced by the principle of the knowledge useful for other purposes (a good insertion on the labour market, for example). This principle of teaching only what is "useful" is generating highly controversial decisions. For instance, a student may ask "What is the use of studying Aristotle, Shakespeare or World War I history?" and this is mainly because the good insertion on the labour market criterion cannot function by itself in the evaluation of study programs. There are important financial constraints and universities are not competing to get the *best* students but *enough* students and this kind of utilitarian perspective could lead their administrators to close down entire departments (the classical studies or philosophy departments, for example). This days it is not considered useful by most of the students to study Homer or Kant. Clearly, the labour market does not favour the study of humanities. Should we give up this study areas? In other words, is knowledge valuable only if it is useful? Or, in more abstract terms, is it rarely useful to teach only what is useful at a given moment of time? I think this is a question worth answering in a separate paper.

The third criterion regarding the quality of higher education is related strictly to the teacher – student relation that is, finding the best ways to evaluate student performance. The evaluation process is the more difficult one since, although only a few admit it, grades are very important to most students. The

<sup>4</sup> <http://www.uaic.ro/uaic/bin/download/Academic/ServiciulCalitate/ordinministru.pdf>

ethical problems concerning evaluation generate heated debates. Is it possible to find an objective standard in the evaluation or should we confine ourselves to comparing students among themselves? Should we consider if the student has improved, or use an absolute standard of evaluation? The student-teacher relation has evolved very much in recent years. The student is no longer considered a naïve pupil that has the obligation of obeying the master. The teacher's authority has considerably diminished in the last decades and this is not always for the best. Authority diminishing is accompanied by the raise of mistrust and lack of confidence – a key element in the training process. This led to the situation where in some universities there is a contract signed between the teacher and the student specifying exactly how every bit of work done by the student will be reflected in the final grade. Although it reduces considerably the risk of favouritism and error, it is difficult to use this type of evaluation in the humanities. When asking students to write an essay for example, certain guidelines can be given, but there are elements that escape this formal evaluation instrument.

However it is not our goal to further investigate this issue here. The purpose of this analysis is to show that there are two criteria in the present law (the third and the fifth) that clearly specify what our common understanding of the term “quality of higher education” is telling us right from the start: the main responsibility of an higher education institution should be directed toward the student. According to this law, the main goal of an academic institution is the passing of established knowledge and not finding new knowledge. The students should be treated as goals and not as means. But is this really the case in Romanian universities? One may argue that nowadays careerism and very demanding research imperatives are transforming the students in a means of getting money in order to do research and this way universities will become research institutes where some teaching is done. Are these claims substantiated? Further analysis of the law could give us the answer.

The fourth criterion of the present law states that in order to assure the quality of higher education the university should find the best ways to assure the quality of faculty members. This is the most vulnerable criterion in the present law because it can lead to certain contradictions with other laws governing the academic life. What are the criteria of evaluating academic workers? First of all the quality commission evaluates their work, the chairman and the dean give the qualifications, students make their own evaluations. The evaluation of academic performance concerns mainly the quantifiable research activity. The teaching activity is thought to be best evaluated by the students. This is a very controversial perspective since in many cases many professors admitted they directed their efforts toward getting higher grades from the student and this did not necessarily mean improving their teaching. “The ethical danger of using student ratings is that teachers whose professional lives are at stake will direct their effort toward getting high evaluation from the students instead of trying to do the most effective teaching. When teacher evaluation forms appear on their campuses some assistant professors report that they changed their behaviour in ways they thought would improve their ratings, regardless of whether they thought it would improve their teaching. In particular, they avoid giving failing grades and gave more A grade, made exams more easier, avoided challenges that may be frustrating [...]”<sup>5</sup> The present law above analyzed has been developed and there are several legal documents concerning higher education quality. The Romanian institution created in order to define and evaluate this particular type of quality, ARACIS, is following liberal principles in determining what quality means. Thus, acknowledging the university's autonomy this institution states that “The criteria, the standards and performance indicators are formulated in such a way that it does not emphasize the organization conformity to a predetermined set of rules but the deliberate and

<sup>5</sup> George Robinson, Janice Moulton, *Ethical Problems in Higher Education*, New York: IUUniverse, 2005

pro-active participation of the institution in the achievement of certain performances proved by actual results.”<sup>6</sup> This leaves enough room for every higher education institution to define its own objectives and methods of achieving those objectives but there are of course certain guidelines to be followed. There are three domains regarding higher education quality: the financial resources, the education efficiency and the managerial capability. The process of university licensing forces each and every faculty to develop its own strategy of quality insurance but using the academic autonomy principle in order to put the burden on the faculty staff does not really solve the problem. The fact that the academic world tends to be dominated by extreme individualism and careerism is a danger that universities cannot avoid by themselves. There has to be regulations that clearly encourage teaching activity.

### 3. The promotion criteria for higher education

Although the teaching activity is evaluated, this evaluation is done mostly by students, and there are important ethical problems generated by this choice. But the main problem is related to the second and the third problems we set out to investigate in this paper: who is doing the teaching in most universities and what are the criteria for getting promoted. The argument of those who praise the emphasis on research is that students must be thought in accordance with the latest discoveries in the scientific area they are training in. So, it follows that university professors should also be excellent researchers in order to meet the demands of the student who wants to receive high quality education. But this is a hypocritical attitude since most of the teaching in the Romanian universities is done by teaching assistants and PhD students. So, top researchers are teaching less and less, this burden being put on the shoulders of the less experienced faculty members. Furthermore, let's take a closer look to some of the criteria for getting promoted in a Romanian university:

“1. First Criterion: Teaching activity: The evaluation of the teaching activity is presented by the head of department in an evaluation document containing:

- a. The self- evaluation
- b. The colleagues evaluation
- c. The student's evaluation
- d. The list of published learning materials and other teaching activities

2. Second criterion: Research activity: a grant, research contract gained in the past five years, in a competition as grant manager

3. Third criterion: Scientific contribution:

a. 2-4 articles/studies/patent act – depending on the situation, elaborated in the last five years as main or second author. At least two scientific contributions from the 2-4 have to be ISI indexed or indexed in international databases.

b. a book in his area of competence as first or unique author

4. Forth criterion Professional prestige

a. Two scientific relevant contributions

b. The presentation in 2-5 pages of a research contract/grant

c. Proofs of the recognition of his merits by specialists and institutions by citing papers in the ISI system, by coordinating of professional and scientific structures; being a member of national and international professional organizations, member of prestigious editorial boards, receiving distinctions and contributing to forming new specialists”<sup>7</sup>

A closer look to these criteria show us that although they are named differently, the second, the third and the forth criteria are all about research. The scientific contribution and the professional prestige are the result of the research done by those who want to get promoted from the rank of assistant

<sup>6</sup> [www.aracis.ro/uploads/media/Metodologie\\_aprobata\\_HG\\_1418\\_-\\_2006.pdf](http://www.aracis.ro/uploads/media/Metodologie_aprobata_HG_1418_-_2006.pdf)

<sup>7</sup> <http://www.edu.ro/index.php/articles/c351>

professor to the rank of associate professor. There are in fact three criteria regarding research and only one criterion regarding the teaching activity. There are many problems with this type of perspective. First of all, the student evaluation is often biased for the reasons mentioned above. Then, the colleagues' evaluation is a weak instrument of decision since it is done by people who work together for several years. There is in fact a high risk of a biased evaluation since the working environment even formed by highly trained people is never emotionally neutral. Furthermore, the teaching evaluation should be done periodically by external institutions. But this is a very difficult task to fulfil since it is hard to say who is higher in rank than higher education workers. A possible solution would have to consider the academic ranks system and create an external evaluation committee formed mostly by full professors. The peer – review system could be used only between full professors.

Another solution to this problem can be found in the regulations concerning ordinary schools. For instance, if a teacher has students that gain important competitions they can use those results in order to gain bonuses and salary raises. The same thing can be used in universities. If a certain professor is supervising a student that publishes an ISI article it should be made possible that the professor receive a bonus or a salary raise.

#### 4. Conclusions

So, one of the main problems concerning higher education quality is the contradiction between quality assurance and the promotion criteria. While asking the academic workers to do quality education higher standards of research are imposed, and, given the limited time and energy resources, the faculty members find themselves in a very difficult position. Since getting promoted and being appreciated are far more attractive objectives than improving the teaching activity, it is clear that this way of conceiving the laws governing the academic world could not lead to better results in improving the quality of the education the student gets in a Romanian university. It is very hard to find the regulations that encourage and reward the teaching activity in the higher education system.

The future regulations designed to improve the quality of higher education should consider ways to make the teaching activity more important and rewarding. It is a generally accepted fact that it is very important for academics to be involved in research activities, but following the current trend we risk to transform universities in research institutions where a little teaching is done by the less experienced personnel.

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# LEARNING TO LEARN - A KEY COMPETENCE WITHIN BOLOGNA EDUCATIONAL SYSTEM

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## Abstract

*This paper intends to identify the optimal ways of developing the learning to learn capacity to the freshmen students. The learning to learn is one of the eight key competencies for life long learning, necessary for the knowledge society and it is recommended by European Council. This competence will allow students to be more flexible and ready to adjust to a continuous changeable world. The study shows the correlations between the students' learning capacities, their metacognitive capacities, and their eagerness to learn in terms of academic performances. The results provide a better understanding upon the students' learning needs and upon the necessity of working on the development of the metacognitive competencies during the university initial training.*

**Key words:** learning to learn, metacognition, academic performance.

## 1. Introduction

Within the Romanian university educational environment there are numberless interrogations related to the finalities it should form— from the cognitive finalities to the attitudinal ones. For the university educational space the cognitive finalities consider not only the acquisition of an specialized information, transposition, application and evaluation capacities, but also research skills, reflection skills upon one's own learning and searching possibilities. There are students who experience the academic success (or not!) thanks to their learning to learn skills.

After the European academic meetings, due to the directions within Bologna process, there were launched the documents regarding the qualification system which should be the finalities for the higher education system. The specialists, who debated on the competences which should be delivered through the university education, tried the objectification of the Bologna Process requirements into the European universities and their curricula through the Tuning Project. Within the project, *Tuning Educational Structures*, there are specified three types of competences need to be developed through university education [9]: instrumental competences (cognitive, methodological, technological, linguistic skills), interpersonal competences (emotional competence, cooperation skills, respect the ethic and social rules) and the systemic competencies (capacity to understand and to foresee the information functioning within a complex system, capacity to understand the changes and to plan the changes).

In the documents elaborated by the institutions of European Community there are directive lines for making possible the harmonization of the educational systems from all over the EU countries. In the

European Parliament Recommendation and the European Council there are defined the key competences which need to be developed both through initial training and through the in-service training in order to assure the life long learning and education. The key competencies take into account the personal needs for personal development, for active citizenship development, for social inclusion development and the responsible employment within the work market. There are eight key competencies: communication in mother tongue; communication in foreign languages; mathematical competence and basic competences in science and technology; digital competence; learning to learn; social and civic competences; sense of initiative and entrepreneurship; cultural awareness and expression. [4], [8]. The European Framework for Key Competences acts as a useful tool for the educational policy makers, for the education and training providers in order to make real the life long learning. The fifth key competence – learning to learn – is central, as it supports the acquisition of all key competencies through various learning activities.

Learning to learn requires an individual to know and understand his/her preferred learning strategies, the strengths and weaknesses of his/her skills and qualifications, and to be able to search for the education and training opportunities and guidance and/or support available.

Learning to learn key competence as it is defined in the European Framework is “the ability to pursue and persist in learning, to organize one’s own learning, including through effective management of time and information, both individually and in groups. This competence includes awareness of one’s learning process and needs, identifying available opportunities, and the ability to overcome obstacles in order to learn successfully” [4]

For P. Knight [6] the general finalities are: the field and subject understanding, the development of the practical skills and the metacognitive skills. The entire university educational system should form complex capacities, not only basic acquisition in a specific field, but also the problem solving skills, making accurate decisions skills, learning to learn skills, abilities of evaluation and capitalization the learnt experience, abilities to transfer to different contexts the knowledge acquired. The academic settings need to take into account both the perspective of doing learning explicit to their students, and the perspective of enabling them with learning to learn skills, such as metacognitive skills which will promote a better accuracy for self-evaluation. The metacognition is defined as a strategic application of the declarative, procedural and conditional knowledge in order to fulfill the established tasks. [7]. The metacognitive strategies comprise: the planning, the monitoring and the evaluation. Each strategy requires the development of specific capacities.

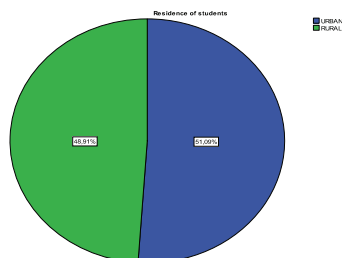
## **2. Methodology**

### **2.1. Participants**

The participants in this study were 92 students at sciences of education, who were attending an optional course about learning how to learn, in the end of the first academic year. A part of these students are already teachers in primary or preschool education and another part of these students have no experience in science of education field. The mean of number of years of experience as teacher is 6.54 and the median is 1 year. Most of the students (47,8%) don’t have any experience in these field. For this study we are interested about performance in learning expressed through the mean of marks after they attended the first year. The mean of the academic performance is 8,29 and the median is 8,40.

The participants are both from the urban area and the rural area, and the distribution are 52% from urban and 48% from rural area.





**Figure 1.** Distribution in terms of residence

## 2.2. Instruments and variables

In order to identify the students' perceptions upon their own academic performance we have asked the students to evaluate themselves before the exam (before the exam they should put themselves a mark considering their learning effort) and to evaluate themselves after they did the exam. These marks were compared with the evaluator's marks.

For the same reason a second set of compared marks were between the students' self-evaluation and the teacher's evaluation (using the teachers' marks and the students' marks, after they finished to answer to the exam questions).

In order to find out the level of metacognitive competencies of the freshmen we applied a questionnaire which describes the level of the metacognitive competence. The questionnaire was built and validated by professor M. Stanciu within the project „The development of metacognitive competence at the students from the first academic year”. For the present study we were interested in that items which point out those capacities enclosed to the metacognitive competence. The concept of metacognitive competence was analysed through eight indicators: the taking notes capacity, the capacity of elaboration and presentation of an individual project, the capacity of elaboration and presentation of a group project, the capacity of elaboration and presentation of a scientific work, the capacity to follow a learning plan, the capacity to evaluate a learning plan, the capacity of management information.

The achievement motivation was assessed through Achievement Motivation Inventory of Heinz Schuler, George Thornton III & Andreas Frintrup (Romanian version, L. Miclăuș and Dragoș Iliescu).

The inventory consists from 170 items, displayed by 17 dimensions: Persistence, Dominance, Engagement, Confidence in Success, Flexibility, Flow, Fearlessness, Internality, Compensatory Effort, Pride in Productivity, Eagerness to Learn, Preference for Difficult Tasks, Independence, Self-Control, Status Orientation, Competitiveness, Goal Setting. Each item is assessed on a scale from „1” – „completely disagree” to 7 – „completely agree”. For the purpose of our study we are especially interested in Eagerness to Learn which signifies a personal openness toward the effort for the acquisition of the new knowledge.

*The dependent variables* are the metacognitive competences, the values of achievement motivation (the values of its dimensions) and the marks obtained through evaluation and self-evaluation. *The independent variables* related to the group of students are: the experience level in the educational system, the academic performance and the living environment.

### 2.3. The objective and the research hypothesis

The research objective consist in the identification of the freshmen students perceptions upon their developmental level of their metacognitive competences and their relation with the dimensions of achievement motivation and self-evaluation level.

*Hypothesis 1:* the developmental level of the metacognitive competence has significant differences in terms of academic performance.

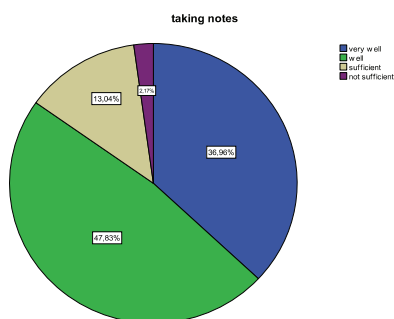
*Hypothesis 2:* There are significant correlations between the students` learning competences, the self-evaluation and the eagerness to learn

*Hypothesis 3:* There are significant differences between the self-evaluation of the students and the teachers` evaluation in terms of academic performance

*Hypothesis 4:* There are significant differences between the students with different academic performance and the eagerness to learn

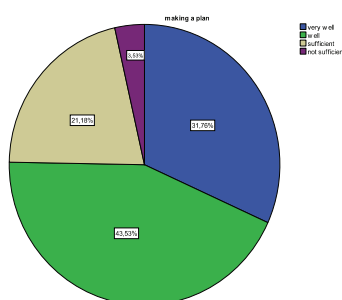
### 2.4. Results

We have started with the description of the students` perceptions upon their learning abilities. We obtained the following results regarding their capacities of taking notes, elaboration a learning plan and information management:



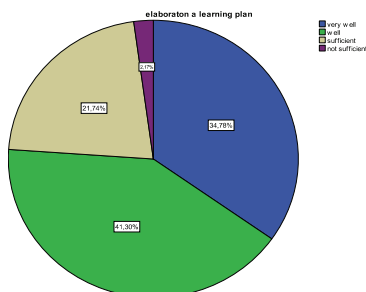
**Figure 2.** The students` perception upon their capacity of taking notes

The students from the first year of study consider they have a very well capacity of taking notes (36, 96%) whereas 47,83% consider they have a good capacity of taking notes.



**Figure 3.** The capacity of elaboration a learning plan

We could notice that a great proportion of students consider they know how to elaborate a learning plan.



**Figure 4.** The perception upon the capacity of information management

*Hypothesis 1:* the developmental level of the metacognitive competence has significant differences in terms of *academic performance*

For the measurement of the academic performance we took into consideration the median for the students grades after the first year of study, the value 8.40. In order to identify if there are significant differences between the means of those with very good academic performance and those with less good academic performance and their metacognitive capacities we used the Independent Sample T Test.

**Table 1.** Perceptions about metacognition skills and academic performance

		Independent Samples Test						
		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
elaboration a learning plan	Equal variances assumed	,884	,350	-2,935	90	,004	-,475	,162
	Equal variances not assumed			-2,922	84,956	,004	-,475	,162
abilities to structure the learning materials	Equal variances assumed	,833	,364	-3,010	90	,003	-,375	,125
	Equal variances not assumed			-2,990	80,641	,004	-,375	,126
perceptions upon academic performance	Equal variances assumed	2,571	,112	-5,247	90	,000	-,837	,160
	Equal variances not assumed			-5,228	86,372	,000	-,837	,160

We could find out that the students with poor academic performance have poor capacities of taking notes. These two factors could be related because the students able to take notes they

have already the capacity for information synthesis, for information processing, and the learning success could be derived from this fact.

The students who have the capacity of information processing and information organization get high level of academic performance.

It is obvious the relation between the students who consider they have a very good capacity of elaboration an individual plan and their very good academic results.

The evaluation of their own results differs in terms of academic performance. The students with good learning performances consider their results as being satisfying, in contrast with the students with low performances.

*Hypothesis 2:* There are significant correlations between the students' learning competences, the self-evaluation and the eagerness to learn

In order to verify this hypothesis we have applied the Pearson Correlation for the data gathered upon the perception on the learning performances, the perceptions on the capacity of structure the learning material and the eagerness to learn

**Table. 2.** Correlations

		perception upon academic performance	abilities to structure the learning materials	eagerness to learn
perception upon academic performance	Pearson Correlation	1	,327**	-,410**
	Sig. (2-tailed)		,001	,000
	N	92	92	92
abilities to structure the learning materials	Pearson Correlation	,327**	1	-,247 <sup>†</sup>
	Sig. (2-tailed)	,001		,018
	N	92	92	92
eagerness to learn	Pearson Correlation	-,410**	-,247 <sup>†</sup>	1
	Sig. (2-tailed)	,000	,018	
	N	92	92	92

We could notice that there are both positive and negative correlations between the data. Considering the results, we could infer that the students who see themselves as having capacities for structure the learning material have also æ positive perception upon their own learning results. We consider as interesting the correlations between the eagerness to learn and the perception upon academic performance: the students with high level of eagerness to learn have significant low perceptions upon their academic performance. This could mean that they are discontent with their learning results and they want to grow their knowledge within the study field.

*Hypothesis 3:* There are significant differences between the self-evaluation of the students and the teachers' evaluation in terms of academic performance

In order to verify this hypothesis we have applied the T Test for independent samples (in terms of the median value of the grades after the first academic year – 8,40). We have noticed that the students with low academic performance have also low results both at the teachers' evaluation and at the self-evaluation. The differences between the means is 1,30, for  $p < 0,005$ , and this demonstrates that these differences are significant.

We have also applied the T Test for pair samples in order to see if there are significant differences between the teacher's evaluation and the self-evaluation.

For the first self-evaluation form (the evaluation done before and after the exam) there are no significant differences, so we could infer that the students' perceptions upon their own learning capacities are constant, either they know or not the exam subjects.

There are significant differences between the self-evaluation and the teacher's evaluation. This fact demonstrates that the students are not wont with self-evaluation techniques or metacognitive techniques to learn how to reflect upon their own learning possibilities.

For the second self-evaluation form, after the statistic interpretations we obtained that the differences between the self-evaluation and the teacher's evaluation are significant ( $t(90) = 14,019$ ,  $p = 0,000$ ).

In a previous study [3] we have noticed that there are significant differences in terms of the academic performance [ $t(289) = 7.554$ ,  $p < 0.05$ ], the students with low level of performance having low test results in comparison with the students with a higher level of academic performance. So, regardless their attitude to the self-evaluation (the students with low performances have the tendencies to higher their scores when self-evaluated and the students with good performances have not this tendency) the final test results of the students with low level of performance on self-evaluation are significant lower than the results of the students with high level of performance.

**Hypothesis 4:** There are significant differences between the students with different academic performance and the eagerness to learn. This hypothesis was confirmed. Through statistical analyses we obtained that the students with low academic performances have also low level of eagerness to learn.

**Table.3.** Group Statistics

	Mean	N	Mean	Std. Deviation	Std. Error Mean
Eagerness to Learn $\geq 8,40$		47	49,8723	5,16517	,75342
< 8,40		45	46,4667	4,02605	,60017

Eagerness to learn appear to be an important facilitator for the academic success. The students, in order to raise their academic performance should also increase their motivation and especially their eagerness to learn. This could be also an objective for the teachers who need to develop their educational approach for meeting the students' learning needs.

### 3. Conclusion

This investigation shows us what is the perception of the students from the first year from the Faculty of Science of Education regarding their metacognitive capacities, in terms of their attitude towards the self-evaluation and their academic performance. We verified if the level of development of the metacognitive capacities has significant differences in terms of academic performance. We found out the differences: the students with a high academic performance have also the metacognitive capacities. We obtained significant differences regarding the self-evaluation in terms of academic performance, (the students with low academic performance have the tendency to overevaluate their results, whereas the students with high level of academic performance have less this tendency)

The results of the fourth hypothesis demonstrated that there are significant correlation between the level of the academic performance and the eagerness to learn. All these results strengthen the idea of the necessity of learning to learn courses embedded into the initial curriculum of teachers' training. These kinds of courses would be necessary to be enclosed also into the training of the university teachers, so that they could offer training of these metacognitive skills to their students.

So, we propose for the university educational policies to take into consideration the development of the university pedagogy courses, the development of the learning techniques courses for the students and also counseling programs for assisting the students with learning difficulties. The schools and teachers are challenged by at least two things: on the one hand teaching the core of subjects within the field of study, and, on the other hand, helping students to learn the ideas and practices related to the learning process itself. This complex skill will enable the students to become autonomous learners (learning autonomy is recommended by other studies on the teachers' learning how to learn issue) [5].

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AGENȚIA ROMÂNĂ  
DE ASIGURARE A  
CALITĂȚII ÎN  
ÎNVĂȚĂMÂNTUL SUPERIOR

# TEACHING AND RESEARCH IN HIGHER EDUCATION - DILEMMA OR SYNERGY?

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## Abstract

*The attitudes that academic stakeholders (teachers and students) hold towards teaching and research represent an important issue of our times. The paper presents the results of a correlational study whose objective was to identify relationships between the main higher education activities in teaching and research, from the perspective of academics' most important partners, i.e. students. The investigation was conducted on a convenient sample of volunteer students in technical and socio-humanistic faculties. The instruments used comprise a questionnaire on students' perceptions regarding the relationship research – teaching – learning and factual data. The domains of analysis are the effects of research on didactic activities, knowledge of research activities at university, and relevance of didactic behaviour. The analysis was conducted according to the respondents' gender, age, faculty and academic results. The findings show that students are aware of the academics' two roles: research and didactic activity, but they have little information about the research conducted. The synergy research – teaching is visible, but not for all partners. Our conclusion: neither dilemma, nor synergy all the time, but a definite challenge for teachers.*

**Key words:** research, students' perception, synergy, teaching.

## 1. Introduction

After the Bologna Declaration [1], the Communiqués issued in Prague [2], Berlin [3] and Bergen [4], the objectives that the university has had to envisage have become complex, involving continuous adaptation to the fast changing needs of the society's demands and to the advances in scientific knowledge. In the Berlin Communiqué, the Ministers recognized the importance of research as an integral part of higher education across Europe and emphasized the role of research and research training in maintaining and improving the quality of higher education [3]. The documents cited underline the importance of student participation in the evaluation of activities [2].

The present paper has been developed at the confluence of two ideas: a) the compatibility between the didactic activity and the research conducted by academics; b) the students' involvement in improving the activities in the academic environment. The overlapping area of the two fields reveals the central objective of this research, i.e. the consideration of the students' perception on the relationship teaching-learning and scientific research activities. The interlink existing between the two concepts, research and didactic activity, represents the outcome of a new perspective on the three-

fold role of the university: it produces knowledge, it provides knowledge (for the economic or the scientific environment), and it mediates knowledge building (for students).

In what concerns the relationship between research and teaching in the academic environment, two opposite approaches can be noticed: the newest one, which supports the compatibility and mutual advantages of the two activities, emphasizing their synergetic effects [5, 6] and the one specific to the supporters of the traditional role of the university, which brings forth several arguments in favour of the incompatibility of the activities. The arguments brought are relevant in both cases, but they tend to weigh in favour of the former thesis, even enhancing it through the synergy effect [6].

## 2. Methodology

The paper presents the result of a correlational study whose objective is to identify the relationships between the main higher education activities in teaching and research, from the perspective of academics' most important partners, i.e. students.

### 2.1. The hypotheses

The research hypotheses were the following:

1. the perception in the university varies according to academic results;
2. the perception on the advantages and disadvantages of academics' participation in scientific research varies according to students' learning style;
3. from the students' point of view, there are differences as to the didactic behaviour of academics who participate in research activities more intensely, as compared to the ones with a weaker participation.

### 2.2. The research tools

The instruments used are the following: a) a two-scale questionnaire (RELET), devised by the authors of the research, focusing on a) the relationship research - teaching (RET) and b) the relationship learning-research (REL), and the Learning Style Inventory [8].

The research on learning styles was accomplished by means of Kolb's inventory for learning styles (1985), built on the idea that learning favours concrete experience (CE) or abstract conceptualization (AC), reflective observation (RO) or active experimentation (AE). By combining the axes, four styles result: diverging (concrete and reflective), assimilating (abstract and reflective), converging (abstract and active), and accommodating (concrete and active). Other data collected on students focused on age, gender, academic performances, year of study, faculty.

The RET scale is built on the following dimensions: 1. perceptions on the research activity in one's own faculty and university, the students' perception on the importance of the research conducted by their teachers; 2. favourable and unfavourable effects on teaching; 3. methods used by academics engaged in research. The REL scale is built on the dimensions: 1. attribution of academic success; 2. effects of student participation in scientific research.

The study of the psychometric features of the questionnaire (RELET) gives credit to the findings. Considering the entire questionnaire, the internal consistency reliability coefficient  $\alpha$  Cronbach is 0.85; for the RET scale,  $\alpha$  Cronbach is 0.74, and for REL it is 0.78. Both scales comprise close questions; some items have a five-step Lickert scale attached: 1- total disagreement, 2- disagreement, 3- neuter, 4- agreement, 5- total agreement; some others take the multiple choice form. An item from RELET is offered below for exemplification.



When they are involved in research activities, my teachers:

1. do not have enough time to guide and support me in the learning process.
2. are not really interested in the teaching activity.
3. do not care whether students have understood the lesson and do not clarify misunderstandings.
4. are not really interested in developing students' research skills.
5. use too academic a language, do not explain so as for me to understand what they teach.
6. use content in their teaching which is not appropriate for my age and level of development (The REL ).

### 2.3. The research sample

The investigation was conducted on a sample of 223 male and female students in technical and socio-humanistic faculties, from the 2<sup>nd</sup> and the last years of study, who attended the course/seminar on the testing day (Table 1). Female respondents represent 60.4% of the total and male respondents 38.7%, the average age being 21.6 years, DS = 2.1. The youngest age is 19 years and the oldest is 43 years, but only 5 students are over the age of 27.

**Table 1.** Academic results in the research sample

Faculty	Number of Students	%	Grade Average	DS	Significance of differences Test post hoc Bonferroni	
					Psychology and Education Sciences	Economic Sciences
Electrical Engineering and Computer Science	73	32.4	7.92	1.01	t=4.8x3 p>0.001	<i>Insignificant</i>
Economic Sciences	86	38.2%	8.19	1.00	-	
Psychology and Education Sciences	64	28.4%	8.73	0.71	-	t=3.3 x3 p<0.001
Entire sample	223	100	8.2	1.01	-	-

### 3. Findings and discussions

The analysis of the results will be presented taking into account the hypotheses and further relevant analyses accomplished for each hypothesis, generally according to the respondents' socio-demographic characteristics, gender and age.

#### 3.1. Students' perception on research

The findings confirm the supposition that the perception on research varies according to the respondents' academic results (Table 2). Thus, the students who have better knowledge of the research activities in the university (especially the preparation of certain publications – books, articles) and feel guided in this activity by their teachers are those with good academic performance. There are statistically significant differences between the students whose grade average is below 8, respectively over 8. These differences regard the disadvantages of the teacher's involvement in research: the students with higher grades identify fewer disadvantages, but the perception on the advantages is similar for the two groups. There are statistically significant correlations between the students' performance and their knowledge of the activities regarding the organization of conferences

( $r=0.193$ ,  $p<0.006$ ) and writing books, scientific papers ( $r=0.221$ ,  $p<0.002$ ). The students with good results state that they are themselves involved in research activities, together with their teachers ( $r=0.649$ ,  $p<0.001$ ). The weaker the academic results, the more uninterested students declare to be in the development of their research skills ( $r=-0.230$ ,  $p<0.001$ ) and the contents taught are not appropriate for their age and level of development ( $r=-0.144$ ,  $p<0.04$ ).

**Table 2.** Perception on the advantages and disadvantages of teacher participation in research activities

Variables	Grade average
Perception on advantages	$r=0.153$ , $p<0.028$
Perception on disadvantages	$r=-0.161$ , $p<0.021$

The advantages of participating in research are more visible for girls, as compared to boys ( $t=3.55$ ,  $p<0.001$ ), for the students with internal attribution of success, as compared with those who explain success by means of external factors ( $t=2.76$ ,  $p<0.07$ ). The existence of a feeling of frustration might be inferred in the case of students with lower grades, provided teachers intensely participate in research activities. Whether this feeling is subsequent to the teacher's unfavouring behaviour or not, its existence requires ways of improving the relationship with the student.

### 3.2. Perception on research and students' learning style

The hypothesis according to which the perception on the advantages and disadvantages of teacher participation in scientific research vary according to students' learning styles is only partially confirmed. The disadvantages of the two-fold role that academics have nowadays are more strongly perceived by students who prefer to learn using concrete experience (CE) and reflect upon their own activity (RO). Differences in the research sample occur between the students attending the humanistic faculty and the students attending the technical faculty ( $t=2.07$ ,  $p<0.007$ ): the former learn by sharing knowledge, asking questions, getting information from people (diverging style), the latter prefer to learn using abstract conceptualization, books and applying the acquired knowledge (converging style). The former blame more pregnantly the teachers' sophisticated language, the lack of appropriateness regarding content, the teacher's weak availability (Table 3).

**Table 3.** Significant relationships between the perception on the disadvantages of teacher participation in research activities and the dimensions of the learning style

Disadvantages of teacher participation in research activities as perceived by students	Preference for learning by means of reflective observation (OR)
They use too academic a language, do not explain so as for me to understand what they teach	$r=0.203$ , $p<0.003$
The content they teach is not appropriate for my age and level of development	$r=0.137$ , $p<0.04$
They are not really interested in developing students' research skills	$r=0.225$ , $p<0.001$

A possible explanation for the unfavourable perception on research activities by students with a diverging style would be the following: these students have a stronger need to receive information directly from the teacher, need experience acquired directly from activities, whereas teachers' involvement in research reduces the time allotted for the direct support and guidance given to students. Considering that students give less importance to conceptualized information, taken from books, they feel at a disadvantage in an academic environment in which interpersonal relationships are limited. For them, academics who do not conduct research have more time for guiding and assisting students ( $r=0.151$ ,  $p<0.026$ ).

### 3.3. Explanation of the favourable appraisal of scientific research by students

In the academic environment, there is an active stereotype according to which students with good academic results are interested in research. In order to identify some variables which could explain their favourable perception, we initiated an analysis of two regression equations: one for explaining the perception on student participation in research, and another for explaining the perception on teacher participation in research, both from the students' point of view. In the former case, we included the predictors: academic results, gender, student involvement in research activities, and the internal attribution of success.

**Appraisal of student participation in scientific research =  $18.7 + 0.58 \times \text{Academic results} + 1.16 \times \text{Gender} + 0.23 \times \text{Internal attribution of success} + 0.45 \times \text{Student involvement in research}$ .**

The common action of these two variables explains 21% of the dispersion of the criterion "advantages of student participation in the research", the model obtained from the involvement of four factors being significantly better than the one obtained by reference to academic results only. These predictors have a negligible impact on explaining the advantages brought by teacher participation in research to the teaching-learning process, R square being in this case only 5%.

### 3.4. Perception on the teacher-researcher's didactic behaviour

In students' opinion, the teaching methods used by academics who are strongly involved in research are ranked decreasingly according to the means given by students' choices: individual or group projects and case studies (the same weight), followed by practical work, the reading of scientific articles. The lecture is placed last, not being considered by students as specific to those academics strongly involved in research.

In the perception of different categories of students, the behaviour of academics involved in research is perceived as follows: girls feel more stimulated as regards the study of the field as compared to boys ( $t=2.07$ ,  $p<0.04$ ); senior students, differently from younger ones, consider that these teachers are more fond of teaching ( $t=2.00$ ,  $p<0.007$ ); as compared to engineering students, the students in the humanistic faculty estimate that the teachers explain more clearly certain concepts ( $t=2.28$ ,  $p<0.024$ ) and develop their research skills ( $t=2.91$ ,  $p<0.004$ ).

## 4. Conclusions

The association between research and didactic activity seems to be subsequent to the new vision upon the role of university, as promoted by European documents after 1999: the university produces and provides knowledge, and supports knowledge building for its own students. This vision transgresses the traditional one, according to which the central role of university is to provide knowledge for students, and it changes the focus given by certain institutions and academics to scientific research. By conjugating these three roles of universities with this new vision of involving students in the assessment and improvement of all the activities in the academic environment, it becomes possible to have a more comprehensive picture, capable of offering new routes as to the continuous improvement of quality in higher education.

Most of our hypotheses were confirmed: firstly, we had the confirmation of academics' participation in scientific research, which now doubles their professional obligations, entailing certain consequences on the didactic activity. Students' perception is influenced by their academic results, as it results from the stereotype which is active in the academic environment. Apart from this criterion, there are also some others, as our study emphasized: gender, learning style, locus of control, students' involvement

in research. The students with weaker results and those with diverging styles incriminate the negative consequences of teacher participation in research more strongly than the other categories: they might feel frustrated by the teachers' weak availability triggered by the involvement in research. For these students, the connection between didactic activity and research remains a dilemma, whereas the relationship works synergically for those placed at the positive side of academic performance. The heterogeneity of students' perceptions represents a new challenge for academics and for the university, with a view to developing research skills together with didactic and networking ones, thus maintaining the balance between the two roles.

The paramount result we obtained regarding student involvement in assessing scientific research reveals that their criticism or complaisance related to an activity considered elitist cannot be generalized. Our study shows that academic involvement in research does not have to do with academics only, as it also has consequences on teaching and learning, and on the degree of student satisfaction. Therefore, the evaluation of different categories of students is worth considering, as a challenge for improving the teaching-learning-research process.

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AGENȚIA ROMÂNĂ  
DE ASIGURARE A  
CALITĂȚII ÎN  
ÎNVĂȚĂMÂNTUL SUPERIOR

# STUDENTS' ASSESSMENT IN HIGHER EDUCATION INSTITUTIONS – CASE STUDY

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## Abstract

*Students' assessment is a major component of didactic activities, being governed by different rules and producing different strong effects. Our research questions regard similarities and dissimilarities in the area of student assessment between three establishments in different European countries: Transilvania University of Brasov (Romania), the ENSAM and ENESAD networks (France) and the University of Lisbon (Portugal). The research methods for the case studies are the analysis of academic documents, the interview and the spontaneous observation. The criteria used for the analysis focus on admission, initial, ongoing and final assessments, the introduction of "the continuous improvement device", as an activity subsequent to assessment. Assessment has lately become pregnantly formative and less punitive, more seldom summative and more often continuous. From an activity performed exclusively by the teacher, assessment has become co-assessment, inter-assessment and self-assessment and, from an activity triggering anxiety, it has envisaged to be an activity triggering satisfaction. On the background of some features common to the European space, the criteria used in the analysis detect interesting variations between the countries compared, opportunities for reflection and sources for possible improvement. The comparison between European practices thus becomes a key-condition for quality assurance in higher education.*

**Key words:** assessment, European universities, academic progress.

## 1. Introduction

The improvement of performance in student and teacher activities, the increase in the requirements for academic staff promotion, the reorganization of the didactic process on a new learning philosophy are mentioned in the European standards and orientations for internal quality assurance in higher education institutions elaborated in Helsinki [1]. They comprise stipulations related to all the components of the didactic process, teaching, learning and evaluation, at the level of students' assessment, and specify the necessity of using transparent, public criteria and periodically regulated procedures.

In this context, the issue of assessment has been addressed in different ways, having been given significant attention from the part of teachers, students and the entire society, due to its huge pedagogical, social and individual stakes [2].

In order to fulfil its social and pedagogical functions, assessment has to undertake quality norms at the methodological, social and pedagogical level [3]. From the methodological/ technical perspective, an accurately performed assessment complies with the following stages: design, elaboration and application, data analysis and pedagogical decision, the communication of results for students and authorities [4]. The difficulty in fulfilling the essential function of assessment, the pedagogical, formative one, has led to the introduction of various techniques and new approaches bearing different names, such as *assessment-assisted learning* [5] or *évaluation formative*, in French [6]. This last type of assessment used to stress even more students' role, just like in [7], who, more recently, has introduced the concept of *assessment as learning*.

Inseparable from the specific normativity, but also from the teacher's pedagogical freedom [8], the assessment meets variations from one cultural space to another or from one individual to another, sometimes reaching the personalization stage, without counterbalancing the issue of quality assurance regarding this activity.

## 2. Methodology of research

The objective of our research is that of a comparative analysis of students' assessment practices within Transilvania University of Brasov, the University of Lisbon and the institutions of the French networks ENSAM and ENESAD. Our research made use of qualitative methods: the study of academic documents, the interviews and the spontaneous observation. The data collected were compared in order to establish similarities and differences between the three higher education institutions. The documents researched were public documents: regulations, admission contests subjects. The method used for researching the documents and interviews is the content analysis.

The themes identified in the documents analyzed are:

1. assessment forms: initial/admission, dynamic, final;
2. weight of dynamic evaluations in the final evaluation;
3. types of items: oral and written questions, practical exams, projects;
4. dominant functions of assessment.

The most frequently used terms in our paper regard formative assessment, summative assessment and dynamic assessment. Formative assessment is a type of assessment conducted by the teacher, who aims at detecting students' difficulties during the learning process, with a view to remedying them [9]. It does not suppose grading, being an activity which supports learning, and includes all the activities conducted by teachers and students, who provide data used as *feedback* for teaching and learning activities [7, 10]. Summative assessment is accomplished at the end of a period or of a course and is used for providing information on how much students have learned and on the quality of the course and of the relationship teacher-students [11]. It represents an answer to external social demands, to the "accountability need" [12]. Summative assessment supposes grading and it is mainly an assessment of learning [7]. The dynamic assessment is an ongoing one, sometimes formative, sometimes summative, according to the time it is applied or to national norms.

## 3. Findings

### 3.1. The admission

For Bachelor's degree programmes within Transilvania University of Brasov, the admission, a modality of initial assessment and selection, is generally based on the high school graduation GPA (Grade Point Average) and high school cumulative GPA, which answers a strategic



orientation, dating back in the 1990's, regarding a relaxation in admission and the thorough ongoing selection of students. The admission on the basis of the high school graduation GPA has replaced the contest-based admission, which used to be mandatory before 1989, and which is still valid only for some faculties: the Faculty of Medicine, the Faculty of Music, the Faculty of Psychology and Education Sciences, the Faculty of Law. The tendency after 2000 has been one of generalizing the admission system without exam for higher education. The ARACIS methodology [13] operates a change, since the students' admission based on high school graduation GPA and high school cumulative GPA is presented as a minimal requirement, whereas the organization of admission exams is seen as desirable, at a higher quality level. Nevertheless, even in 2010, Transilvania University of Brasov, just like most of the Romanian universities, keeps the admission based on the high school graduation GPA, although this characterizes a certification exam and not a selection one.

In France, the institutes from the ENSAM and ENESAD networks organize the admission based on knowledge checking, using both written examinations (objective items, provided by a bank of items) and oral ones. Being given that the institutions provide polytechnic training, the examinations are in Mathematics, Physics, and Foreign Languages.

In the University of Lisbon, the admission takes place after a national examination, organized in two stages: July and September. Within this university, the process is the same like in all the other public universities in Portugal. The institutions boast autonomy, but they are under guardianship of the Ministry of Science, Technology and Higher Education. There is an admission system at national level, with the same rules for all higher education institutions (universities and technical institutes) – the students who have passed the high school graduation exam, the BAC (the 12<sup>th</sup> year of school is currently part of mandatory schooling in Portugal). The examinations consist of some subjects, which they may choose according to their field of study in high school (humanities, sciences etc.) and also according to the courses which they would like to take in tertiary education. For example: students who would like to enrol for medicine in the University of Lisbon have to take three national tests – Mathematics; Biology and Geography; Physics –Chemistry.

In order to enrol for Education Sciences, students need to have passed two tests, out of three possible groups: Geography and Portuguese, or History and Portuguese, Mathematics Applied in Sciences and Portuguese. For these two cases, the admission takes into account the high school cumulative GPA (the last three years – the 10<sup>th</sup> grade, the 11<sup>th</sup> grade and the 12<sup>th</sup> grade), which has a weight of 50%; the grades obtained in the tests have a weight of 50% in the students' final grade average.

Each University/ Faculty can define a minimum grade (for the cumulative GPA and for the national tests) for the admission, for each course. The type of national test compulsory for each course is decided by each University/ Faculty.

In order to allow students to choose diverse courses and diverse universities, there are, however, certain common requirements for different Universities and courses within the same scientific field. For example, students who have passed the tests in Mathematics, Biology and Chemistry, may register for different courses in sciences (Biology, Mathematics, Chemistry, Engineering, Computer Science, Medicine, Nursing etc). Students may choose a maximum of six different options for courses/ universities, in order of their preference (the 1<sup>st</sup> option is the favourite one). In this admission contest for higher education, there are a definite number of

vacancies for each course (which are decided by the Faculties/ Institutes each year). There are a global number of vacancies (*Clausus Numbers*) and there are vacancies reserved for certain students (students of Azores [3.5% of vacancies]; students of Madeira [3.5% of vacancies], emigrant students or Portuguese emigrants' children living with their parents [7%]; physically or sensorially impaired people [2%]; soldiers [2.5%].

There is a National Commission for Admission in (Public) Higher Education which is responsible every year for setting the rules, including the legislation on this topic. Examples: in the Faculty of Information Technology and Communication, the admission exams focus on: 1. Economics; 2. Descriptive Geometry or 3. Mathematics. In the Faculty of Psychology, knowledge is checked in the following sets of subjects: 1. Biology, Geology and Mathematics, 2. Economics, Mathematics Applied in Social Sciences and 3. Mathematics Applied in Social Sciences and Portuguese.

There is also a parallel system (Maiores de 23) for the people over 23 and who do not fulfil the conditions for ordinary enrolment (previously explained). In this case, people take an examination directly in the Faculty/Institute which they want to attend (general culture and the scientific field to which the course they want to take belongs, an interview in which they expose their motivation and professional route in the field). In each Faculty/Institute, there is a Jury which is in charge of the elaboration of these tests and the analysis of the CV, as well as of the interview. The people who are admitted for this route have the right to request credit from the Curricular Units of the course where they are admitted, according to their experience. The Jury guides the student for preparing the works/ portfolio required by the credit.

### 3.2 Dynamic Assessment

The dynamic or “ongoing” evaluation is accomplished within Transilvania University in two ways: homework corresponding to seminar activities or partial examinations. The objectives, the number of classes and the assessment (with specifications as to the individual/ collective form, written/ oral methods, types of items (objective/subjective), the permission given for using certain materials or calculation means, the time allotted for the test, assessment criteria, the weight of ongoing evaluations) are presented in the course syllabi, thus ensuring the transparency of the assessment and the fulfilment of its mandatory functions.

The ongoing assessment “unburdens the session”, imposes rhythm to learning, offers feedback to students, and allows the overcoming of obstacles. The informal discussions with the students from different faculties reveal that the ongoing assessment, under the form of homework, is present, although it seems to have a low frequency.

The number of assessments per semester and their weight in the final grade may differ from one case to another; a few solutions are described below.

1. Summative assessment, by means of a partial examination, after 6-7 courses, with a weight of 30% in the final grade, without students having to retake, for the final examination, the courses for which the grade 5 was obtained. If they want to have a higher grade, students resume learning, retaking the partial exam.
2. Summative assessment, by means of two mandatory partial examinations, after 3-4 courses, respectively 6-8 courses, each of them with a weight of 20% in the final grade. The retaking of all the courses is compulsory for the final examination. The grades for the partial examination are definitive.
3. Summative assessment based on a project, with 20-30% of the final grade. The grade is definitive.



Irrespective of the situation, teachers provide not only a grade, but also descriptive feedback, drawing students' attention to the strong and weak points of the paper, with a view to improving subsequent learning. Teachers themselves may benefit from the data interpretation for improving the course, the teaching, the relationship with students.

The faculties from the ENSAM and ENESAD networks, like those of Transilvania University, use the ongoing assessment under the form of homework, partial written examinations or projects. In the aforementioned French institutions, the final grade for a certain subject consists of assessments accomplished along the semester/ trimester, with a weight of 60% (slightly higher than in Brasov) and a final assessment with a weight of 40%. The number of ongoing assessments is 2-3 for each subject, including surprise assessments.

In all the three higher education centres/ networks, formative assessment is not only accepted by students, but also desired, since it provides information as to students' difficulties and ways to surpass them, entailing self-assessment and inter-assessment. As also shown in [14], formative assessment is particularly advantageous because it changes the relationship teacher-student and students' attitude towards certifying assessment: assessment is no longer seen as a judgement, but as a help, the teacher is no longer the great inquisitor, but a facilitator of learning. However, for teachers, formative assessment is very time-consuming, but it becomes particularly useful to the ones interested in the quality of their own teaching or in learning.

### 3.3 Final Assessment

In the faculties within Transilvania Brasov, the final assessment takes place during a strictly established period of the year, the session of exams, lasting for four weeks, placed at the end of the semester, in January-February and June-July. These time spans, marked by a specific aura, sometimes by the "red-ink terror" [15], are extremely demanding especially for those students who have postponed learning, or for those subjects which lack partial examinations or have little homework set for students.

The final assessment requires great effort, generates tiredness, being followed, most of the times, by forgetfulness. The extreme tendencies characterize, at the negative side of the spectrum, those teachers who diminish the amount of correction work, by means of less numerous, but difficult items, or by the indulgence which helps them avoid conflicts. At the opposite side there are the teachers who combine ongoing assessments, students' portfolios, written and oral methods, practical and oral tests in the final assessment, which trigger a great variety of requirements.

If students do not demonstrate the accomplishment of the proposed objectives, they may retake the examination several times, during the autumn session of examinations, corresponding to the academic year in which the subject was studied, or during other autumn examinations. The passing into the final year of study is conditioned by the passing of all the examinations of the previous years. The transparency of the assessment is ensured by the presence of the assessment objectives in the course syllabus, the specification of the type of examination: written, oral, project, portfolio, in the first days of the semester. The assessment tests have a similar structure, comprising: items (objective or subjective), the description of the task, the time allotted, the individual/ collective form, written/ oral methods, permission given to certain materials or calculation means, the weight of ongoing assessments, other specifications regarding students' behaviour during the test. Unfortunately, few faculties can present, on demand, assessment tests from previous years. They cannot be found either in the University

Library, or in the libraries of the faculties (which would enhance the assessment transparency), but they are available in certain departments.

Within the institutes from the ENSAM and ENESAD networks, there is no predetermined, unique interval for the yearly final evaluation. The examination is scheduled one week after the course has finished, towards the end of the semester, without the other subjects having finished the time allotted for teaching-learning. Thus, students' overload during one determined time span, the session of exams, can be avoided. For transversal subjects (which include units from several disciplines), assessment is accomplished by means of a project which is publicly defended and evaluated by a Jury (Commission), which anticipates the expertise project at the end of the university. If students do not demonstrate that the objectives specified in the programme of study have been reached, they may retake the exam twice; provided they do not obtain a passing grade, they have to repeat the year (if this is the first year in the university) or just the semester, for the second and third years of study. A special case is represented by the assessment of laboratory activities, for which the result of the examination is eliminatory.

The transparency of assessment is ensured by communicating the assessment objectives, knowledge of the procedures, access of any student or teacher to assessment tests from previous years, which should be present in the faculty library. The assessment tests have a similar structure, comprising: items (objective or subjective), the task description, the time allotted, individual/ collective form, written/ oral methods, permission given for using certain materials or calculation means, weight of ongoing assessments, other specifications regarding student behaviour during the test.

The programmes of study from ENSAM and ENESAD provide the following information for each module, which supports assessment and which is also known by students: objectives, number of classes and assessment, with specifications in point of the individual/ collective form, written/ oral methods, types of items (objective/subjective), permission given for using certain materials or calculation means, weight of ongoing assessments, other specifications regarding student behaviour during the test. The final assessment is combined with the dynamic one for certain modules which stipulate even systematic activities graded after each course, or homework set on a regular basis. We offer an example for the module Global Approach of Agricultural Exploitation (AGEA) where the activities consist of group work alternated with field or class work: the assessment is collective and combines three grades regarding a) the group dynamics - 20% (organization, involvement, contact with farmers), b) oral exam - 40% and c) written exam - 40%.

The assessment in the University of Lisbon takes place each semester and there are three assessment periods within each: 1<sup>st</sup> period; 2<sup>nd</sup> period; special period. Teachers are the ones who decide upon the assessment tools for these curricular units. Generally, students may choose between continuous assessment (supposing practical work – individual or in groups, frequency/ attendance/ presentations during the course, written tests) and the final assessment (examination). The weight of each of these for the final grade is decided by the teacher and the rules are communicated to students during the first course. For example: A student who has failed during the 1<sup>st</sup> period may take the exam in the 2<sup>nd</sup> period. The special period is only for some specific cases (students who have the status “employed student”; students who take part in Student Associations). After having taken the exam, students have the possibility to improve the grade during another period or even during the next year.

#### 4. Discussion and Conclusion

The comparison of the three modalities to accomplish assessment leads to the conclusion that assessment represents a major preoccupation for students, teachers and for institutions themselves, being often the object of quality assessment. In all the three institutions, the attitudes towards assessment are based, at least at the declarative level, on a philosophy of continuous progress which refuses assessment as a goal per se or as a mere administrative chore.

The approach is not focused on the assessment itself, but on the continuous improvement of teaching-learning, which it underlies. In addition, assessment is focused on competences and not on fragmentary objectives, establishing a culture of learning and assessment for students and for the public at large. In France and Portugal, this approach also involves the organizations whose representatives participate in public examinations, in annual or final projects.

For certain authors, the old axis of temporal analysis is no longer determinant. Consequently, the question raised is not about when assessment is accomplished, but about what is the purpose of the data obtained. Over the last decades, the pedagogical literature has started to valorise continuous evaluation, considering it an antidote to the disadvantages of summative, final assessment. Although this approach varies, its essential function remains constant: supporting learning. The French assessment practice, in an authentic integration of teaching, learning and assessment, introduces the “continuous improvement device” (ACC – *amelioration continue centralisée*), as an activity subsequent to assessment, including all the sub-systems of a school organization. ACC offers an overview resulting from identifying nonconformities, undesirable situations and, starting from this, it analyzes existing elements, accomplishing the descriptive diagnosis of the assessed object, analyzes the current performance, identifies key points of operation in an analysis of risks and opportunities, validates key points of performance and actions to be achieved.

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AGENTSIA ROMÂNĂ  
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# ISSUES REGARDING THE GRADUATES' COMPETENCES IN THE PRESENT CONTEXT OF LABOUR MARKET

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## Abstract

*This paper contains some issues regarding to a better definition of the competences that a graduate should obtain in university. Our research has the aim to reveal the requirements existing on the labour market regarding these competences, the main objectives being to find the attitudes of both university graduates and employers. The outcomes revealed that the employers are interested mainly in the transversal competences of candidates and in their availability for continuing learning. On the other hand, there is still a huge confusion of graduates regarding their competences as they are poorly connected to practical activities. Starting from these outcomes, we can conclude that every faculty has to put in practice marketing strategies meant to harmonise the employers' position with the graduates' ones. Using such strategies, a faculty can improve its educational process and the customer satisfaction.*

**Key words:** Bologna graduates, competences, labour market, qualification, strategic marketing.

## 1. Introduction

One of the main challenges of the 21<sup>st</sup> century has been the increasing of quality in the educational system at all its levels, starting from the hypothesis that the quality of people that leave a certain educational level will have a high influence on the quality of the processes at a higher level. In spite of the various strategies proposed by national and supra-national forums, the progresses in education's quality were very few.

The Bologna Process was an important step towards a common effort of European countries in increasing the quality in education, the main goal of this process being to harmonize the national education systems through a range of credits - such as in the ECTS system - as a proper mean of promoting the most widespread student mobility. The declaration of Bologna process was signed by 29 countries that agreed to begin a wide reform process, which nowadays gathers all 46 signatory countries to the Council of Europe's European Cultural Convention [1].

In this framework of European reforms and efforts towards a better quality in education, many countries implemented programs meant to define firstly the competences that the university graduates have to obtain in accordance with the labour market requirements. Our research joins to these efforts of finding the main needs of employers in order to give better ideas of focusing the education process on specific competences for graduates.

## 2. Literature review

A review of the literature reveals that the relationships between universities and business companies have an increasing impact on the development of the graduates' competences. Furthermore the competences that begin to take shape in school continue to develop within the companies the young graduates are to work in [2]. Such attempts to increase the quality of higher education could serve to attaining the main goal of Bologna Process, which is to allow Europe's diverse education systems to articulate better with each other in a European Higher Education Area [1].

When we talk about competences and their relevance for the employers we should consider that there are specific skill needs defined by labour category. At the management level, these are rather transversal skills hence managers often have an educational background in accountancy, marketing, law, economics etc. Nevertheless, managers are expected to possess the following skills and competences: computer skills, business and strategic planning, strategic alliances, management skills, management through visions and values, yield management, accounting, product development, innovation, human resource management, destination management, project management, management skills to cope with globalisation influences, change management, marketing and sales skills etc. [3]. At the level of different operations inside companies the employees should have especially professional competences that help people to solve some specific problems of the departments in which they work.

Starting from the above mentioned issues we can conclude that in the new environment of changes in the higher education, the universities' management should focus on strategic marketing orientations in order to establish its strategic directions of development meant to assure the achievement of the long-term objectives. These objectives have to be oriented towards the satisfaction of both target segments of a university: students and labour market.

The objectives of higher-education should be also in accordance with the EU's strategies, one of these being "EUROPE 2020- A strategy for smart, sustainable and inclusive growth". This one aims to help member states to overcome the effect of economic crisis and to improve the level of employment, social cohesion and productivity. Europe 2020 sets out a vision of Europe's social market economy for the 21st century. According to this vision, there are three mutually reinforcing priorities [4]:

- **Smart growth:** developing an economy based on knowledge and innovation.
- **Sustainable growth:** promoting a more resource efficient, greener and more competitive economy.
- **Inclusive growth:** fostering a high-employment economy delivering social and territorial cohesion.

One of the headline targets of this strategy is to obtain a share of early school leavers under 10% and at least 40% of the younger generation to have a tertiary degree.

Taking into account the above mentioned strategy, another issue becomes very important in literature. This is about the dual mission of a university: education and research. Some authors talk about many academic scientists that eschew teaching in favour of research. Scientists at leadership positions at top-level universities - despite the university's publicly stated mission of education - direct more funding, awards and job security to outstanding researchers than to outstanding teachers. In this respect, the world of science must confront and resolve the named contradiction of values that tends to transform the research and teaching in a zero-sum game. These two activities have to be put together in the service of students and graduates in order to obtain a better value and quality of higher education [5].

### 3. Research objectives and methodology

Our research is part of the efforts made by the Romanian Agency for the qualifications in higher-education (ACPART) in order to define the National Qualifications Framework, which are to be integrated in the European Qualifications Framework (EQF). ACPART is in charge with the description of every qualification resulted from the 1<sup>st</sup> cycle of higher education in Romania, under the strategic project "DOCIS" (POSDRU/2/1.2/S/2) financed from the European Social Fund. Inside this huge project, our team has dealt with defining competences for the study program "Business administration in hospitality industry".

The European Qualifications Framework (EQF) is a common European reference framework, which links countries' qualifications systems together, acting as a translation device to make qualifications more readable and understandable across different countries and systems in Europe. It has two principal aims: to promote citizens' mobility between countries and to facilitate their lifelong learning. In the EQF, a learning outcome is defined as a statement of what a learner knows, understands and is able to do on completion of a learning process. The EQF therefore emphasises the results of learning specified in three categories as: knowledge, skills and competences. This signals that qualifications – in different combinations – capture a broad scope of learning outcomes, including theoretical knowledge, practical and technical skills, and social competences where the ability to work with others will be crucial [6].

Defining the competences of every qualification is a hard work that involves a lot of people and efforts for finding the best definitions of what should a graduate to know and to make in order to meet the requirements of the labour market. In this respect, we put in practice ten in-depth interviews with the participation of managers from the hospitality industry. The main objectives of these in-depth interviews were:

- To find what job categories could be available for the 1<sup>st</sup> cycle graduates;
- To find the companies' requirements regarding the graduates' competences;
- To obtain the managers' appreciations regarding the quality of graduates' work;
- To receive suggestions regarding the improvement of education process.

All these information are prerequisites necessary for a better definition of competences that a graduate should obtain from a study program. The interviews were conducted with top managers at the companies' headquarter.

In addition to this research, we have tried to put in balance the attitudes of graduates, even if these ones are not asked for the named project. The main aim of this research was to find ways to harmonize the positions of the two parts that meet each other on the labour market: graduates and employers. The objectives of this second research were to find the perceptions of graduates regarding their own competences, their opinions regarding the graduates' employability and to obtain ideas for the education process improvement. The research involved three focus groups that ranged between 8 and 10 graduates from three different study programs: marketing, tourism and international business.

### 4. Research outcomes

We structured the outcomes of our research on two directions according to the objective stated above. First of all, the results obtained from the in-depth interviews among companies were used to define the competences of the 1<sup>st</sup> cycle graduates from business administration in hospitality industry. The other outcomes, obtained from the just graduated people, have served us to design some strategies to improve the education process.



#### 4.1. Requirements of companies for future employees

From the managers' point of view, the main competences that a graduate should have in order to receive a job in their companies are related to: building relationships with customers, using computer systems, having sales and negotiation abilities, communication in foreign languages, making financial analysis, organising the work place etc. As we can see, the companies dealing in hospitality industry need a lot of competences from graduates, mainly transversal competences. The jobs available are mainly related to the specific of this kind of activities: receptionist, reception manager, restaurant manager, financial analyst, marketing manager, hotel manager etc.

The appreciations of managers regarding the actual competences of graduates tend to the same outcomes: the graduates are quite good prepared from the theoretical point of view but they have not enough practical experience, which is very important for employers. Many times the employers prefer persons with previous experience against new graduates in spite of their conviction that for a company it is better to build a team which contains new and loyal workers instead of having a high fluctuation of experienced people that are interested only in their personal advantages.

On another hand, some of the interviewed managers are available to hire young graduates which are willing to learn in order to reach to top positions inside the companies. But they want new employees to understand that they have to follow some stages that go from lower to higher positions. In their opinions, many graduates have no patience to promote on better jobs, as they want from the beginning high positions with very good wages. These kinds of behaviours and attitudes can give rise to various conflicts between the employers and job candidates even before to conclude the first agreement.

As regards the main suggestions of analysed managers, we can conclude that they have mainly expectations of learning availability from graduates without experience. The managers recommend common jobs to these ones, in which they can learn about the company and gain a lot of practical experience. Such positions could give aspirations for higher level inside companies that have to be confirmed with strong competences. Such an evolution could also give reasons to ask for better compensations.

#### 4.2. Opinions of graduates regarding their competences

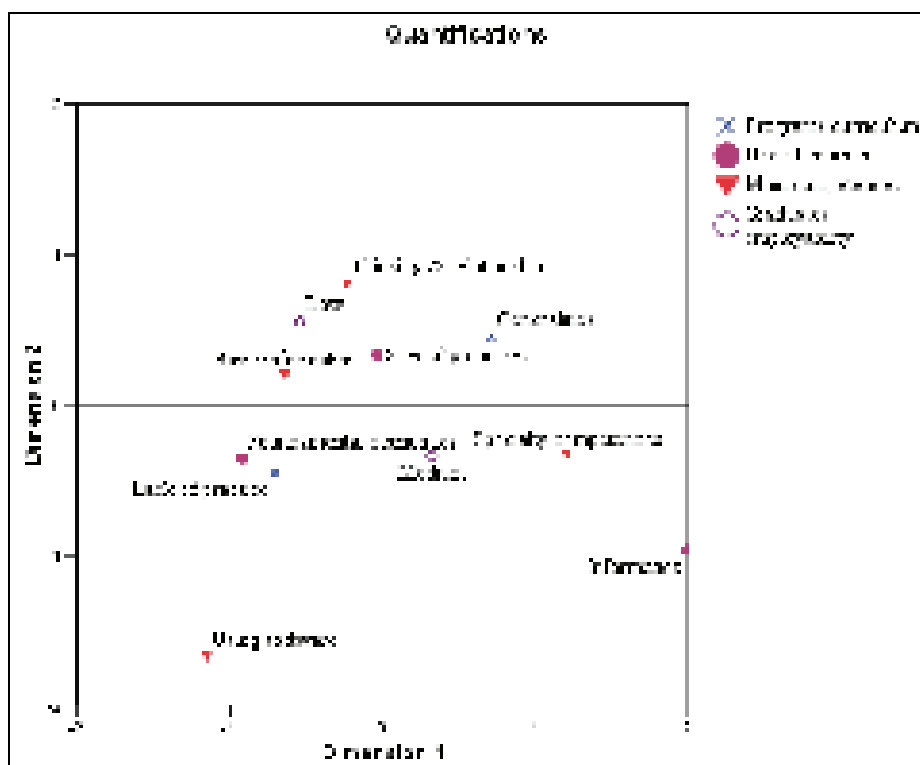
The data collected from graduates using the focus-group research method were processed using the content analysis. This one helped us to concentrate the variety of opinions into some major answers regarding the research objectives.

First of all, the graduates, in present students in master programs, are unhappy with the new Bologna system, being convinced that the old system was better. They perceive the curriculum as being very general, with few specialty courses that were not enough deepened. They are also unsatisfied that it is necessary to follow master studies in order to complete a university degree. Another weak point was considered the gap between the theory and real work activities, being necessary to include more hours of practical activities in the curriculum.

Talking about the graduates' perspective to find a job after finishing the first cycle, many of the respondents consider that they are not enough prepared for a job, the employers asking often for previous experience. The respondents feel also a threat from the graduates of certain private own faculties, which are considered with a lower level of competences. In spite of this fact, they sustain that the employers do not make the difference between these two types of graduates. We can see here a

contradiction in opinions because one of them asserts that the employers have high requirements from candidates but on the other hand they accept whatever graduate which has a diploma.

Trying to find some associations between the graduates' opinions, we applied a statistical analysis known as the homogeneity analysis (or HOMALS) according to which variables can be grouped into sets/categories in order to emulate regression analysis and canonical correlation analysis. This method allows categories to be transformed by means of optimal scaling with options for nominal, ordinal and numerical scale levels. The method is also known as "multiple correspondence analysis" and allows one to describe the relationships between two or more nominal variables in a low-dimensional space containing the variable categories as well as the objects in those categories. Objects within the same category are plotted close to each other, whereas objects in different categories are plotted far apart.



**Figure 1.** Homogeneity analysis between the graduates' opinions

The variables used in the homogeneity analysis were: the appreciations regarding programs' curriculum; the opinions regarding the most useful courses; the appreciations regarding the competences gained by graduates; and the attitudes about their own employability.

The results presented in figure 1 show us a group of graduates that consider that they have a low employability, their main competences being the possibility to operate with basic information and also thinking & relationships abilities. They consider that the study programs contain mainly generalities and the most useful courses are the specialty ones. Another group of graduates consider that they have a medium employability and specialty competences. They appreciate

the specialty courses and fundamental economics as being the most useful, but the study programs are characterised mainly by a lack of practice. Nobody considers that he or she has a high employability. There are also some outliers that consider the informatics as being useful and they have also gained competences in using software.

## 5. Conclusions

Taking into account the results of the two researches, we can conclude that it is necessary to obtain a harmonization of the positions that both employers and graduates have at the moment. In this respect it is necessary a higher cooperation between universities and companies in order to involve students in practical activities, to organise seminars with the participation of specialists from companies etc. In this manner, every part could be better informed about the expectations of the other part and the curriculum of the study programs may be improved.

Our researches have also limits due to the fact that the samples used are not representative but they gave us some directions to be followed. In this respect, the management of every faculty should put in practice the tools of strategic marketing that can help them to design a marketing plan for the future development of the institution with a high focus on students' needs. Defining the competences as the scope of DOCIS program has to be only a starting point of a good strategy to reform the study programs in order to obtain a higher customer satisfaction. In this kind of changing program the cooperation with the employers is crucial.

Taking into account the above mentioned issues, we consider that the results of our research have implications both for researchers, academics, quality assessors and practitioners, being a good starting point for the improvement of educational process.

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AGENȚIA ROMÂNĂ  
DE ASIGURARE A  
CALITĂȚII ÎN  
ÎNVĂȚĂMÂNTUL SUPERIOR

# EDUCATIONAL EVALUATION BY STUDENTS - A PROBLEM OF TRANSPARENCY OR QUALITY MANAGEMENT

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## Abstract

*Active involvement of students in quality assurance in education is recognized by all parties involved in this process so students have now a definite place in internal and external evaluation of universities. The aim of our study is the evaluation of the educational process, namely the assessment of the educational process made by students in terms of transparency and accessibility of information on universities' websites in Romania. For achieving this, in the first phase, an analysis of existing electronic documents on the universities' websites was made, documents relating to the improvement of the educational process. In the second stage there were analyzed aspects of education that are subject to student assessment (clarity of objectives and course structure, interest, utility and clarity of course content, relationship between teacher and students, teacher punctuality, frequency and method of knowledge assessment by teachers and also global appreciation of classes). Results show that the evaluation of educational process conducted by students is intended to become a common practice but information on this practice and results from these assessments are less visible on universities' websites. This entitles us to say that now evaluation by students of teaching process is more a rare and confidential practice and the actors involved in this are not very open to this approach.*

**Key words:** quality assurance, evaluation, students

## 1. Introduction

The increasing need for quality and the need for providing qualified manpower and knowledge production made universities to consider new methods of improving their educational program policies.

In the past, examination and evaluation of quality in educational process was largely made between teachers without consulting all participants in this process.

Quality was considered to be an issue only for academics who made assurances that quality was being met during teaching and researching [1].

This old paradigm is to be challenged once again with the signature of the Bologna Process which ensures that students are equal partners in all quality assurance processes related to education, including their governance, external and internal procedures. This new concept is gradually applied due to the fact that it regards an environment that is not receptive to this kind of changes.

According to this idea and the actual European trends in quality assurance domain, greater emphasis is placed on the need to develop an internal evaluation of the University, including student's evaluation of the educational process and teachers, so the main parties of educational process are to be involved.

This student engagement into higher education quality assurance process may face a series of difficulties ranging from how to understand and assess quality to total rejection from a series of teachers, fact that led to controversies [2, 3].

According to some critics, students are unable to make good decisions because they are being motivated by a "consuming society" and this could lead to threatening of academic freedom. A similar view is shared by some French authors [4], who do not give credibility to the views of students over quality field.

On the other hand some researchers support the role of evaluations made by students considering it is an important resource because they (students) along with teachers and other observers reveal the most critical assessments whether their criteria are being explained or not [5].

Barbier (1990) [6] identified the dichotomy related both to university teachers and to researchers conducting evaluations of higher education quality in universities. "It is as if an ideological space had developed around the concept of evaluation, with two distinct poles: a negative pole organized around notions of repression, selection, sanction and control, and a positive pole organized around notions of progress, change, adaptation and reasoning" [1].

According to Theall and Franklin (1990a) [7], most of literature addresses refer to student's quality assessment, which are multi-dimensional, reliable and well-founded also not being influenced by preconceived notions.

With the development of disciplinary structures and the emergence of new research methods, new quality assurance mechanisms are required so that any problems arising with this development could be solved [1].

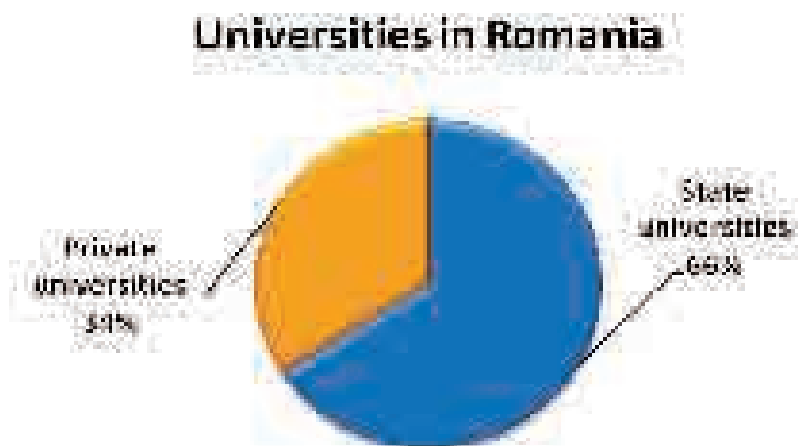
Each university has a unique quality control system which aims for teaching standards and methods. In absence of an institutional body strong enough to propose some criteria that are to be recognized by worldwide universities, defining such criteria is quite difficult in contrast with the sector involved in research [8].

International agencies handling quality assurance and implementation should consider keeping improving already existing patterns for quality assurance and even creating new mechanisms of quality assurance that come to meet this continuous development of the educational process.

The aim of our study is the evaluation of educational process, namely the assessment of the educational process made by students in terms of transparency and accessibility of information on universities' websites in Romania.

## 2. Methodology

To study the evaluation of the educational process made by students, analysis of the existing electronic documents relating to quality improvement found on Romanian universities' websites was made on a first phase. The list of universities has been taken from the Official Gazette of Romania (Monitorul Oficial al Romaniei) (2009). [9] For this, documents from 85 universities, 56 state universities and 29 private universities were analysed. After excluding 3 private universities due to malfunctioning websites, the effective study was conducted on 82 universities. The excluded ones were: Romano Catholic institute of Bucharest, Bucharest Baptist Theological Institute and "George Baritiu" University, Brasov.



**Figure 1.** Division of universities in Romania

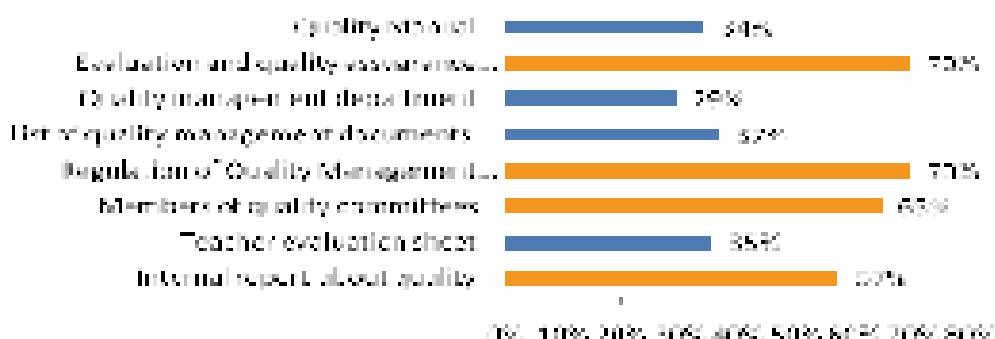
In the second phase of the study were taken into consideration aspects of the educational process subject to student evaluation found in the questionnaires used by universities. Following the analysis of the 83 universities' websites, 20 questionnaires for students' evaluation of educational process have been found. The analysis of the questionnaires has been made according to the following criteria: learning/ teaching environment, teaching activity, teacher - student relationship, educational content, and assessment of knowledge conducted by teachers and the rate of attendance to classes by students involved in evaluation process.

## 3. Results

### 3.1. Analysis of documents related to increase of educational quality

The documents founded on universities' websites and taken into study are the following: Quality Manual, The evaluation and quality assurance committee and its members, Quality Management Department, Regulation on Quality Management System, Teacher evaluation sheet, Annual assessment by the Head of Department, Evaluation by students, Internal quality assessment report. Frequency with which they are found in presented in the figure below.

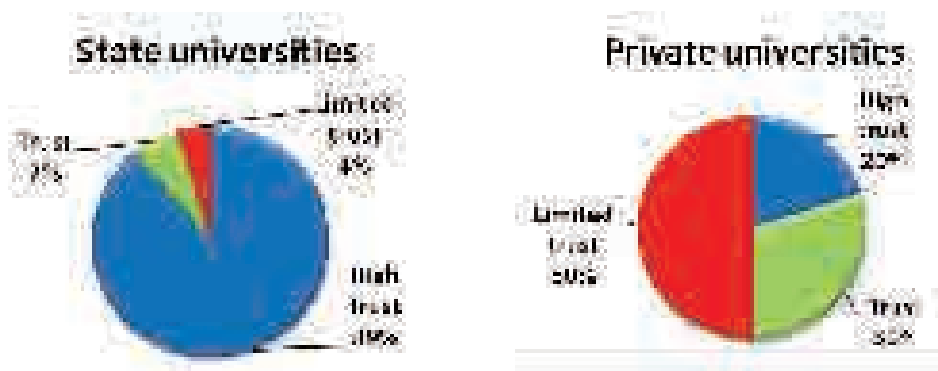
## Quality related documents



**Figure 2.** Documents related to quality assurance

### 3.2. The Romanian Agency for Quality Assurance in Higher Education ratings

Out of all universities in Romania, 64% were evaluated by The Romanian Agency for Quality Assurance in Higher Education, 79% of state universities and 24% of private ones. Each university is assessed by one of The Romanian Agency for Quality Assurance in Higher Education committees and after this a report is prepared. Based on this report and other documents the Agency grants one of the following ratings: high degree of trust, trust, limited trust and lack of trust. Universities included in this study had only been rated: high trust, trust or limited trust as seen in figures below.

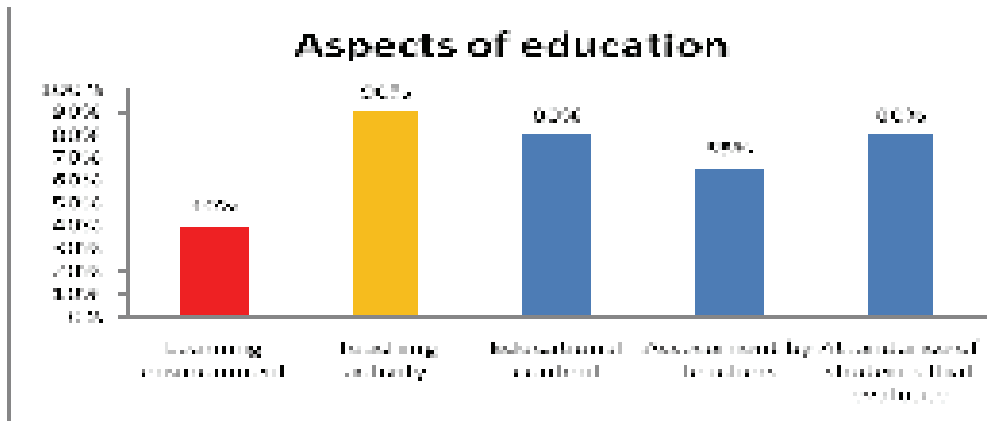


**Figure 3 and 4.** The Romanian Agency for Quality Assurance in Higher Education universities' ratings

### 3.3. Analysis aspects of education subject to students' evaluation

The bases of analyzing the 20 questionnaires published on universities' websites consists mainly of the next criteria in order of frequency with which they were found in analyzed questionnaires: teaching activity and professor-student relationship (90%), educational content (80%), assessor students' attendance, assessment of knowledge by teachers (65%), teaching / learning environment (40%) The issues found in questionnaires overlap mostly so that some of them could be found in several of these five big domains.





**Figure 5.** Aspects of educational process found in questionnaires

### 3.3.1. Learning / teaching environment

In learning/ teaching environment are involved all factors that directly or indirectly influence student activities when being taught or when learning. The following are among factors being found in questionnaires: use of modern audio-visual equipment during classes, diversified teaching materials, classrooms ergonomics (conditions of temperature, light, space and cleanliness) and access to libraries. This issue is only found in 40% of questionnaires.

### 3.3.2. Educational content

It was made reference to the difficulty of the classes in ratio to allocated number of hours, the way it was structured and the use of latest news in domain.

### 3.3.3. Knowledge assessment by the teacher

By this it was made reference to the conduct of examination, scoring accuracy, the ratio of course volume material and difficulty of the exam, assessment of the things presented only during the classes and can be found in the literature mentioned in the class, time needed to give the results reported to the number of works.

### 3.3.4. Teaching activities and teacher-student relationship

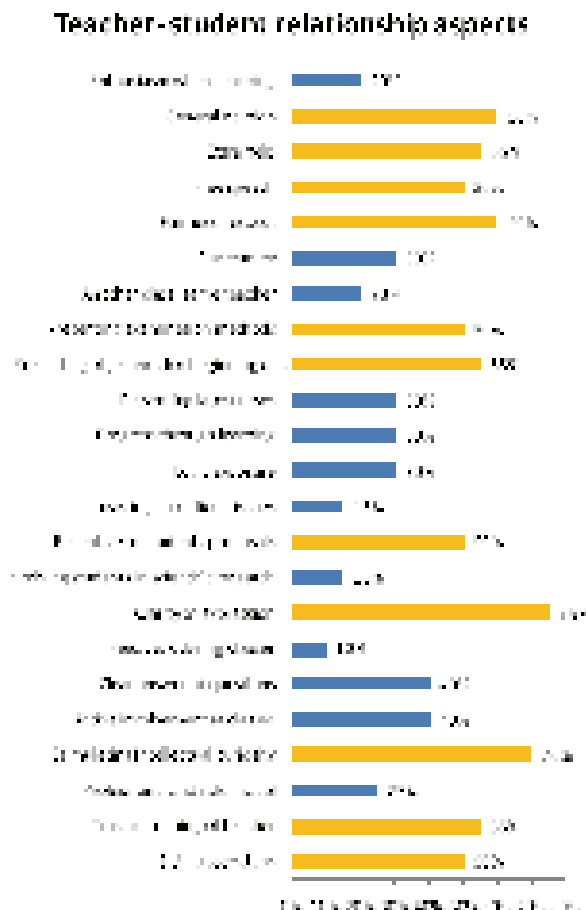
This domain reaches the highest percentage, being found in 90% of questionnaires.

#### 3.3.4.1. Teaching activities

As part of teaching activities the following issues were examined: the use of clear language, coherent and logical exposure of the course material, use of complementary methods for facilitating learning, linking concepts from the class with practice, creating interest among students, stimulation through learning, willingness to give extra help outside office hours, perceptiveness to students' proposals and encouraging free thinking and expression.

### 3.3.4.2. Student – Teacher relationship

The purpose of applying quality assessment questionnaires to students can create an adversarial nature both among universities and among teachers because this process can be considered a method of improving the quality of education but also a process for monitoring students.



**Figure 6.** Aspects of teacher- student relationship

At the same time, students' opinion about the quality of education is included in a broader process of evaluation of overall educational quality. Even if students' perspective provides important feedback, accomplishing the whole assessment is not limited to this source. This is reinforced by the fact that all questionnaires are anonymous so that the liability (interest) of the one who fills them in is often low and also by the fact that the number of completed questionnaires is variable.

The issues most commonly found among the questionnaires were: clarity of expression (75%), students' intellectual curiosity stimulated by teachers (70%) and respect towards them (60%). At the opposite end feedback requested by teachers during classes is only found in 10% of questionnaires, involving students in scientific activities: congresses, communication sessions,

etc. (15%). In half of the questionnaires students were asked if the teacher has encouraged freedom of thought and expression during classes. Also 50% of the questionnaires required strong points / weaknesses and suggestions or other observations.

Interpreting the results may generate some problems. The results reveal the students' personal opinion that can contribute to improving quality but may also reflect personal opinions about teachers and these are unconstructive and unhelpful.

### 3.3.5. Attendance of the assessor student

All of this would not be defining if the number of assessor students attending classes is small, so the relevance of questionnaires would not show the opinion of the majority. Starting with this a question mark could be raised regarding to students' honesty and involvement to contribute at quality assurance.

## 4. Conclusion

The purpose of this study was to determine the existence of students' assessment of teachers through given questionnaires and if these questionnaires are being published with or without open access on universities' websites. Another aspect seen in this study was to determine the criteria by which teachers have been evaluated among the questionnaires found on universities' websites.

After conducting this analysis 20 questionnaires were found from 85 universities. The information found is not necessarily grounded in reality because the questionnaires evaluating the educational process could have been handed to students but the results haven't been published on websites, this being a management problem or these questionnaires are accessible on the websites but are not being filled in by students, which generates a transparency issue. Teaching activity, student-teacher relationship, educational content, assessor students' attendance, knowledge assessment by teachers and teaching/learning environment were the preponderant components of educational process that have been found in questionnaires on universities' websites.

Some universities present their results but in most of cases those are confidential being accessible to teachers only. Even so the results from the questionnaires that were applied are below 40% of those being published on universities' websites.

Results show that the evaluation of aspects of educational process conducted by students is intended to become a common practice but the information regarding this practice and the results of these assessments are less visible on Romanian universities' websites.

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# AN EVALUATION OF THE QUALITY ASSURANCE – CASE STUDY: THE UNIVERSITY OF BUCHAREST

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## Abstract

*Quality still defies a precise definition. The result is a lack of effectiveness and a general misunderstanding of the role of quality assurance in higher education, especially when is considered in international setting. On the other hand, this may offer diversity and creativeness in a space of rigid regulations and strict standards to the point that this may be the core issue that allows us to build bridges between different approaches. Our paper aims to be a systematic reflection on the main concepts concerning quality assurance processes, starting with quality itself. A national quality assurance evaluation of the University of Bucharest (UB) is the reference framework of our discussion, strengthening the arguments with real examples and providing further food for thought.*

*Our approach starts with a minute analysis of the concepts and tries to see how far one may go to encompass the realities of higher education institutions.*

**Key words:** quality assurance evaluation, quality culture, university management.

## 1. Introduction

Currently, 'quality' is on everybody's lips. Quality Assurance (QA) is at the top of most universities agendas, and quality evaluation and enhancement are without any doubt among most important tasks of any higher education institution all around the world. However, the current understanding of this problematic varies not only from country to country, but from university to university. In Europe, QA plays even a more important role, being regarded as one of the key factors which will lead to the creation of the European Higher Education Area<sup>1</sup>. However, in spite of this promoted crucial role, QA still remains an enigmatic concept<sup>2</sup> for many Romanian universities. It is very difficult to define and asses quality, since we lack a precise understanding of these key terms. Thus, "What does it mean?" and "How can it be measured?" are still important questions.

<sup>1</sup> [4], p. 9: "The Bologna process focuses on structural convergence of, and a common architecture for, higher education systems in Europe. To some extent the Bologna process can be seen as, at least initially, an attempt to recover a national and educational sector initiative as a countermove to the power of the Commission and to reforms giving priority to economic concerns."

<sup>2</sup> [6], p. 1: "In Europe, the meaning of quality assurance is being developed in apparently different ways. In some countries quality assurance is an internal responsibility of each higher education institution and is based on an internal evaluation of the institution's programs. In other countries, quality assurance entails an external evaluation or accreditation." It may be added that in some European countries one can find even both ways, and thus it is not an either-or situation.

In this context, we will focus our attention only to a discussion concerning quality evaluation of higher education institutions. This is still perplexing, since one's notion of quality evaluation often does not coincide with another's, and, as very often may happen, no two experts in the field ever come to the same idea when debating what means an excellent university. Some authors goes even further and claim that not just the mere notion of quality lacks a stable and unique understanding, but the whole quality environment varies from place to place: "Perhaps the most obvious recent influence on assessment has been the policy climate in relation to quality assurance and enhancement. The quality assurance and accountability climate differs from nation to nation"<sup>3</sup>. Creativity and cultural oriented-approaches could play an interesting role in helping university overcoming the black and white paradigm of seeing things.

## 2. Quality Assurance Evaluation

What does Quality Assurance Evaluation (QAE) mean? In order to answer this question, we think, one should break it down in another two questions:

1. What does *quality assurance* mean?
2. What does it mean to *evaluate* quality assurance?

With regard to the first question, one could generally accept the following definition:

*QA means the totality of the procedures, processes and systems used by a Higher Education Institution (HEI) in order to manage and improve the quality of its educational and administrative activities.*

Currently, almost all universities have a unit comprising several experts dealing with this topic, and all European countries have national regulations in this sense. Moreover, all around Europe, there are various agencies that take care of this process on a national and even international level. The main objectives of an evaluation deal with the functioning of the university as a whole and the functioning of its components, the programs (degrees) and the disciplines. The evaluation actions are covering areas like teaching, research, outreach, as well as the State policies or the governance of institutions.<sup>4</sup>

Now, let us deal with the second question: How can one **evaluate** *quality assurance* of HEIs? Normally, to evaluate or asses something means to measure its parameters and compare them according with certain standards. Dealing with universities is no different. The parameters are called in this case 'performance indicators'. So far, so good, but what are these indicators? What really do they indicate?

Quality indicators are designed to measure the degree of implementation and efficiency of a quality management system in a HEI. In short, they measure quality. But this seems already highly paradoxical, since one aims to measure *quantitatively* the quality of an institution.

According to our previous definition, quality concerns procedures, processes and systems. Taking that as a working definition, we can certainly observe that procedures, processes and systems could be measured in one way or another. Once identified, we can say whether or not, in accordance with certain standards, our educational system is 'delivering quality products'. Without considering a new puzzling question, namely what is meant by 'product' when dealing with education systems, we have to face again the old question: What is *quality*?

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<sup>3</sup> [1], p. 4.

<sup>4</sup> [7].

This sounds like a very puzzling and fundamental question, one which has a special philosophical flavor. But then, “What is *the philosophy* of quality (assurance)?” Paraphrasing St. Augustine (*Confessions*, chapter XIV), one may say that “if no one asks me, I know what it is. If I wish to explain it to him who asks me, I do not know”.

In a sense, all of us have a certain idea of what quality means, the hard part comes when we have to identify exactly what gives quality to an educational product. The problem gets even more complicated, depending whether we consider education an outcome or a process, or both. Anyway, we do what to be caught in this kind of discussion so we can go further and put an end to this digression asking the following questions: What quality assurance indicators cannot measure? What does fall out when evaluating the quality of an educational system? What they cannot really measure is the existence of a ***culture of quality***. What does this mean?

### 3. Quality Culture

The existence of a quality culture in a higher education institution presupposes (at least) three important aspects:

- the commitment of the central management<sup>5</sup>;
- the awareness of all participants;
- the existence of an efficient evaluation system.

In addition, a quality culture in an HEI reflects not only an orientation towards the needs of its stakeholders, but also an internality that supports its staff in the fulfillment of their duties.<sup>6</sup> But still, what is meant by *quality culture*? In short, the philosophy of quality culture could be expressed by the following:

*To write down everything you do, and to do all you have written.*<sup>7</sup>

This is very important and touches the heart of the process, namely to act consciously, to be aware of all the procedures and mechanisms involved in the educational processes, to respect them and to try to continuously improve them. But does this conscious action exhaust the meaning of ‘quality culture’? Certainly, it is very important, in fact, it is extremely important to know and follow procedures, yet it is not enough. But what is missing?

An evaluation focuses primarily on the first component, on the *documentation* of the institution, and the second, the *implementation* of the procedures, if wanted, could be easily mimed in the case of an evaluation. Yet, exactly the second part accounts for the inner life of an institution. This particular ingredient indicates the existence of a *quality culture*. Employing a trivial example, it is like cooking. The recipe acts as a procedure that has to be followed. Tasting the food from time to time has as counterpart the periodical inner and/or external evaluations of the institution, evaluations which provide an essential feed-back in order to adjust and improve the quality. But does following closely a recipe provide enough assurance and predictability that the meal would be good? In a sense, yes, it means that the food will be good, but here good it is not good enough, and what we need is excellence. But good food means that it is eatable, whereas an excellent one means much more, and this

<sup>5</sup> For more on the role of university management and quality culture, see [3].

<sup>6</sup> [8].

<sup>7</sup> A similar approach may be found in [5], p. 1: “Write down what you are trying to do and check periodically that you are doing it.”



'much more' does not appear in any recipe, it is not capture by any procedure. What is lacking in this case is exactly the skill that makes someone an excellent cook. That means to know very well the system. Moreover, it means to know how to adjust its parameter in order to provide a better outcome. This is the real mark of the existence of a quality culture: both the desire and the knowledge how to obtain quality.

#### 4. An Instance of a Quality Evaluation – The case of UB

The University of Bucharest faced this year an important quality evaluation done by ARACIS<sup>8</sup>. The evaluation focused on the university management at various levels, including the university as a whole and its administrative departments, as well as undergraduate<sup>9</sup> programs at all its nineteen faculties.

Using a bottom-up approach, we will start by proving a suggestive example of a very important dysfunctionality. The evaluators ask our department<sup>10</sup> to provide an indicator concerning the ratio of professors to students. We asked the General Secretariat to provide us such information, but their answer was negative: they could not offer us such ratio. We turn then to the Human Resources Department, but again the result was negative. The impasse was evident. What can be done in such cases? We contacted again the General Secretariat and asked them to provide us the total number of students; we get it very quickly. We asked then Human Resources to provide us the number of professors and we got it without any problem. Eventually, we did the calculation and obtained the required ratio.

The moral of this story is obvious: confronted with the specific requirements of an evaluation, we discovered a lack of communication among the departments of our university. It seems that they do not have the benefic practice of sharing information and, in fact, we discover a lack of transparency. But transparency and enhancing quality work hand-in-hand, and they increase the capability of the institution to adapt to and solve new challenges and changes.

Another negative aspect that came out during the same quality evaluation was what we may call *The Ivory Tower Symptom*. What does this mean? Basically, it means the tendency of most UB professors to consider that their main task is only to teach and research, while administrative work is not part of their current duties, and, accordantly, it should be charged extra. But is this right? For instance a normal contract of a tenured North American professor stipulates the following duties: 35% Teaching, 35% Research and 30% Administrative work. We consider that as an important aspect of our academic life and we think that to provide some administrative work should be a mandatory requirement for all faculty members. Certainly, most administrative work<sup>11</sup> is highly time-consuming, yet it should be done by someone, for otherwise the institution could not function properly. This would be regarded as a necessary condition.

The sufficient condition in this case is given by the fact that involving all members of a department in academic work will certainly increase their awareness and capacity to provide quality. Quality

<sup>8</sup> Romanian Quality Assurance Agency for Higher Education (in Romanian 'Agentia Romana pentru Asigurarea Calitatii in Invatamantul Superior')

<sup>9</sup> An evaluation of its graduate programs has been done separately.

<sup>10</sup> The Quality Management Department of The University of Bucharest

<sup>11</sup> What is meant here is not administrative work done by people working in the administrative compartments of the university, but the administrative work done or which should be done by the professors themselves

means feedback and consciousness, but quality means also teamwork and coordination. Certainly, it is very important to provide increase the quality of our teaching and research, and in this case administrative work acts as a burden, which distract us from the real stuff, yet, when discussing about the quality assurance at the level of the whole institution, administrative work is essential. Moreover, pushing the things further in this direction, with few exceptions, we may say that administrative work in this case work as a liaison, enhancing the inner cohesion of the institution. This works so simply because such work normally requires collaboration and awareness; collaboration between colleagues and awareness of the processes.

We have chosen to present first the negative aspects not because we are negativist but because their acknowledgement and the feedback received from the evaluation team are essential in order to expand the positive elements of our university.

The self-evaluation process of UB, as an introductory step of the institutional evaluation, gave a good starting point for the evaluation team. The statistical data and the descriptive information for each faculty had represented a very valuable resource.

The systemic complexity of UB -19 faculties – encompassing the major fields of teaching and research was recognized both as an asset in the national landscape, as well as a big challenge in running the system at its full potential of interdisciplinary and collaboration.

The focus on quality and internationalization were positively scored by the evaluators but of course there is always room for improvement. Also, the role of creativity and innovation was seen as highly valued by the university management. A follow-up evaluation action in respect to this was launching an internal project competition between faculties, in pursuing the improvement of their undergraduate programs with the help of new technologies.

## 5. Conclusions

In order to have a functional system is essential for the findings and recommendations of the evaluation to be further cornerstones of the drafting of new strategic documents such as the operational plans and the UB strategy for the next academic year. The critical challenge for quality assurance processes is how to prove themselves as activities which demonstrably adds value to institutional activities.

An essential remark regarding *Quality Culture* is that it requires a good coordination: *horizontally*, a better coordination and collaboration between academic and administrative departments; *vertically*, a better coordination and communication between central management and its local counterpart.

Our understanding of the ways **to enhance quality assurance** in a higher education institution has two main points:

1. to increase the **inter-departmental communication and coordination**;
2. to augment the degree of **administrative involvement** of professors.

As the research proves it<sup>12</sup>, in the knowledge society, creativity is one of the keys in solving the issues stated above. Thus, the emerging agenda should take in consideration to put a growing emphasis over factors like cross-cultural communication, the importance of multicultural environment or the role of design and aesthetics.

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<sup>12</sup> [9]

## ACCREDITATION AND RECOGNITION OF THE JOINT MASTERS PROGRAMS

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### Abstract

*Since the June 1999 Bologna Declaration, the European dimension of higher education has become a matter of increasing interest for Europe's higher education institutions. One major issue that gives substance to this concept is the development of joint degree programmes. In early 2002 when the Joint Masters Project was first proposed to the European Commission for Socrates programmes funding, Joint Masters programmes were a poorly understood but interesting development on the landscape of European higher education. Of course, Romanian universities have to adapt to the new challenges determined by the designing and implementation of joint programs. Unfortunately, the data regarding the current situation are rather scarce and more comprehensive research has to be done. This paper summarises the results of the survey carried out by The Romanian Agency for Quality Assurance in Higher Education (ARACIS) on the situation of joint master degree programmes. The study has been conducted through a questionnaire addressed to public and private HEI's administrators, including those holding responsibilities on the definition and implementation of internationalisation policies and to joint programmes' academic coordinators and managers. The data collected have been analysed and commented by ARACIS experts and will be used in future research by the ARACIS.*

**Key words:** joint master programs, master cooperation, accreditation, recognition, mutual recognition

### 1. Introduction

Since the last decade of the last century, European universities have been interested and involved in the development of joint programmes leading to the award of double or joint degrees. The Bologna Process, started in 1999 with the Bologna Declaration, has increased the interest on these programmes among European and non European HEIs, and in many cases European countries have adapted their legislation to allow the development of JPs.

The benefits that these structured joint programmes bestow on all higher education actors are one key factor that explains their development. The added value of student mobility periods - in terms of development of a range of social, linguistic and inter-cultural management skills - are often assumed, but do not occur naturally. Through such positive collaboration, the learning process expands horizons not only for students, but also for academics and institutions that stand to gain in today's competitive global landscape through European collaboration and mutual learning. Europe can benefit considerably through the development of high quality joint

master programmes, which have the potential to meet a wide range of European needs, and also to place European higher education as a reference for quality on the global map.

For the universities involved, joint degree programmes can be seen as a tool for institutional development and for the strategic positioning of the university and its networks, an opportunity for fostering and expanding mobility within Europe, an instrument to increase the attractiveness of the European Higher Education Area, as proposed in the Erasmus Mundus initiative of the European Commission and as a tool for strengthening the institution's competitiveness and reputation.

The first phase of the Erasmus Mundus (EM) Programme, launched in 2003 and implemented in the years 2004 – 2008, has triggered an essential change in the philosophy regarding joint programmes creation and administration. It focuses predominantly on the concept of "consortia" as well as on the concept of "integration" to be applied to the curricular aspects as well as to the administration and management issues of a JP.

At "Master degrees Conference", held in Helsinki in 2003, one of the recommendations issued refers to the need for joint master degrees in Europe to become an important peculiarity of higher education, to promote cooperation among specialists as well as their improvement in areas of interest at EU level.

Joint programs are programs offered jointly by different higher education institutions irrespective of the degree (joint, multiple and double) awarded. A joint degree is a joint diploma issued by the institutions offering a joint program as equivalents to national diplomas, attesting the successful completion of this joint program. According to ENQA, a joint degree is a degree awarded by the higher education institutions that offer a joint programme, attesting the successful completion of this joint programme. It is a single document awarded by the higher education institutions responsible for the programme in question. The document is signed by the competent authorities (rectors, chancellors) and replaces the individual (institutional/national) degrees.

According to European University Association, the joint degrees have all or some of the following characteristics:

- the programs are developed and/or approved jointly by several institutions;
- the programs meet the appropriate national quality standards;
- students from each participating institution physically take part in the study program at other institutions (but they do not necessarily study at *all* cooperating institutions);
- students' stay at the participating institutions constitute a substantial part of the program;
- periods of study and examinations passed at the partner institutions are recognized fully and automatically;
- the partner institutions work out the curriculum jointly and cooperate on admission and examinations. In addition, staff of participating institutions could be encouraged to teach at other institutions contributing to the joint degree;
- often, there is a formal agreement between the institutions providing the different components of the degree;
- after completing the full program, students either obtain the national degree of each participating institution or a degree (usually an unofficial "certificate" or "diploma") awarded jointly by the partner institutions.

## 2. Accreditation and recognition

According to European consortium for Accreditation in Higher Education, accreditation is “a formal and independent decision indicating that a programme and/or an institution meets certain predefined quality standard”.

An accreditation process has to follow three steps: self-evaluation or documentation to be submitted by the unit undergoing accreditation, external assessment by independent experts and accreditation decision.

Unfortunately, there is no single procedure model possible but four, according to Kaja Braathen: the **traditional approach**, regarding the initiative of an individual institution, realized when needed or wanted, by individual agencies, focused on national offer and resulting in national accreditation, **transnational approach**, regarding the initiative of one institution, realized when needed or wanted, by one agency, focused on whole joint programme and resulting in national accreditation, **joint procedure**, at the initiative of several institutions, realized when needed or wanted, by individual agencies, focused either whole joint programme or involved institutions and resulting in national accreditations, and **single procedure**, at the initiative of any institution, realized when needed or wanted, by one agency, focused on whole joint programme and resulting in national accreditations.

In the same time, ECA has developed a set of principles for the accreditation of joint programmes, divided in four sections:

### 1. Information sharing and transparency

- On receipt of a request for the accreditation of a joint programme the accreditation organisation informs the other relevant accreditation organisation(s) about the request;
- The other relevant accreditation organisation(s) provide(s) information on:
- Whether the programme is part of, has already undergone or is undergoing a quality assurance and/or an accreditation procedure;
- Whether the relevant institutions can legally offer the joint programme (including the status of the degree involved).

### 2. The composition of the expert panel

- There should be particular emphasis on the inclusion of experts with relevant international experience and knowledge.

### 3. The assessment process

- The submitted documentation must include comprehensive information on the totality of the joint programme and not just the single contribution (national and/or institutional);
- The panel has to determine site visit(s) requirements;
- Any site visit(s) must include representatives of the programme who are able to present the totality of the joint programme across all sites (even if there are not representatives from all sites);
- The panel makes its assessment on the totality of the joint programme, including taking into account the learning outcomes aimed for by the joint programme irrespective of the individual study pathways;
- The assessment process should, where possible, include at least one observer from another relevant accreditation organisation.

### 4. The accreditation decision

- The accreditation decision is based on the assessment of the totality of the joint programme (even if the accreditation decision is only binding in the "jurisdiction" of the accreditation organisation that took the decision);
- The accreditation decision must be communicated to the relevant accreditation organisation(s).

Currently are made significant efforts to develop a European methodology for accreditation procedures joint programmes.

Another key issue in joint programmes analysis is the mutual recognition of joint degrees. In order to ease it, ECA has developed some principles. The principles could be an integral part of a mutual recognition agreement. This implies that accreditation decisions regarding joint programs are/should be subject to the relevant mutual recognition of accreditation decision agreements.

*Principle 1:* Accreditation organisations should take into account learning outcomes in their assessments, thus enhancing Mutual Recognition of accreditation decisions.

*Principle 2:* Accreditation organisations should assess whether the learning outcomes are in line with the National Qualifications Framework and/or the Qualifications Framework of the European Higher Education Area.

*Principle 3:* Learning outcomes are a shared concern of stakeholders and thus accreditation organisations should assess whether the higher education institutions consider stakeholders opinion when designing or revising programmes and learning outcomes.

*Principle 4:* Accreditation organisations should assess whether learning outcomes and their assessment by higher education institutions are understandable and public.

*Principle 5:* Accreditation organisations should assess whether curriculum design and content enable students to achieve the intended learning outcomes and whether higher education institutions apply proper procedures to assess it.

*Principle 6:* In the case of programme accreditation, accreditation organisations should make explicit reference to the programmes learning outcomes in their reports.

*Principle 7:* In the case of institutional accreditation, accreditation organisations should evaluate the institution's provisions regarding the implementation and assessment of learning outcomes.

The recommendation notes that joint degrees may be awarded as:

- a joint diploma in addition to one or more national diplomas;
- a joint diploma issued by the institutions offering the study program in question without being accompanied by any national diploma; or
- one or more national diplomas issued officially as the only attestation of the joint qualification in question.

The mutual recognition process, although under a positive trend in the last year, is hampered by several issues, caused by the fact that this joint programmes do not formally belong to any – or any single – national education system, although it is a phenomenon of a different nature than transnational education. It should also be admitted that because of this reason in a strict legal sense joint degrees are not covered by today's main international instrument for academic recognition - the Lisbon Recognition Convention, even though members of ECA and the corresponding ENIC-NARICs of their countries signed the Vienna Sententia in 2005, laying down the preconditions that have to be met to start recognizing each other's qualifications automatically. It may be worth emphasizing that even when all the components of a degree belong to a national system, the degree itself may not, as it will consist of components from two or more systems.



To fully appreciate the recognition problems of joint degrees, it is useful to bear in mind that recognition of joint degrees may concern four different situations:

- recognition of the joint degree in a country one of whose institutions has provided a part of the study program giving rise to the qualification;
- recognition in a country one of whose institutions participates in the consortium having issued the degree, but this institution has not provided any part of the degree in question, i.e. the applicant has studied at other institutions participating in the consortium;
- recognition in a third country, i.e. a country that has not in any way been involved in the study program and/or consortium granting the qualification;
- recognition of a degree, in any country, all or a part of which has not been subject to transparent quality assurance.

One survey, realized in 2010 by ENIC-NARIC network, emphasize that legal aspects regarding both the organisation of joint programmes and the recognition of qualifications awarded by joint programmes are a serious obstacle towards recognition. Most ENIC-NARICs do not recognise qualifications awarded by a joint programme if that programme is not established or offered in accordance with the national legislation of one of the participating countries, if one of the involved institutions is not recognised or if one of the awarding institutions is not authorised to award that degree.

Some other findings include the fact that joint programmes and joint qualifications are not necessarily sufficiently incorporated into the national higher education systems.; some institutions use joint programmes to escape national legislation; the degree and the diploma supplement do not provide the necessary information about the joint programme; a joint programme needs to be quality assured and/or accredited.

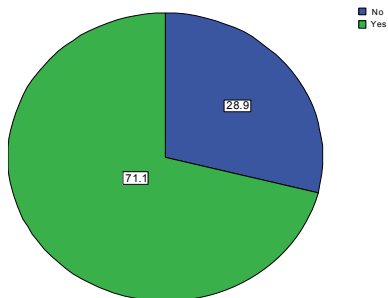
### 3. Situation in Romania

In Romania the joint programmes are still at the beginning, the information is scarce and the main features of them largely unknown. To address this situation, The Romanian Agency for Quality Assurance in Higher Education has performed a study, the first of this type in Romania, on 31 universities. From these, only 13 have developed 54 joint master programmes. A number of 38 out of 76 questionnaires received were considered valid.

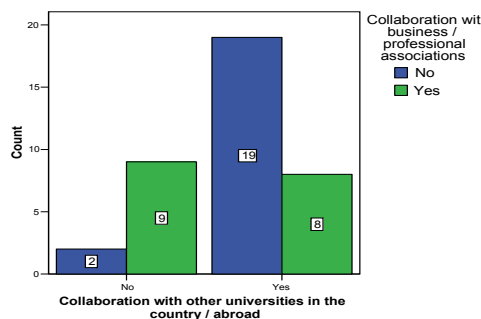
Below are some of the findings.

Most joint programmes are developed in collaboration with other universities (more than 70%) and less frequent with business or professional associations. This is an obvious result considering the fact that universities are taking their first steps in joint programmes and prefer working with entities of their own. Among them, only 29,6% are cooperating also with professional associations, while only 5,26% of them are developed without university or professional associations support. Most of the JMP developed without university collaboration are supported by professional associations (81,8%). However, the fact that a significant percent of all JMP are connected with professional associations is a positive one, contributing to a more realistic link with actual processes and phenomenon and facilitating faster hiring for the graduates.

Collaboration with other universities in the country / abroad

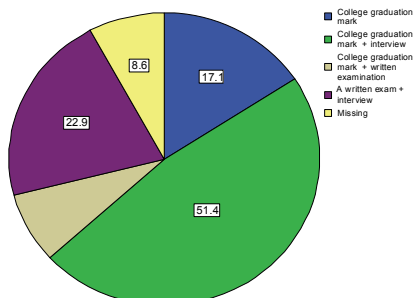
**Figure 1.** Collaboration with universities

Bar Chart

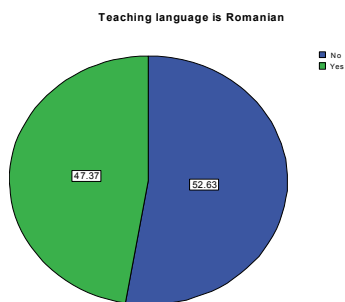
**Figure 2.** Collaboration with university - professional associations cross tabulation

Most of the joint programmes tend to link the admission process to other elements and not only graduation mark (an interview or a written exam). This is the case for more than two thirds of them and is congruent with European situation and is caused by the fact that usually they are held in an international language and needs knowledge in several related or distinct domains. The situation is further complicated if the programme is double or multiple diploma, where the interview or exam are mandatory, in our opinion.

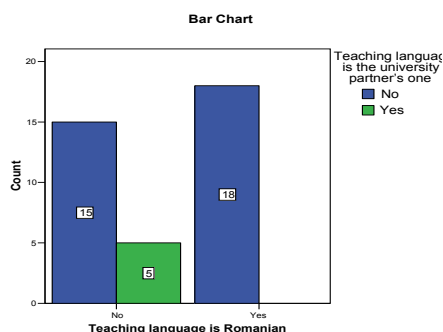
Admission to the master is by

**Figure 3.** Admission criteria

Regarding the teaching language, surprisingly, only 52.63% of the joint programmes are held in other language than Romanian and only 21% are held in English. Among them, only 11% have classes in English, while for multi lingual JMP, none is held in Romanian. This is caused, on one hand, by the university's partners, who tend to keep their courses in their own language (13%) or, on the other hand, by the splitting of the courses – some of them in Romanian, some in partner's language. In our opinion, this is not a positive fact and shows how reluctant are both professors and students in using a foreign language. Last but not least, another explanation is given by the fact that many joint master programmes have partners from France, Germany or Spain and, hence, are held in those international languages, respectively.

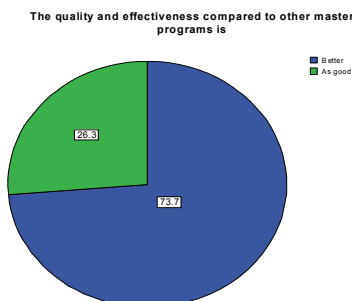


**Figure 4.** Percentage of programmes held only in Romanian



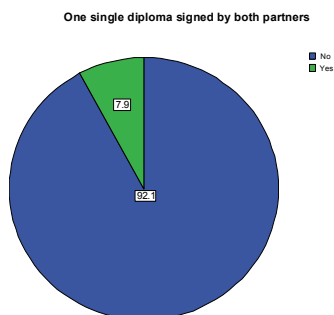
**Figure 5.** Teaching language: Romanian – university partner language cross tabulation

The quality and effectiveness of joint master programmes are considered better, compared to “classic” master programs, by a majority of respondents. See figure 6.

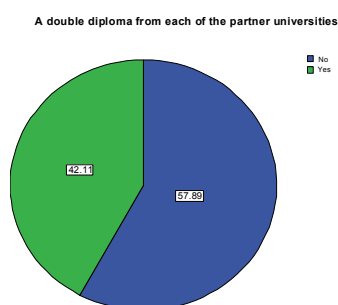


**Figure 6.** Quality and effectiveness of joint master programmes compared to “classic” master programs

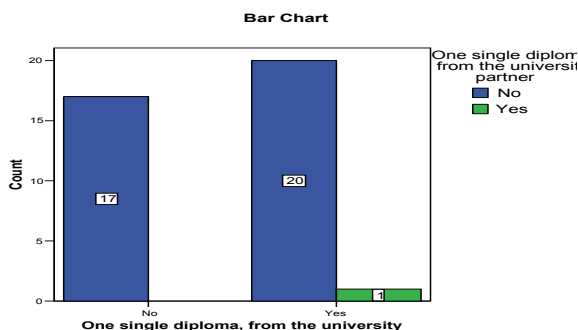
Most joint programmes award a single diploma, usually from one university (55,26%). There are few cases in which the diploma is signed by both partners or by university partner (both cases under 10%). One single joint programme has not offer a diploma from the partner university. A second case is double diploma - 42, 11% of all JMP offer this. This is a positive issue regarding the attractiveness of the joint master programmes. We strongly believe that in the near future joint programmes will become a real competitor for regular master programmes, especially those offering multiple diplomas.



**Figure 7.** Percentage of JMP offering one single diploma signed by both partners

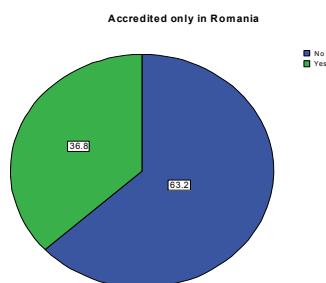


**Figure 8.** Percentage of JMP offering double diploma

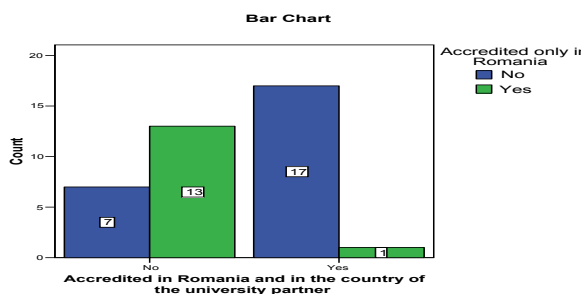


**Figure 9.** One single diploma from the university – one single diploma from the university partner cross tabulation

One important issue is the accreditation situation of these master programmes, considering the fact that in European Union this is a sensible issue, also. Most of them are accredited by ARACIS (36,8%) or in Romania and in the country of the partner (47,37%). Usually, the programmes accredited in Romania is accredited also in the university partner country (94% of this cases). One positive aspect is that all joint programmes have been accredited in one form or the other.

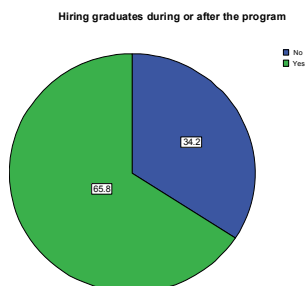


**Figure 10.** Percentage of JMP accredited only in Romania



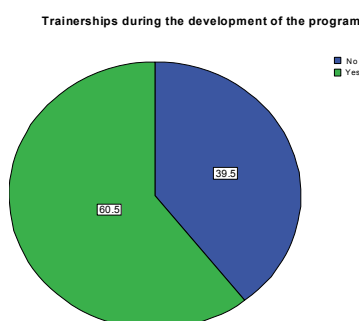
**Figure 11.** Accredited in Romania and in the country of the partner - accredited only in Romania cross tabulation

Regarding the effects of the programmes developed in collaboration with professional or business associations, the most evident and positive is the hiring during or after graduation. Almost 66% declared that their master students managed to employ during or after finishing the master programme, which is a high rate compared to regular master programmes.



**Figure 12.** Hiring percentages during or after JMP (only for the JMP developed with professional associations)

Other benefits include total or partial recognition for entry into professional associations and traineeship facilitation.



**Figure 13.** Percentage of traineeships during JMP for entry in professional associations

Another benefit of joining joint programmes is that allow the graduates, regardless of the type of joint master programme, to sign to a PhD program. Virtually, all the respondents agree that graduating such a programme is an incentive for a future PhD.

The main incentives for the universities in developing JMP are, according to research, is a better harmonization of experience gained in universities from several countries, universities raise their potential to meet a wide range of European needs, and also to place European higher education as a reference for quality on the global map. Additionally, joint degree programmes can be seen as a tool for institutional development and for the strategic positioning of the university and its networks, an opportunity for fostering and expanding mobility within Europe, an instrument to increase the attractiveness of the European Higher Education Area, as proposed in the Erasmus Mundus initiative of the European Commission and as a tool for strengthening the institution's competitiveness and reputation.

For the students, advantages range from bi or multiple diploma, in some cases, to an improved insertion in the labor market from European Union, possibility to learn in an intercultural environment, an increase in competitiveness due to other educational system exposure. Additionally, the added value of student mobility periods - in terms of development of a range of social, linguistic and inter-cultural management skills - are often assumed, but do not occur naturally. Through such positive collaboration, the learning process expands horizons not only for students, but also for academics and institutions that stand to gain in today's competitive global landscape through European collaboration and mutual learning.

For the employers, the advantages come from the opportunity to hire better educated people, able to work and communicate in multi and trans cultural teams, the possibility to evaluate – before hiring – the actual knowledge of their future employees and, not last, a better chance to hire people with deep knowledge in new areas, meeting the expectations and needs of different organizations.

Of course, there are disadvantages, also. Recognition of joint degrees is a fundamental issue, linked also to issues of quality assurance and funding. The recognition problem has been extensively discussed, and action is being taken to ensure that the Lisbon Recognition Convention is amended to include provision for fair recognition of joint degrees. This issue is also on national agendas for legislative reform following the pledge made by European Ministers

of Education in the Berlin Communiqué to resolve the problem. Clear internal quality assurance procedures which are implemented across networks are needed, and institutional responsibility for students studying at several institutions needs to be defined. The funding of joint masters programmes is critical to their success, also. Currently networks receive funding from a variety of sources (local, national and European) and funds are generally allocated for specific activities. Some of the unavoidable costs of successful network operation (international travel, administration, short-term accommodation etc) - which make joint programmes more expensive to develop and maintain than traditional programmes - have to be found from other institutional budgets. It is therefore vitally important that institutions are committed and aware of the benefits which these programmes offer.

#### **4. Conclusions and recommendations for joint master programs**

Joint degrees are potentially useful instruments to help further the internationalization of European higher education and in particular to help make the European Higher Education Area a reality. However, joint degrees can only be truly useful if they are adequately recognized and should emphasize the link between the recognition of qualifications and the quality assessment of higher education programs and institutions. In addition, Romania should review their legislation to remove any direct or indirect legal obstacles to the establishment and recognition of joint degrees, and the widespread use of the Diploma Supplement and the ECTS will help facilitate such recognition.

Moreover, it is necessary to distinguish between joint and double degree programs, in terms of curriculum, objectives and their organizational models and the perspective of the protection of learners / users.

Joint degrees and programs based on an integrated curriculum must meet the identified needs of the Romanian and European society which cannot be achieved by national programs in terms of developing new professional skills and of identifying new areas of research.

Students, alumni, employees and significant others should be consulted on the most suitable areas for implementation of joint degree programs. However, it is recommended that higher education institutions should maximize their proactive role in planning long-term societal needs. Students should also be involved in planning and evaluation.

Institutions should develop joint programs to support and fully integrate them as essential basis for the mission they have.

Partner institutions in joint degree programs should be selected on the basis of mission and commitment, and on the capacity to develop and sustain such programs in terms of academic, organizational and functional values.

For joint programs, partner institutions will jointly develop and implement appropriate quality assurance procedures and make them known explicitly to students / learners.

The joint degree programs must ensure an adequate supply of linguistic diversity and language learning. These programs will promote European identity, citizenship and employability.

Another recommendation regards identifying opportunities for cooperation with renowned universities and companies recognized in the European Union to create "joint programs" in

areas of distinct specialization required by the employers and considering the internationalization process and the transition to a knowledge based society and economy.

Last but not the least is a rigorous process of identification of new sources of funding for such programs, both at university and at faculty level.

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# VIRTUAL INSTRUMENTATION - AN EFFECTIVE TOOL IN MECHANICAL ENGINEERING MASTER-LEVEL EDUCATION

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## Abstract

*Our day's educational challenges enjoin the necessity of continuous adaptation between available resources, labor market requirements and institutional offering. At the same time it has to consider a permanent lack of novel methods to promote new systems and technologies from the market into the educational process. This paper deals with a short presentation of teaching modern methods inclusion in master-level engineering education process at Engineering Faculty in Braila. This paper describes how the courses are laid out in order to achieve the desired goals and how the virtual laboratory experiments should fit into the courses to promote multidisciplinary and interdisciplinary understanding. A practical example of master degree studies will be provided as an example of good practices in supporting of National educational process to become harmonized with European Area of Higher Education.*

**Key words:** education, mechanical engineering, master-level, virtual instrumentation, simulation.

## 1. Overview

In our days companies require engineers who are able to understand broader multidisciplinary and interdisciplinary approaches of systems and of their working. Hereby the Universities need to be engaged in reforming its curriculum to meet some of these demands. The objective of this paper is to discuss the implementation of Virtual Instrumentation on new core courses for one of MSc-ME degree programs at "Dunarea de Jos" University, Engineering Faculty in Braila. These courses were developed in the Department of Technical Sciences, and take place in the area of multidisciplinary dynamic systems in order to reach this goal.

The basic idea is to teach these courses using a unified approach to multidisciplinary systems, with virtual laboratory experience and system simulation using different software packages and applications. Regarding the software it was considered two main directions, as follows: the first consisted by powerful and consecrated packages like Matlab®, Maple®, LabVIEW®, Working Model®, Adams®, Dymola®, and much more others, and the second framed by self-made (or home-made) software applications using one of the common high level programming languages at this moment. Of course, the very basic idea supposes permanent focusing on an inquiry-based problem-driven approach. This is a team effort and a large number of members from the Department of Technical Sciences have been involved in executing this project. Upon completion of this MSc-ME program, the students should be able to demonstrate a good understanding of design, modeling, identification, simulation, analysis, and deploy of multi- and inter-disciplinary engineering systems.

## 2. Virtual Instrumentation - A Challenge in Master-level Education

### 2.1. Goals and Objectives

The objective here is to develop and teach a set of courses in multi- and inter-disciplinary mechanical engineering including virtual laboratory experience for master engineering students.

The goals to be reached in are the development of the following

- Course material and a laboratory manual.
- A unified approach to teach multi- and inter-discipline mechanical engineering as a combination of various disciplines.
- A set of virtual experiments for each discipline laboratory.
- A set of applications to teach design, modeling, simulation, identification, analysis and deploy of multi-disciplinary engineering systems among master mechanical engineering students.
- Multi- and inter-disciplinary skills among MSc-ME students.

One of the challenge in education of future engineers at this moment is that the students need to be advised how to study and work. Another challenge is to increase their motivation so that they will graduate as MSc-ME.

### 2.2. Resources and Methods

Reorganization of MSc Programs at Engineering Faculty in Braila was the perfect reason to promote new ideas based on modern teaching methods. Therefore, *Computer Assisted Dynamics of Machines and Technological Equipments* MSc program, formerly known as *Dynamics of Machines and Equipments*, was the first beneficiary of laboratory virtualization. The list of courses provided for virtual laboratories implementation was given in Table 1. Note that the rest of courses in this MSc-ME program have no other directions unless the computer applications (such as FEA, CAD) or provides the basic information in addition with this master degree program (such as *Research management*, *Experimental research*).

**Table 1** Partial courses list for Computer Assisted Dynamics of Machines and Technological Equipments MSc Program at Engineering Faculty in Braila

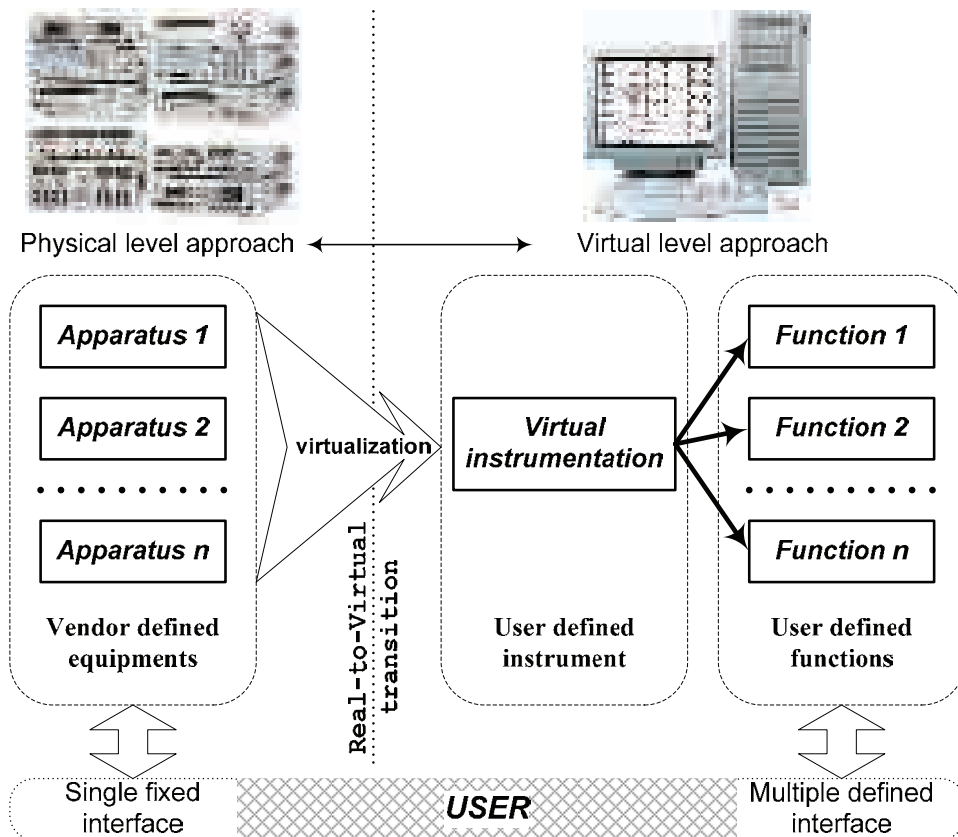
No.	Course	Index
1	Equipment - Environment Interaction and Dynamics Modeling	c-01
2	Nonlinear and Random Vibrations	c-11
3	Dynamics of Vibratory and Shocks Actions Equipments	c-12
4	Dynamics of Hydraulic Driving Components and Systems	c-13
5	Dynamics of Elevation and Transportation Machines	c-14
6	Dynamics of Embankment and Foundation Machines	c-15
7	Dynamics of Construction Materials Recycling Machines	c-16
8	Dynamics of Vibration Isolation Systems	c-17
9	Noise and Vibration Pollution Disproof	c-18
10	Computational Advanced Methods and Systems for Dynamics of Machines and Technological Equipments	c-21

Virtual instrumentation is a way to build computational models for real world, and it requires understanding of the very basic ideas of modeling and simulation. Hereby in MSc-ME program it was provided a basic course of *Dynamics Modeling*, where it is teach and emphasize the idea of

models. Modeling helps the system virtualization and it enables to specify the structure and the behavior of its. The model has a strong influence in how a problem is formulated and how a solution is framed. Each model may be expressed at different levels of precision. The best models are those deeply connected to the real world. Usually, one single model is not enough to provide the real phenomenon.

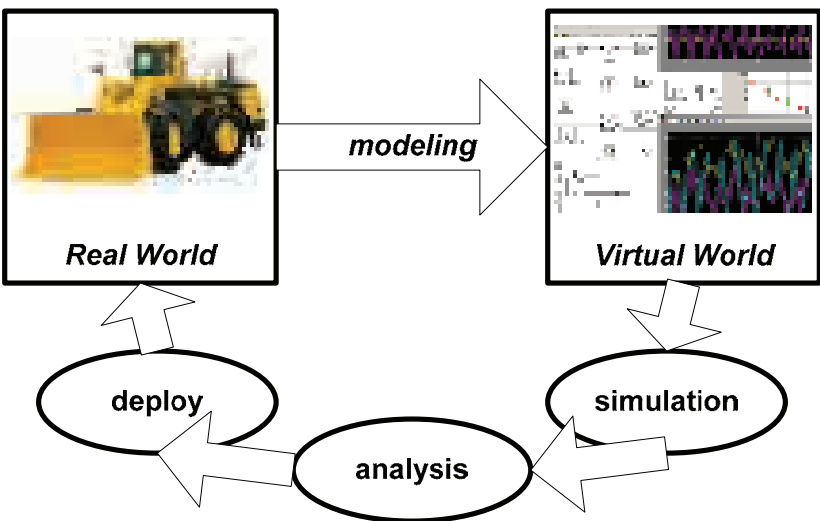
Regarding the tools for modeling, software engineering provides UML (*Unified Modeling Language*) standard that means a code visualization approach with 13 different diagrams. A lot of software packages are based on or includes this standard. Other development packages supply user friendly graphical tools for building and analyzing the model (as such well known LabVIEW® software). The ordinary trend is to move to the model driven development in the embedded system engineering. And virtual instrumentation is also model driven development.

Another trend in modeling and simulation is to develop a self-made application, using a high level programming languages or math-oriented software's, dedicated to analyze a practical problem at one time. This means a very profound approach of the reality, but a reduced feasibility regarding the future upgrades.

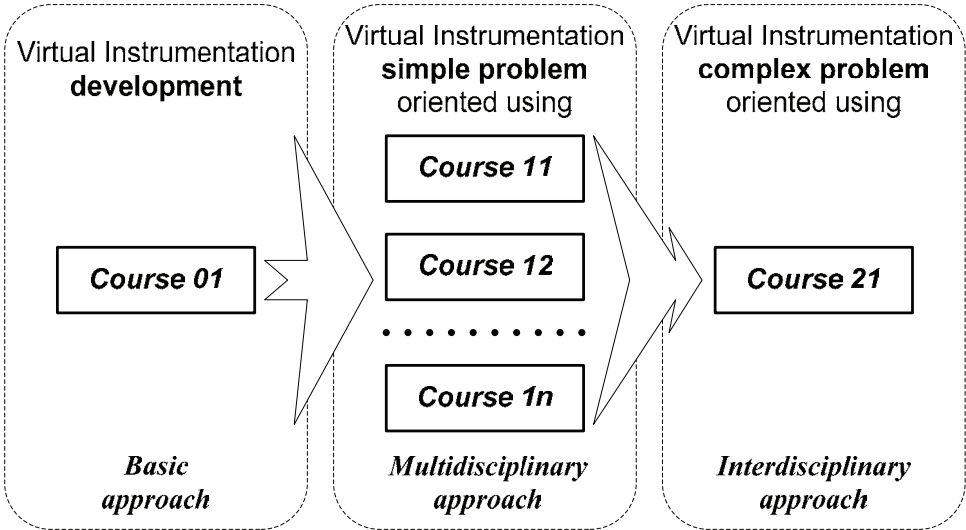


**Figure 1.** Real-to-Virtual World Transition schematics

Whatever the tools adopted for virtualization, the basic essential aspects are commonly and the schematic diagram of these was presented in Figure 1. This kind of virtual instrument helps to bring closer the reality through the separately physical instruments replacing with a set of virtual applications with the same functions at least. Acquiring real data and building the model is the main advantage of this approach. In Figure 2 is depicted another schematics that shows a deeply linkage between modeling, simulation, analysis and deploy. Taking over the essential data from the real system leads to a proper model for it. Next, it will be simulate, analyze, modify the initial hypothesis, and return to the model, until the results will be suiting for deploying.



**Figure 2.** Complete cycle of modeling-simulation-analysis-deploy



**Figure 3.** Basic structure of MSc-ME courses in order to use the virtual instrumentation (see text for details)

### 2.3. Implementation and Results

Courses structure presented in Figure 3 reveals the natural approach of the entire teaching process. The courses indexes have the significance in Table 1. The schematic in Figure 3 has except the improper disciplines for virtualization as it was presented in the previous paragraphs.

The first course enables to understand what a dynamic model is and to learn how it was build and how it works. This course offer the right support for sketching, creating, using and developing of a dynamic engineering system model.

The next category of courses includes the proper frame to understand and solve simple problems. Each mechanical area used in machines and technological equipments analysis have its own support. At this point the virtual instruments will be created in one of the provided software packages, as a function of its purpose.

The last category includes a course which offers the basics for complex and advanced problems solving. It supplies multiple software platforms to create, use and develop a dynamic model for machines and technological equipments. It is also an overview about the previous courses, regarding the restrictions of dedicated models and the expansion of their simulation and analysis capacity by output correlation, results unifying and global approach.

There are three essential phases in the previous concept: design - adopting of proper research algorithms for model and build it; prototyping - implementing and integrating models for simulation and analysis; deploying - prototypes can be scaled to the reality such as customer wanted. According this, the presented MSc-ME program provides a large set of practical examples of virtual instruments in computational dynamics of machines and technological equipments and uses them in teaching and learning environments.

### 3. Concluding Remarks

The engineering higher education must develop continuously. The new ideas have to adopt wisely, but relative speedily. In the future there will be appear or develop also other more dedicated environments for teaching and learning build based on virtual instrumentation concept. It is extremely important to understand also the key skills which are needed in the work of an engineer as the expert designer and developer of the new applications. To understand the higher level of abstraction by using the computational models and virtual prototypes is not very easy but to increase this understanding is one key task of the engineering teaching.

Every teacher has some answers to the challenges that appear permanently. Teacher's work has been changed, and at this moment the teacher is a trainer. Therefore the teachers and the students have to use various methods and techniques such as: collaboration learning, team works, problem based learning, learning in practice, learning by doing, e-learning, virtual learning environment, learning platforms, mobile learning devices, projects, etc.

Hereby the virtual instruments provide an excellent solution, because of a major reduction for laboratory equipment costs. They also provide access to expensive equipments with reduced costs and to expensive laboratories over the internet.

Learning based on virtual instruments is an excellent tool to improve engineering higher education because of its flexibility, which can be used to overcome the complexity of the master-

level engineering education opposites to other fields of education. It is clear that some disciplines are not easy to be teaching and learned based on virtual instrumentation, and a part of these may require expensive laboratory equipment. But, continuously development of virtualization techniques, methods and serviceable tools will provide a much more gain in flexibility of education process.

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# QUALITY ASSURANCE OF HIGHER EDUCATION QUALIFICATIONS IN ROMANIA

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## Abstract

*Within the Bologna Process, the European cooperation for quality assurance and recognition was one of the main objectives of the higher education architecture until 2010. Recently, cooperation among quality assurance agencies was supplemented by cooperation between the quality assurance agencies and the agencies for academic qualifications with a view to cooperative activities for the assurance of the quality of qualifications. This paper explores the benefits of agreements between the quality assurance agencies and the agencies for qualifications for the self-certification process of the National Frameworks for Higher Education Qualifications. So far, Belgium/Flemish Community, Germany, the Netherlands, Denmark, Ireland, Scotland and the United Kingdom finished the self-certification process and published their reports on the website of the Bologna Working Group for Qualifications. Romania will proceed the self-certification process from 2010 until 2012. Research methodology of this study is based on case studies and secondary data analysis. The connection between the development of the academic qualifications framework to other Bologna process action lines is an endeavor to integrate quality assurance, credit transfer and accumulation systems, lifelong learning, international mobilities, recognition of qualifications as action lines in the Bologna process.*

**Key words:** cooperation, quality assurance of qualifications, self-certification, curricula.

## 1. Introduction

Since 1993, the quality assurance system in Romania has gained considerable experience. This experience was recently recognized in 2008 by the ENQA: European Association for Quality Assurance in Higher Education through the admission of the Agency for Quality Assurance in Higher Education ARACIS as a full member of EQAR: the European Quality Assurance Register. The Board of ENQA agreed to grant ARACIS's full membership of ENQA for five years from 2 June 2009.

It feels good for a Romanian researcher to read that "According to the Bologna Process Stocktaking Report (prepared for the Ministerial Conference, Leuven, 2009), our country has achieved a grade of *excellent performance* for 8 out of the 12 indicators measuring the degree of implementation of the Bologna Process." (Quality Barometer, 2009).

Nevertheless, the increase of performance for most of the quality assurance indicators in the higher education system is a reason for pride, but there is still something at the level of process, highlighted

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in evaluation in 2009, indicating that the image of Romania at the European level in terms of formal implementation of the Bologna Principles is not, however, exclusively positive: "In this regard, one weakness is represented by **the delays in the implementation of the national qualifications framework in higher education**" (Quality Barometer, 2009, p.9). However, this delay is not so discouraging if one looks at the performance of other countries involved in the Bologna process. Only 7 countries out of the total of 46 Bologna countries published so far their self-certification reports on the official website of the Bologna Working Group on Qualifications Frameworks. <http://www.ond.vlaanderen.be/hogeronderwijs/bologna/qf/national.asp#B>.

As the deadline for publishing the self-certification report was prolonged until 2012, Romania still has the necessary time to fulfill the self-certification process and publish the report in due time.

Actually, my research started from an additional highlighted quality indicator that worried me when I first saw it: the degree of correlation between the qualities defined by the academic staff as important for employment and the skills defined by employers as important indicates a major gap " (Quality Barometer, 2009, p. 10). If in the case of the self-certification process there are not so big reasons for worry, in the case of orienting employers and teaching staff in the same direction, more intellectual and political work has to be done by ARACIS and ACPART. Therefore, my research questions envisaged two issues:

1. What are the best procedures for the self-certification process in Romania?
2. Which are the benefits of the self-certification process for the Romanian graduates of higher education on the labor market?

According to the NQFHE, a higher education qualification is the formal acknowledgement of the value of the individual learning outcomes for the labour market or for continuing education and training, by having a study document (diploma, certificate) giving the legal right to practice a profession. The self-certification process should prove that the Romanian NQFHE is compatible with the European EQFHE, and the qualifications of the Romanian graduates are compatible with the qualifications of other European graduates.

The following sections combine the results of recent research (2009) on the qualifications frameworks and my own findings from a survey among 94 academic staff from 2010 in order to present documented answers for the research questions and discussions for future actions.

## 2. Quality of Qualifications: from ACPART to ARACIS

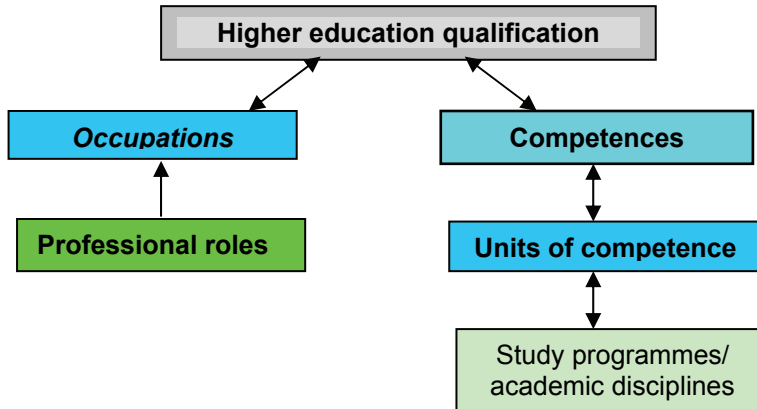
Although the National Framework for Qualifications in Romanian Higher Education NQFR -HE is not in its final stage, the Methodology for using NQFR-HE was legally established through the Romanian Minister of Education and Research Order no. 4430 from June 2009.

The National Agency for Qualifications in Higher Education ACPART developed the NQRHE as the unique instrument to determine the qualifications structure and ensure national recognition as well as international comparability and compatibility of qualifications acquired within the higher education system. NQFR-HE is the instrument for optimizing the university curricula for ensuring the convergence of academic contents taught in different European countries.

Since 2005, the ACPART Agency manages the description of the higher education professional qualifications for each programme of studies and validates the new qualifications (Zaharia S, 2008), while ARACIS Agency evaluates the content and the quality of the process which ends by certifying a specific higher education program as authorized or accredited by external evaluation.

Recently, cooperation among quality assurance agencies was supplemented by cooperation between the quality assurance agencies and the agencies for academic qualifications with a view to cooperative activities for the assurance of the quality of qualifications. The structure of the higher education qualifications (Figure 1) requires the intervention of experts from both agencies: ACPART and ARACIS:

**Figure 1: Description of a higher education qualification**



**Source : ACPART, 2008**

The quality of academic programmes is guaranteed by ARACIS through the authorization and accreditation procedures, but the quality of academic qualifications is an issue under discussion that became a part of the accreditation process in some countries (Germany) or a separate procedure to be undertaken by other organizations beyond the self-certification of NQF HE. This issue came on the policy agenda as a proof of responsibility towards the big number of students that increased in the academic year 2007 - 2008 to 896,258 students in Romania mainly as a result of the increase of the number of students in the private sector, respectively 379,608 students in the private sector (Report MECT, 2008). Consistent efforts at institutional and system levels were made in order to maintain quality of study programmes and increase the number of students at the same time.

### 3. Methodology

A research design is the logic that links the data to be collected (and the conclusions to be drawn) to the initial questions of the study. In order to respect this methodological requirement, the research methodology of this study was based on two case studies and secondary data analysis of three survey data from the research *Quality Barometer in Higher Education* carried out by ARACIS in 2009.

Gallup selected for ARACIS research in 2009 three samples of 1540 academic staff, 1256 employers and 1500 students with a sampling error of  $\pm 2,27\%$  guaranteed with a probability of 95% from 40 Romanian universities.

Secondary data analysis is a form of research in which the data collected and processed by one researcher are reanalyzed – often from a different perspective- by another. The advantages of

secondary data analysis are obvious: "it's faster than doing an entire survey and we can benefit from the work of topflight professionals" (Babbie E, 2001, p.270).

For explorative purposes, for the investigation of the self-certification process I have preferred the case study research strategy. I have chosen two countries for case studies: Germany and the Netherlands because their self-certification reports and other relevant documents that are already published on the Bologna Working Group for Qualifications.

Case studies are the preferred strategy when "how" or "why" questions are being posed, when the investigator has little control on the events, and when the focus is on a contemporary phenomenon within some real-life context. Such explanatory case studies also can be complemented by two other types- exploratory and descriptive case studies.

My own contribution comes from the data gathered by questionnaire in 2010 from a questionnaire e-survey on the utilization of the Romanian NQFHE in curricula development, with a sample of 94 teaching staff from 35 Romanian universities. The sample is representative at national level on the dimensions of gender and academic management levels distribution of the teaching staff.

#### **4. Procedures for self-certification in Europe**

Criteria and Procedures for verifying that national frameworks are compatible with the Bologna framework were established by the Bologna Working Group on Qualifications Frameworks Report in 2005 and were verified in all seven self-certification reports published so far. These six criteria are as follows:

1. The national framework for higher education qualifications and the body or bodies responsible for its development are designated by the national ministry with responsibility for higher education.
2. There is a clear and demonstrable link between the qualifications in the national framework and the cycle qualification descriptors of the European framework.
3. The national framework and its qualifications are demonstrably based on learning outcomes and the qualifications are linked to ECTS or ECTS compatible credits.
4. The procedures for inclusion of qualifications in the national framework are transparent.
5. The national quality assurance system for higher education refer to the national framework of qualifications and are consistent with the Berlin Communiqué and any subsequent communiqué agreed by ministers in the Bologna Process.
6. The national framework, and any alignment with the European framework, is referenced in all Diploma Supplements.
7. The responsibilities of the domestic parties to the national framework are clearly determined and published.

Procedures for verifying that national frameworks are compatible with the Bologna framework are as follows:

1. The competent national body/bodies shall certify the compatibility of the national framework with the European framework.
2. The self-certification process shall include the stated agreement of the quality assurance bodies in the country in question recognized through the Bologna Process
3. The self-certification process shall involve international experts.

4. The self-certification and the evidence supporting it shall be published and shall address separately each of the criteria set out.
5. The ENIC and NARIC networks shall maintain a public listing of States that have confirmed that they have completed the self-certification process [[www.enic-naric.net](http://www.enic-naric.net)]
6. The completion of the self-certification process shall be noted on Diploma Supplements issued subsequently by showing the link between the national framework and the European framework.

So far, Belgium/Flemish Community, Germany, the Netherlands, Denmark, Ireland, Scotland and the United Kingdom finished the self-certification process and published their reports on the website of the Bologna Working Group for Qualifications.

Romania will proceed the self-certification process from 2010 until 2012, therefore the experience of other countries would be useful.

After a synthesis of common features and specific issues for each country, I have selected in the next section two countries: Germany and the Netherlands out of the seven countries that published their self-certification reports so far.

## 5. Results

In this section are discussed the results of the self-evaluation reports published on the Bologna Working Group for Qualifications in two countries: the Netherlands and Germany.

Three variables were of interest in this analysis: institutions in charge with NQFHE, characteristics of the international commissions, and reporting procedures.

### The Netherlands

In the Dutch case, the Ministers of Education from the Netherlands and the Flemish Community delegated the Accreditation Organization of the Netherlands and Flanders NVAO to establish an independent committee of international experts. The main task of the independent committee was to verify the compatibility of the Dutch and Flemish NQFHE with the European overarching framework for qualifications QF-EHEA.

In accordance with the Terms of Reference for the self-certification process, the details of the procedures for verification can vary nationally.

The committee of 7 national and international experts checked all documents sent by the Dutch and Flemish ministries of education and involved all stakeholders in the evaluation of higher education qualifications.

The independent verification committee was asked to formulate recommendations for the NQFHE development for the future. Final conclusions of the self-certification process were reunited in two reports on the Dutch NQFHE and Flemish NQFHE and the Executive Council of the NVAO checked these conclusions against the seven criteria and six standards for self-certification published on the Bologna Working Group for Qualifications website.

Based on the NVAO stated agreement, in 2009, the two Dutch and Flemish ministries of education finished their self-certification process. NVAO emphasized that the Dutch NQFHE self-certification process was rather integrated in the implementation of the Bologna action lines

than a separate process. “*Dublin Descriptors* have been developed and eventually accepted by the different stakeholders in the Bologna process. These descriptors specify the general achievements of learners upon conclusion of the Bologna cycles” (NVAO, 2009).

The Verification Committee concluded that the National Framework of Qualifications in Higher Education in the Netherlands is compatible with the overarching Framework for Qualifications of the European Higher Education Area. “Enhanced communication to each group of stakeholders, especially students and employers, seems crucial” (NVAO, 2009).

For the future, the Dutch Ministry of Education that is the main institution responsible for the development of the NQFHE, delegated to the Accreditation Organization of the Netherlands and Flanders (NVAO) the monitorization and update of the NQFHE.

## Germany

BMBF- the German Federal Ministry of Education and Research in close cooperation with KMK- the Standing Conference of Ministers of Education and Cultural Affairs of the Länder of the Federal Republic of Germany are the main national institutions responsible for the development of higher education qualifications in Germany.

The national Bologna Working Group in March 2008 officially initiated the self-certification process to verify the compatibility of the Qualifications Framework for German Higher Education with the “Qualifications Framework for the European Higher Education Area”. In line with the recommendations contained in this report, was appointed a steering group of 7 experts, out of which two were international experts.

The steering group had produced a draft version of this report by July 2008, and this was subsequently presented to the relevant stakeholders and interested parties for comment. In September 2008 these stakeholders and interested parties were invited to attend a hearing, after which the steering group finalized the report (BMBF & KMK, 2008).

The relevant stakeholders and interested parties showed that all seven criteria and the six standards for implementing the certification process had been met. The steering group came to the conclusion that the “Qualifications Framework for German Higher Education Qualifications” conforms to the “Qualifications Framework for the European Higher Education Area”.

The “Qualifications Framework for German Higher Education Qualifications” reflects specific features of the German higher education system, although these do not conflict with the “Qualifications Framework for the European Higher Education Area,” but are rather to be understood as more detailed aspects. In particular, this applies to the guideline that requires a total of 300 ECTS points to be gained in Germany for attaining Master’s level.

In Germany all higher education institutions are required by the Education Law to organize their degree programmes according to the NQFHE. This compatibilization is externally evaluated during the accreditation process by the German Accreditation Council.

Both countries, the Netherlands and Germany received the same recommendation regarding the intensification of communication on the NQFHE with all stakeholders.

## 6. The benefits of the self-certification process for the Romanian graduates

Learning outcomes are “statements of what a learner is expected to know, understand and be able to demonstrate at the end of a period of learning. They are defined in terms of knowledge, skills, abilities and competencies that an individual will attain as a result of his or her successful engagement in a particular set of higher education experiences.

The European compatibilization of qualifications means also the compatibilization of curricula or learning experiences. My research proved that the participation of students and teaching staff to the international mobility programmes leads to the compatibility between the Romanian university curriculum and the contents of the European universities courses. The survey conducted in January 2010 among teaching staff indicates that 32% of the Romanian teaching staff respondents participated at least once in an international teaching stage. The participation in international experiences influence on the harmonization of curriculum was evaluated “in a very high measure” by 23% of respondents and “in a high measure” by 40% of the respondents to the questionnaire.

An important lesson for Romania from the Netherlands and Germany has implications for the work market planning. Good quality of qualifications is a warranty for a better labour market in the future. The German labour market is the best example in terms of planning the study programmes in direct connection with future employment opportunities.

The Gallup surveys designed for the Quality Barometer 2009 of ARACIS indicate that the 4 aspects employers look for in a graduate are poorly connected with the academic characteristics: 1. the graduate’s ability to work in a team, 2. to organize his or her work, his or her punctuality, 3. “morality” on labour market understood as graduates having an ethos of professionalism and 4. “communication skills” - with peers, superiors, customers.

The professional competences of higher education graduates are more efficiently developed if the academic contents of courses are harmonized with the contents taught in other countries. At present, the professional competences of the European higher education graduates obtained as a result of the national curriculum are considered international or European competences on the European labour market.

## 7. Discussion for Future Action

In April, 2008, the European Parliament adopted the Recommendation establishing the European Qualifications Framework for Lifelong Learning EQF/LLL. The EQF/LLL descriptors are generic, being used to describe all types of learning. It should be mentioned that there is some confusion among the EQFHE and EQF/LLL, but the Bologna Working Group recommends, in order to avoid confusion “that the promotion of European higher education should build on the overarching EHEA-framework, which includes the Dublin descriptors” (BFUG, 2009). The two frameworks will coexist, but for the higher education levels (levels 6, 7 and 8) will be mainly used the EQFHE.

Although all Bologna Process countries agreed on the European Qualifications Framework and developed their National Qualifications Frameworks, there are no initiatives for the development of a European Higher Education Curriculum, the majority of the countries operating with a national curriculum for developing European competences.



With regard to employment, my research from 2009 on career guidance departments from 39 Romanian universities proved the fact that the guidance systems for student career and employment are still poorly developed in universities, despite the fact that the academic staff assumes the function of training graduates for employment (Dima, A.M, 2009).

In Romania, ARACIS should administrate the National Register of Higher Education Programmes and ACPART should administrate the National Register of Higher Education Qualifications. In practice, none of the two registers were finalized so far as functional interactive data bases. Although located in the same building, ARACIS and ACPART do not have common projects, but common directions of action, functioning separately as two autonomous agencies with different mission and status, different staff and different resources.

Evaluation of competences of higher education graduates according to the European Framework of Qualifications EQF and employability are the new challenges for quality assurance indicators. For this reason, stakeholders may expect a closer cooperation between ACPART and ARACIS for the future.

## 8. Conclusions

Quality assurance is a basic principle of the Romanian NQFHE. Matching the quality of university study programmes to the professional qualifications requirements and developing university curriculum from the professional competences required by the labour market in Romania and Europe are two basic principles that are mentioned in the Methodology of development of the Romanian NQFHE.

According to its mission, ACPART sets procedures and instruments for the descriptions of qualifications in higher education, for promoting these qualifications, as well as procedures and instruments for monitoring, periodical evaluation and updating of NQFHE in Romania, but the self-certification process that will take place until 2012 proves that an agency should have external evaluation of its products and processes in order to acknowledge their quality to the interested stakeholders and public.

The examples of the self-certification process of the NQFHE in the Netherlands and Germany are useful for the self-certification process of the Romanian NQFHE especially as models of connecting of all stakeholders for a better work market planning.

Actually, the self-certification process of the NQFHE that involves national and international experts, independent from ACPART, is the first step proving the fact that an agency cannot set up criteria for evaluating the quality of its own products, but cooperation with other agencies and evaluation from the stakeholders are the correct indicators of its products quality. Self-reporting is not a productive strategy. More precisely, if ACPART sets procedures and instruments for the descriptions of qualifications in higher education, the monitoring of the quality of qualifications should be done by ARACIS or a different quality assurance agency in order to provide a fair and impartial judgment for the public.

Although all Bologna Process countries agreed on the European Qualifications Framework and developed their National Qualifications Frameworks, so far there are no initiatives for the development of a European Higher Education Curriculum, the majority of the countries are operating with their national curriculum. Still the professional competences of the European

higher education graduates obtained as a result of the national curriculum are considered international or European competences on the European labour market.

The connection between the development of the academic qualifications framework to other Bologna process action lines is an endeavor to integrate quality assurance, credit transfer and accumulation systems, lifelong learning, international mobilities, recognition of qualifications as action in lines the Bologna process.

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AGENȚIA ROMÂNĂ  
DE ASIGURARE A  
CALITĂȚII ÎN  
ÎNVĂȚĂMÂNTUL SUPERIOR

# ETHICAL ASPECTS OF QUALITY MANAGEMENT WITHIN A ROMANIAN MILITARY UNIVERSITY

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## Abstract

*For a university, be it military or not, to be deemed trustworthy, not only the letter, but also the spirit of the law must be complied with in the case of the norms and regulations governing its activity. Trust is consolidated by means of multiple ways, which aim at preventing the occurrence of any conditions that would favour or determine infringing acts on the laws and regulations. At national level, there are established certain principles and practices, which define the academic quality management. These are accepted by all the States within the European Space of Higher Education. The higher education institutions must agree to take the principles and practices set up at national level. But, at the same time, each university establishes certain elements, which make it unique. These elements are in accordance with the mission, organizational culture, academic tradition and adopted strategy. Universities must demonstrate that they come in conformity with the principles and practices applied as compulsory by their own management, working procedures and educational system. The academic deontological code imposes certain rules of conduct for all the members of the academic community. Furthermore, these rules must be first and foremost obeyed by the management structures. The paper aims at presenting a few ethical aspects of quality management within the framework of a Romanian military higher education institution.*

**Key words:** quality, ethics, management, code, integrity.

## 1. General Ethical Principles within a University

The status of a university provided with a secure reputation is obtained and strengthened under the conditions of putting into practice the programmes of study and a set of fundamental ethical principles on a regular basis. Out of these, it is worth to mention the following ones: respecting the human rights; assuring to the employees certain working conditions guaranteeing their health, safety and security at the working place; integrity, by not accepting any form of bribery or any corruption act and avoiding the conflicts of interests by the whole personnel; reporting the performance by providing complete information and accepting the external audit; promoting a loyal and ethical competition; not involving in the policy of the political parties, but defending and promoting the personnel's interests; directly and indirectly contributing to the activity of the local communities within the framework of which the activity is carried on; honestly and responsibly communicating with the customers, employees, representatives of the local and national community.

The minimal condition for a university to be considered trustworthy refers obviously not only to the letter, but also the spirit of the law which must be complied with in the case of the norms and regulations governing its activity. But this trust is strengthened and increased by all the means

aiming at preventing the coming into being and manifestations of any conditions or behaviour that might favour or lead to acts of infringing the laws, norms and regulations.

The legislature and regulations in all these domains are extremely severe; however, the universities have considered necessary to enact further moral rules specifying as minutely as possible the strengthening of the management and employees' awareness in this respect, but also the partners' trust in promoting relationships with universities.

Ethics, as it is promoted at present, highlights a set of responsibilities and moral norms, which must be taken into consideration by the leadership and the employees both in their mutual relationships and in the relations with the main groups that affect or are affected by the university activity. Each manager must gain his/ her employees' respect by means of the exemplary character of his/ her behaviour, by performance and competence. [1, 3]

Furthermore, we will analyze a few ethical aspects considered to be essential by the authors of the present study having in view a high quality of the university management: the managerial communication, the code of ethics and academic integrity as well as the ethics committee.

## **2. Ethics in Managerial Communication**

Individually, man is not born with ideas, principles, convictions or moral skills, but he/ she learns them and acquires them by living, working and training him/ herself. In this context, man learns how to communicate ethically or non-ethically and what this really means. [1]

Managerial communication connects the activities carried on within the framework of a certain organization. The fundamental principle of ethics in communication is to treat the subordinates as human beings, as reasonable, free, conscious and self-sufficient individuals responsible for the tasks assumed by them. [5] Although ethics does not represent an issue concerning the managers of the Romanian universities yet, within the institutions in which the boss is not biased and he/ she appreciates the personnel's qualities according to merit as well as keeps the promises, communication gets an ethical profile.

Ethics is determined by the norms and principles taken into consideration by the employees of an organization. Generally, it is difficult to determine what is ethical and what is non-ethical, this depending on the specific standards accepted by society and university. The factors determining an ethical managerial communication are the following ones: the governmental regulations, the ethical codes, the university regulations and the individual's characteristics. [4] The universities are concerned to develop an ethical behaviour in the case of their own employees. Many of them have ethical codes in general and according to the field of activity. The competitive managers elaborate ethical codes in the field of managerial communication, too. This represents a business card by means of which a certain image is created, namely the image regarding the manner in which the employees communicate. [2]

We suggest the following aspects which must be taken into account when designing an ethical code of managerial communication: [4, 6] treating the interlocutor with consideration; clearly expressing what is expected from the receptor; conveying the messages which represent and suggest a certain meaning and not meanings; offering correct and necessary information; actively listening and understanding what the dialogue partners have to say; sincerity; positive

attitude; taking into consideration the interlocutor's opinions even if they are divergent; keeping the sense of humour.

In the activity carried on within the framework of the university, the manager ascertains, on a regular basis, that there are certain attitudes and convictions shared by many employees or even by all of them. Although he/ she is in search for a reasonable explanation of this phenomenon, he/ she does not find it. However, he/ she feels that he/ she deals with a 'covert power' influencing the employees' behaviour. This is, in fact, the organizational culture. The manager plays the part of identifying what factor belonging to the organizational culture stimulates or inhibits the managerial communication. His/ her responsibility is to indicate the norms, which must be abandoned or altered and the norms that must be preserved or changed.

Further on, there are analysed the ethical aspects of the quality management within a Romanian military university. All these are related to the 'Academic Integrity' performance indicator, which is part of the 'Mission, Objectives and Academic Integrity' standard.

### **3. The Ethical and Academic Integrity Code of the Romanian Military University**

The ethical codes represent the reflection of the values systems and they aim at directing the group and human behaviours. The university is a long-term higher education institution whose aims, valid for each member belonging to it, include the professional development and recognition, under the conditions of the respect for the rule of law and human rights. All the members of the academic community must act by promoting the interest of the institution, creating a correct image and fulfilling the educational objectives of the institution.

The university respects the dignity of each member and promotes the academic integrity. The code of ethical behaviour and academic integrity is based upon the following principles: [6] the university cultivates and enriches the tradition of the Romanian higher education, which aims at shaping the qualities and values essential to exercise a certain profession; the academic integrity and ethical code represents a moral contract between the academic community as a whole and its members, contributing to the cohesion of its members, the creation of a climate based on cooperation and competition, the increase of the academy prestige; the code does not substitute for the norms and interior regulations and it cannot contravene them; this completes the University Charter and it is compulsory for all the members of the academic community to respect its stipulations.

#### **3.1. The Professional Activity**

The general ethical rules of the academic community must be the following ones: the university assures the protection and encouragement of the teaching staff, the auxiliary teaching staff and the administrative personnel, in improving the teaching, acquiring and research activities as well as providing the services specific to the educational act; the university has by law, the legal authority of setting up the discipline and normality in the case of breaking the norms of the present code or those stipulated in the Charter and in the laws in force; the institutional relationship of communication with the teaching staff and with the students promotes: the free exchange of ideas, the improvement of the teaching process, the freedom of speech, the participation in the academic structures, correct and transparent promotion procedures, the awarding of objective professional score and the individual right to ask for the collective debate of any issue in accordance with the correct and transparent procedures.

The academic freedom supposes the following elements: any member of the academic community must avoid to hurt the others' freedom, based on the respect for differences; the critical approach is encouraged as well as the intellectual partnership and the cooperation, irrespective of the political and religious opinions; the scientific objectivity is above any pressures resulted from personal or group interests; the academic freedom will be preserved even under the conditions in which the financing of certain activities is supported by extra-budgetary or private funds; the distortion of the scientific content of the lectures, making certain research results in the sense of the dependence on political, religious, economic and other factions, is sanctioned according to the legislation in force.

The members of the academic community must promote the non-discrimination and the equality of chances regarding the access to studies, employment and scientific as well as educational programmes. They will avoid and eliminate the conflicts of interests, which result from the intersection of several types of relations or positions affecting the judgement and the correct evaluations as well as the objectivity of community members' actions.

Any relation of direct financial or commercial nature or by means of some specialized legal persons belonging to the academic community, to the other employees, students or their families will be engaged only in the interest of the institution and only with its approval. No woman can be disfavoured due to the fact that she is pregnant, that she has children in her care, that she is a single mother, unmarried or divorced.

The whole academic community, the employees and students have the moral responsibility to inform the rector any case, act or phenomenon of individual or institutionalized corruption connected with the activity within the university.

There are considered to be serious forms of corruption, being forbidden, the following practices: the bribery and corruption in the case of any examination (entrance examination, graduation examination, exams at certain disciplines, buying, selling or substituting written papers, projects etc.) in exchange of money, objects or services; asking for money, services or presents by the members of the academic personnel as well as the attempt of bribery or co-interesting and bribing them under any other forms; collecting funds from the students for presents offered to the teaching staff participating in the graduation examinations, in the assessment of the B.A. projects etc.; asking for certain personal services, of any type, from persons who are or are to be under evaluation, employment or promotion, as well as offering such services in exchange of good will; offering, in order to obtain certain advantages, educational and/ or administrative services, which lie within the functional powers of that particular person as a member of the university; the favouritism in the process of evaluation, employment or promotion, of sharing the teaching or administrative tasks, must not be mistaken for the selection based on demonstrated competence.

The only accepted qualitative hierarchy is that of merit. For the students, merit is established according to the performance standards in the context of some evaluation criteria at lectures, seminars, laboratories, professional and sport competitions, graduation examination, involvement in the associative life, civic actions etc.

For the teaching staff, merit is established according to: the involvement in the knowledge development, the prestige brought to the institution and the specialty in which they work, the quality and the up-to-dateness of the lectures, seminars/ practical works, of the students' supervising activity, the quality of the scientific papers, winning research grants, involvement in



the university development, evaluation made by students, the programme of study, solving the students' problems, the attitude towards the personal progress etc.

For the members of the leading structures, the criteria refer especially to the efficiency of the resources management, the creation and preservation of the professional and moral standards established by the institution, applying the institutional legal regulations and the ethical norms rigorously, the evaluation being made by the representatives of the students, subordinates, the leadership of the superior structures etc.

There is encouraged and rewarded the teaching staff and students' orientation towards the scientific and pedagogical quality, especially towards excellence; there is promoted the spirit of initiative, the scientific curiosity, professional and managerial efficiency. The professionalism of the academic community members is characterized by: expertise in exerting the profession; experience and exigency in exerting the profession; identification with the profession and the capacity of cooperation with those who have the same concerns (belonging to the same field of activity); devotion towards the teaching and research activity; conviction in the capacity of self-perfection; cooperation with the other members of the university teaching staff.

The university defends the right to intellectual property. By its structures, which play an important part in the ethical evaluation, it is responsible for the ethical dimensions of any activities and research carried on within its framework. The intellectual honesty and correctness suppose the following aspects: the benefits and payments must be given to all those who are at the origin of the intellectual property; all those who have taken part in the different stages of research and whose results become public must be mentioned in the spirit of professional honesty; the university must assure the recognition of the intellectual property right to all the teaching staff and students involved; it is forbidden any form of intellectual fraud, which is sanctioned according to the usage and practice in the field; plagiarism is sanctioned; this type of situations is mentioned in the data basis of the ethics and academic integrity commission.

The dissemination of the professional knowledge is encouraged by the university through academic exchanges, without infringing the students' right to benefit from high quality teaching activities. The university encourages the activity of internal and international teaching as well as scientific representation of all its members.

### **3.2. The Educational Activity**

The existence of a personal relationship between the members of the academic community is forbidden if it endangers the integrity of the educational process. The non-fulfillment of the teaching responsibilities includes the following aspects: the arbitrary refusal to have an appropriate professional teaching behaviour; the interference in topics which are not connected with the academic curriculum; the infringement of the moral norms during the lectures, in the rest of the programme and/ or not respecting the students' scheduling at different activities; the students' evaluation according to other criteria than those of performance; unjustified delays in evaluating the students and communicating the results.

The code of ethics and academic integrity forbids: [6] the discrimination, including the harassment of a student because of race, religion, sex, ethnical origin, citizenship or other arbitrary or personal reasons; the use of the teaching staff member's position or abuse of power in order to influence the student's reasoning or consciousness due to arbitrary or personal

reasons; accomplishing some colleagues' professional competence evaluations according to other criteria than professional performance, merit, professional results etc; any discrimination or harassment (race, sex, religion, ethnical origin etc.); the infringement of some confidentiality rules in the relationships with the colleagues; not respecting the curricula and syllabi; not respecting the time schedule and the examinations.

The teaching staff members have the same rights and responsibilities just like all the other citizens, being free to express their views and take part in the political actions of the collectivity, outside the academic community as private persons. It is also forbidden to intentionally present personal views as points of view of the university as well as the refusal to participate, temporize or obstruct certain humanitarian actions necessary in exceptional situations.

### **3.3. Transparency**

The university respects the principle of transparency regarding all categories of information, except for the classified ones, which interest the academic community members, the potential candidates, the graduates, the institutions with which the public cooperates, assuring correct and consistent information. Thus, it is facilitated the equality of chances in competition and the assurance of the equitable access to the university resources. It is forbidden to hide, counterfeit or distort information, which can be accessed by all the academic community members as well as by the public.

The criteria of selection for covering the teaching positions must be specified rigorously and clearly, complying with the legal stipulations and advertising them. The students and the other beneficiaries of the formative process have the right to access clear information about the examination evaluation criteria even since the beginning of the teaching process as well as explanations regarding the obtained scores.

### **3.4. Personal, Professional and Social Responsibility**

The university encourages its members to distinguish themselves through sustained activity and involvement in the professional and public issues, through collegiality and responsibility. The academic programmes and activities must be oriented towards the needs of the society. When its members represent the university publicly, they must respect the ethical and professional standards.

The following aspects are considered to be discouraging and undesirable: behaviour denoting envy, cynicism, lack of kindness, vanity, lack of interest; systematic indifference towards the students, teaching staff and auxiliary personnel's requests; indifference in the cases in which it affects, to a great extent, the development of the educational and research process.

The university guarantees the rights of the academic community members. There are forbidden the slander, the libel, and the public disparage of the persons within the university by the members of its own academic community.

### **3.5. Respect and Tolerance**

The university promotes the respect for the dignity of each member in a climate freed by any harassment, exploitation, humiliation, contemptuous attitudes, threat or intimidation. The university adheres to the value of tolerance towards the differences among people, opinions, beliefs and intellectual preferences.

There are accepted and encouraged, in the spirit of the respect for the academic ethics, those critical attitudes based on scientific arguments or those of disagreement towards the actions of a person or group, which are not accompanied by aggressive or insulting behaviour, manifested during the activities carried on within the university. There are forbidden any forms of harassment and discrimination.

These are a few elements of the ethics and academic integrity code of the Romanian military university under analysis. Within the framework of a future work, the study may be extended in order to elaborate a code governing the activity of the university.

#### **4. The Commission of Ethics and Academic Integrity**

The commission of ethics and academic integrity coordinates and controls the application of the norms stipulated by the code of ethics and academic integrity. It has the following attributions: to take measures in order to apply the code of ethics and academic integrity; to analyse and find solutions to the denunciations and intimations referring to the deviations from ethics and academic integrity; to draw out an annual report regarding the situation of the university from the perspective of complying with the principles and stipulations of the ethics and academic integrity code; to propose and promote possible alterations or amendments of the ethics and academic integrity code; to notice the state institutions concerning the cases that are subject to criminal law and to place all the information detained regarding those particular cases at their service. With a view to applying the norms of the code, the Commission of ethics and academic integrity generates an internal investigation and receives intimations concerning the infringement of the stipulations from the behaviour code, formulates recommendations towards the university leadership for solving the cases of code infringement, elaborates studies and research regarding the aspects referring to ethics and academic integrity.

Under the jurisdiction of the ethics and academic integrity commission enter all the persons who belong to or have certain relationships with the university: students, non-teaching staff, leadership, teaching staff holding positions within the university or cooperating with the institution as well as other institutional partners. Under the jurisdiction of the commission enter both the acts taking place within the university as well as campus and those carried on outside it to the extent to which they involve the academic community members.

#### **5. Conclusions**

The study carried out on the ethics of quality management within a Romanian military university leads to drawing certain conclusions, which are valid not only in such a university.

The university offers a space free of intrusions, pressures and political, religious or economic constraints, except for those of scientific, legal or ethical nature. The university members are protected against censorship, manipulations, persecutions, under the conditions of the respect for the scientific standards and professional responsibilities. The university promotes an environment favorable to exercising the professional autonomy, the right to elaborate, alter, extend or perfect the programmes of study and research. For each academic community member, the right to take and apply decisions for his/ her own academic and professional career is guaranteed.

The academic community members must be treated equally, righteously, correctly and equitably, without any discrimination. The university assures the recognition, cultivation and reward for the personal and collective merits leading to the fulfillment of its institutional role.

The integrity of the relationship professor – student lies at the basis of the educational mission of the university. The teaching staff members respect the personality and the dignity of the students as individuals and adhere to the roles of intellectual mentors and counselors. The teaching staff members must make great efforts to cultivate an academic behaviour, to assure the correct evaluation of the students according to their real achievements and merits; they must avoid any exploitation, harassment or discrimination of the students and will protect their academic freedom.

The university management as well as the whole academic community have responsibilities resulting from their belonging to the academic community. Thus, the justified critics must be accepted showing respect for the academic freedom.

A future research will lay focus upon more elements included within the framework of the code of ethics and academic integrity. It will also highlight new elements strengthening the position of the ethics committee. The results of these research studies will lay the foundations for a strong ethics code as well as an ethics and academic integrity committee, which will be able to apply easier the code.

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AGENȚIA ROMÂNĂ  
DE ASIGURARE A  
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# AN OVERVIEW OF QUALITY IN HIGHER EDUCATION IN THE WEST AND RECOMMENDATIONS FOR ARAB UNIVERSITIES

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## Abstract

*The paper proposes to study quality in higher education. It presents the definitional problems related to the concept of quality, and, then, it shows the approaches to implementing quality. Approaches to quality in higher education in most countries have started with an assumption that, for various reasons, the quality of higher education needs monitoring. While there are some conflicting attitudes towards systems of quality management in the West and criticism of the bureaucratic procedures related to some methods of quality assessment, the paper also discusses the situation in Arab countries regarding quality in higher education. To sum up, governments around the world are looking for higher education to be more responsive in face of the needs of a changing world.*

**Key words:** Arab and Western universities, quality, higher education transformation.

## 1. Introduction

Over the last two decades quality has become an urgent international concern sweeping higher education. Top on the agenda of the World Conference on Higher Education, which took place in Paris in October 1998, was quality as a concern for all. Quality has become the concern of governments internationally as is indicated by the International Academy for Quality (IAQ); the EFQM which was founded in 1988 and is in charge of managing the European Quality Awards like the Malcolm Baldrige Model in the USA and the Deming Prize in Japan; the British Quality Foundation; the Teaching Quality Academy; the European Center for Total Management (ECTQM) and so on. In Arab universities, the provision of quality loses its real significance amid economic or political challenges.

The concern for quality in higher education is indeed caused by the cutback in public funding for universities and the government's requirement for value for money. Moreover, the move towards globalisation heightened the wave of competitiveness and made Western countries aware that they have to look for systems that are cost effective in funded services so as to compete at world stage. They fully realise that once competition enters the higher education market, each provider must find ways to distinguish the service it offers from that of its competitors.

## 2. Quality in Western universities: causes and prospects

However, the economic forces of the market that internationalisation unleashed on governments led to see some of the ideals embraced by Western universities of traditional repute challenged. "Pursuit of truth", perceived as the goal of higher education in the West for centuries was always regarded by

academics as a sufficient guarantee for investing in higher education to achieve the quality of outcomes. Expanding knowledge of students and enhancing their minds were part of the exceptional qualities offered by the university. It was only the elite who had the choice to pursue knowledge delivered by exceptional teachers and managed by exceptional staff. This served to make the universities enjoy some “academic independence of the kind articulated by von Humboldt, in the context of the establishment of the University of Berlin in 1809, expressed in the terms *Lernfreiheit* and *Lehrfreiheit*” (Penington, 1998, p.256). This state of things changed because of some important factors that shaped the world since the 1980s and reinforced what is known in the global age we live in as the fragmentation of time and space which David Harvey (1990) calls time-space compression (quoted in UNESCO, 2005). This new affair transformed the focus on truth and certainty to possibilities and probabilities. So, universities had to adapt to the changing world of knowledge and its laws.

In developed countries, there was the clear commitment to academic autonomy, but when governments were faced with increased demand for funding which came as a result of the growth of student enrolments which transformed higher education to mass higher education (Trow, 1974), the governments saw the need for regulating the quality of provision and delivery in higher education. Many academics see that quality is no longer a choice or a luxury but a requirement for the 1990s. The concern for quality in education means caring about the goals, needs, desires and interests of customers and making sure they are met (Whitaker & Moses 1994, p.76). But Lee Harvey sees that there has been little exploration of what quality is in higher education in his “An assessment of past and current approaches to quality in higher education”. He considers that the failure to address the question of the nature of quality is behind the suspicion and alarm or amusement that academic staff regard the quality procedures imposed on them. They see them as tools of intrusion and inquisitorial systems of accountability. In fact, the new quality revolution was not accepted by all as it reflected a sense of control and policing over the well established profession of venerated academics who regard themselves as the generators of all the wealth of knowledge and high quality research that characterise Western universities for a long time.

What is the best definition of quality in education is a matter of great confusion, abstraction and controversy. Quality in higher education is a complex concept that has eluded clear definition (Nightingale & O’Neil, 1994; Lengnick-Hall & Sanders, 1997; Marshall, 1998). Quality is most often defined as fitness for purpose related to the needs of the user/customer (Juran 1988). Lee Harvey, however, sees that this definition is rather vague as it is hard to define what fitness consists of. Harvey (1995) identifies five broad approaches to defining quality in higher education. These are quality as exceptional, perfection, fitness for purpose, value for money, and transformation. Transformative education is about adding value to the students by enhancing their attributes but it is also about empowering them as critical, reflective, transformative, lifelong learners (Astin, 1991; Harvey & Knight, 1996).

In the transformative model, quality relates to the way in which the educational experience enhances the knowledge, ability and skills of graduates as well as empowering the graduates (Harvey & Knight, 1996, p. 8). Lee Harvey discusses the view of transformative education or what others call qualitative change that should be the goal for achieving quality in higher education. The transformation that quality education achieves in learners is what makes them fit to assume leadership roles to transform the world they live in. This is what makes Lee Harvey calls this transformation as positive and active. For him, education is a participative process. Students are not products, customers or consumers but they are participants. Education is not a marketable service for a customer but an ongoing process of transformation of the participant. This is one way how some scholars have defined quality in higher education.



In a report (1993) presented to the Commission of the European Communities, we find the reasons for the attention given to quality in higher education, which are linked to the transformations that took place in education since the 1980s. Some of these reasons are linked to public funding and the need for more accountability to the funding bodies, the massification of higher education, democratisation and openness of institutions, internationalisation of education and the viability of higher education. It is the industrial and service sectors which were the first to utilize the systems of quality assurance. Afterwards, educational institutions which are seen, also, as organisations began to adopt the principles of quality assurance. Quality control is what measures up quality through standards that are defined along well-defined criteria to produce cost effective goods or services.

But quality control can be, also, seen as a tool for surveillance and intrusion for some academics. The concept of quality in this way is looked at as threatening the liberal establishment of their profession. The atmosphere evokes for them a top-down regime of control and inspection. For some critics, quality is a waste of energies and time just as any bureaucratic procedure. Hence, a tension has emerged between quality as-“accountability procedures” and quality as-“transformation”. Some see that quality is not, in fact, producing the transformation in students to meet the requirements of a rapidly changing world. Lee Harvey warns that by focusing on accountability, the goal to make education a medium for transforming students is undermined. He shows that external quality monitoring can be counter- productive as it does not ensure a culture of internal continuous improvement that guarantees transformative processes of education. He gives some examples of countries that adopted external quality monitoring and shows the failure of ensuring a sustained commitment to quality improvement. In Spain, for example, “evaluation fever” has not achieved the expected effectiveness (Quoted in Harvey, 1995). In the United States, with a longer history of evaluation, informed commentators have suggested that the impact is only peripheral (Quoted in Harvey, 1995). In Australia, the quality of university teaching is increasingly the subject of political rhetoric, but doubt remains about both actual performance outcomes and the role and relevance of the Australian Universities Quality Agency (AUQA). Present quality procedures are found to be inadequate, and scepticism about AUQA’s capacity to achieve its aims. (Guest & Duhs, 2003).

### 3. Quality in Arab universities: Challenges and Recommendations

We are in need of quality in Arab universities more than just rhetoric and political slogans used to receive the adulation of electorates or a fashionable catch all term or just simply as a passing fad. Instead of confidence in reform in the higher education of some Arab countries, we feel that there is a wave of doubt or disillusionment surrounding actual performance outcomes and the role and relevance of the actual agendas of reform. Real improvement in educational outcomes are likely only when “policy makers take to the road so as to gain first- hand experience of the problems faced by learners, teachers, principals and parents” (Diyen, 2004, p.221). Policy makers have to get out of their ivory towers to see how quality can be improved in education if they really mean to adopt the principles of quality improvement. Unfortunately, the development of quality assurance policies does not always take place as an integral part of Arab higher education reforms processes. (UNESCO, 2005) We must ensure that quality is top priority of institutional management at the grass- roots level of Arab universities, otherwise it will continue to be just a dream.

The concern with quality assurance in Arab universities was only dealt with seriously at the 7th meeting of the Regional Committee responsible for the application of the Convention (1995).



The ministers of Higher education, then, planned some resolutions to be adopted between 2000-2003 aiming at creating national agencies for quality assurance in higher education institutions. Until now, the number of states and institutions that have responded to the call of the Ministerial conferences is quite low. (UNESCO, 2005). At the same time, following a resolution by the Conference of the Ministers responsible of higher education in the Arab States, an expert committee set up by the Association of Arab universities has developed guidelines for self-assessment and accreditation of higher education institutions that were distributed to all members of the Association. "Many of the ideas and projects concerning quality assurance in higher education in the Arab States have not come to realization because of the lack of qualified human resources to carry them out" (UNESCO, 2005, p.6).

When Arab countries are ready to face the challenges in higher education with commitment, freedom and courage they will, then, be able to transform their rhetoric on quality to practice. They will be aware that poor quality causes waste through rework, and causes them to lose their capital in the competitive world of knowledge.

We have to look for ways to develop a quality culture in society first, so the implementation of quality assurance in higher education will be rooted in the whole culture. Funding must be allocated to training administrators and professors to acquire knowledge about quality and its managements systems. Without actual sensitisation of the role that quality should play in promoting and developing society, we will continue to see quality illiteracy prevailing in our reform programmes.

The transformation of Arab universities to quality institutions is achievable only if the following challenges are surmounted. The first challenge that impedes any attempt to apply the systems of quality assurances in Arab universities is financial dependence of some Arab states, and the deteriorating economic conditions. Higher education in poor Arab universities suffers severe resource constraints. Most of the countries are dependent on foreign aid or on the World Bank loans. In the report of the UN published on 17 January 2005, Kofi A. Annan urged the donating countries who would compete for the millennium goals to invest in health and education to alleviate poverty. He does not specify what type of education. When we read reports of the World Bank, we find that the latter is reducing lending to higher education and gives priority to basic education with the 1990 International Conference Education For all. (Samoff & Carrol, 2003). So, what is the fate of quality in universities if the latter are at the mercy of charitable donors or lenders? Crisis, deterioration and dependence will be the mark for defining their provision. How can poor Arab countries avail themselves of the potential in IT knowledge when they are not even equipped with traditional bases of knowledge? When libraries are not equipped with books and do not possess refereed journals; and have no audio-visual and electronic equipments; and when students do not find chairs in classrooms; and when we have outdated curricula; and when professors have no incentives to improve teaching or to allocate energies to research; and when research is produced for international companies which fund projects that meet their own needs, how can we expect these institutions to apply the procedures for quality assurance?

While universities in developed countries are competing to incorporate an "informatics culture", the universities in Arab countries have not reached even the minimum of international standards. It is beyond the scope of this paper to tackle this point, but what is obvious in such a deplorable situation is that poverty is a handicap for quality.

The second challenge is the relevance of higher education. In Arab universities there is no relationship between the productive and business sectors on the one hand and studies and research on the other hand. The research that is done by academics in universities to develop Arab countries relies on imported technologies and does not serve their local or regional needs. The result is that Arabs do not share in the production of information in the world but just receive it passively. But, if we continue to rely on imported information, we will never achieve autonomy and independence of higher education. If Arab countries do not design their own programmes for developing national policies to make higher education relevant to local and regional demands, higher educational institutions will not be responsive and producing development. Bernheim and Chaui write that “where the aims and methods of research are determined by links with the major research centres of the economically and militarily hegemonic countries,” (UNESCO, 2004, p.1) some countries will continue to be dispossessed of the right to information which now forms the basis of economic power. Arab countries have to make their universities autonomous and capable of ensuring the application of scientific and technological innovations to meet the social and political needs of their own societies which are some of the important prerequisites of quality in higher education. One of the criteria of the improvement of quality is autonomy. Bernheim and Chaui’s discussion of the negative effects of the channels of power which accompany globalisation can be used as a warning for Arab universities to call for concerted efforts from all the participants in higher education to address the issue of quality:

Insofar as economic hegemony belongs to financial capital and not productive capital, information prevails over knowledge proper since financial capital operates with purely virtual wealth, whose existence amounts to information itself. Such a situation produces, among other effects, one that is fairly precise: economic power is based on the possession of information which, as a result, becomes secret and ultimately constitutes a field of unprecedented economic and military competition while necessarily blocking democratic forces, which rest upon the right to information, both the right to obtain it and the right to produce and disseminate it. In other words, the knowledge society, from the information viewpoint, is governed by market (especially financial market) logic, so that it is neither appropriate nor conducive to the political action of civil society and the effective furtherance of requisite information and knowledge for social and cultural life (p.1).

The next challenge is linked to democratisation. We still see in Arab universities a tendency towards traditional teaching models while now the requirements for sustainable development and growth go beyond mere transmission-accumulation which characterises traditional teaching. The relationship of teacher/ learner should change. The teacher will be a co-worker with the student and this will make knowledge revolve around learning rather than teaching. If we analyse the relationship of teacher/learner in Arab universities, we will see traces of paternalism and tribal allegiance as characteristics of this relationship rather than the promotion of students as participants. This is however a natural reflection of the structure of top- down governance in Arab society in general. To allow students play the role of participants is one of the factors of quality assurance in democratic states. The transformation can occur only in an atmosphere where democracy and openness are dominant elements of the social and political establishment.

Another factor to the challenge towards the application of quality in Arab universities is also linked to the role in Arab universities. Women should play a real role in leadership positions in higher education. One of the tasks set out by the world declaration on higher education in the World Conference on Higher Education (Paris, October 1998) is the role given to women in decision making roles in higher education. But in Arab universities, women do not have the chance to use this right as we find only marginal roles given to them even in some so- called

avant-guard countries which overpraise themselves for restructuring their societies on the modern paradigms of liberalism.

Another aspect of democratisation is linked to the appointment of high rank officials in Arab Universities. We have to train people to develop a culture of continuous improvement which can succeed only through openness and democracy. If the policy of favouritism continues in the choice of presidents, rectors, deans, departments' chairs, the spirit of quality is undermined from within and can never be fulfilled. We need people who possess competencies in leadership, innovation, and team work; and, over all, quality of educational provision. We are in need of managers of quality education who can accommodate and initiate change, and who are not scared to lose their posts for taking initiatives and risks. We are in need of managers who are able to be self critical and ready for continuous improvement.

#### 4. Conclusion

To sum up, quality in higher education is a universal need for development and promotion for both western and Arab universities. It must be an international preoccupation for all countries to implement quality management systems to ensure high quality learning and research. However, we have to be cautious about some of the effects of quality monitoring systems. A lot of work is needed to make professors and staff accept the principles of control and management. Expertise should be sought to clarify the definitional problems of the concept of quality and change the antipathetic feelings towards quality by some academics to faith in the efficiency of quality outcomes. The words control and management suggest centralisation and authoritarianism. But, if we see quality management as a method of controlling processes rather than personnel, we will cease to feel uneasy about it.

Still, if we keep on emphasising the economist agenda of knowledge over the humanist approach of knowledge, we end up by producing or training graduates who fit a marketable world that is doomed to change rather than preparing graduates who are capable of producing sustainable development. If we let our quality assessment of higher education be determined by the market logic and its laws, we will fail to produce citizens who are equipped with knowledge that generates effective and long term improvement which is a guarantee for sustainable development.

Furthermore, in adopting quality assurance procedures, we have to be aware of cultural diversity and identity among countries. The institutions, the governments, the cultures of the world are different from one country to the next and the model of quality must not be only one for all. Differentiation is an asset and should not be undermined by the endorsement of a single approach to quality. This will create a spirit of conformity and may spoil efforts towards creativity and diversity which are the basis for quality improvement.

Moreover, the interference in higher education by either politics or economics will damage the inherent quality of the university. Frankfurter (quoted in Bok, 1982) explained that for "society's good, political power must abstain from intrusion into ...[the] freedom [of universities] except for reasons that are exigent and obviously compelling" (p.38). By seeking to rein in public expenditure in order to compete effectively in the new international era, we will tend to make education just as any commercial article which is devoid from the humanist sense that should characterise education. The role of a university should be to act as a guardian of freedom and critical thinking. But, if it gives in to too much control from government, it will cease to play this role. A university should prepare graduates to be armed with knowledge which allows them to have life long learning

which serves to problem solving. They should be equipped to use their human rights so as to be participants in leadership roles. But, as long as there is inequality in the world we will never see the fulfilment of quality in teaching; and quality will continue to remain just a slogan which is used by politicians. As long as there is inequality of IT knowledge in the world, we will continue to have a division between the haves and the have nots of quality. As long as there is poverty and no democracy in the developing world and third world countries, we will continue to see a large part of the world has no equitable access to quality in higher education.

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# ENTREPRENEURIAL BEHAVIOR OF HIGHER EDUCATION INSTITUTIONS IN THE CONTEXT OF THE KNOWLEDGE BASED SOCIETY

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## Abstract

*This paper focuses on entrepreneurial behavior of universities. Universities advance their reputation and their wealth by creating and disseminating knowledge. Innovations that universities bring, but also their entrepreneurship efforts, lead to a faster creation of knowledge and to its transfer in economic and social practice, contributing to the concept of knowledge based society. The research starting point were the case studies reported in the countries participating in **European Universities for Entrepreneurship - their Role in the Europe of Knowledge (EUEREK)** which suggest that severe financial constraints may inhibit creative entrepreneurship because many innovations require initial investment and some financial risks that institutions with limited resources are not willing to take. The case studies show inhibitors and stimulating factors. We consider these to be the major contributions of this research to prior literature. The second part of this paper focuses on Romanian universities and their evolution since 1990. The market of consumption of higher education has grown intensively but is still flawed in certain areas. The financial constraints and opportunities are the key factors of the entrepreneurial activity orientation. We conclude that financial constraints and opportunities are the key factors of the entrepreneurial activity orientation. Governments can stimulate entrepreneurial behavior of universities by the mechanisms used for allocating resources. This research is aimed at raising awareness and includes a critical analysis of Romanian universities entrepreneurial inhibitors.*

**Key words:** "the entrepreneurial university", "academic capitalism", "intellectual entrepreneurship".

## 1. European and national premises regarding knowledge based society

The European leaders have met in Lisbon in 2000, announcing their intention to make Europe the "*most competitive and dynamic knowledge based economy in the world*" by 2010 (A. Toffler, 2006). Lisbon Strategy highlights the current priorities at EU level: Investment in research; Science and innovation; Development of a competitive business environment; Labor market adaptation according to the demographic challenges and energy policy and climate changes. Romania's National Strategy for CDI is set in the National Research, Development and Innovation Plan for 2007-2013 (PN II), approved by HG 475/2007. In PN II vision, the role of the national system of CDI is to develop science and technology to increase economic competitiveness, improve social quality and knowledge accumulation of recovery potential.

## 2. The university seen as an entrepreneurial organization that provides education, research and facilities for students

Integration of research along with education in the hard core of academic mission was called "the first university revolution" (Etzkowitz, 2003, quoted by Mircea Miclea in *Higher Education in Europe*, UNESCO CEPES Vol. 31, no. 2 July 2006 p. 104) . The new universities were already



moving towards the second revolution that tends to transform universities into genuine business providers of education that can perform research and develop economic activities such as facilities offers for students. These new changes are characterized by expressions such as "the entrepreneurial university," "academic capitalism "," intellectual entrepreneurship ". Clearly, the university as a public utility institution with the mission to provide education can be seen in terms of organization and management as an enterprise with a specific business object. The university is led by the teaching staff, by self-management and not by professional management. From this perspective the university is not an entrepreneurial or management organization. The entrepreneurial character is given by the management style used and also by entrepreneurial activities undertaken to fulfill the mission of education.

### 3. Entrepreneurship aspects in the study cases reported in EUEREK project

The attitude and activities of entrepreneurs arise from innovation and risk taking if we expect further benefits. The funding is the key indicator in the management of any business activities because any innovation requires risks taking and has an economic dimension. Universities are institutions that advance their reputation and their wealth (patrimonial and human) by creating and disseminating knowledge. If the innovations that universities bring and the assumed risks lead to a faster creation of knowledge and to their transfer in economic and social practice, then their entrepreneurship contributes towards the knowledge based society. Any organization with adequate incomes compared to the needs and the aspirations has a minimal motivation to engage in risky innovations. In this case, if a university is not authorized to retain and manage autonomous their own generated revenues, it is not an economic incentive to supplement the budgetary allocations through the sale of academic services. The financial constraints and opportunities are the key factors of the entrepreneurial activity orientation. In this respect, the case studies reported in the countries participating in *European Universities for Entrepreneurship - their Role in the Europe of Knowledge (EUEREK)* suggest that severe financial constraints may inhibit creative entrepreneurship because many innovations require initial investment and some financial risks that institutions with limited resources are not willing to take. Typically, any additional income arising from research and teaching is cashed at the university central level and not at the level of university's faculties, departments or work teams. Such arrangements do not encourage entrepreneurial behavior at individual level or working group's level in the university. Governments can stimulate entrepreneurial behavior of universities by the mechanisms used for allocating resources. If they are allocated for the academic services provided, for the aspirations and achievements in research or for student's recruitment, the higher education institutions are encouraged to be oriented to the specific market and entrepreneurial behavior.

The major financial indicators for assessing the potential of the business activities of the universities are: *the source of incomes* (public represented by budgetary allocations and private represented by for their own incomes), *the mechanisms by which incomes are received*, *the procedures for allocating resources within the institutions*.

The entrepreneurship dimension in universities can be measured by their entrepreneurial behavior. Five different categories of entrepreneurial behavior can be observed in the EUEREK project:

- *Private universities that have the advantage of the new entrants into higher education (English universities have private profile and are similar to the U.S. universities where governing organisms are similar to corporate management boards);*
- *Institutions highly involved in terms of entrepreneurship stimulated by government initiatives;*



- *Major independent institutions involved from the entrepreneurial perspective but not directly stimulated by government initiatives;*
- *Small departments, faculties and research centers;*
- *Education with the help of associate teaching staff, research and counseling by involving each individual academic staff.*

In 2004, the institutional case studies had very different income profiles. Budget income reached rates of 70% in universities in Finland, Poland, and Spain to 0% in private universities from Moldova, Poland, Spain and UK. Study fees are complementary to state budget funding in these extreme cases ranging from over 90 per cent in the private universities in Poland and Spain to zero in Finland and Sweden. The percentage of non-government source of income from research ranges from over 60 per cent in one of the UK (Nottingham) institutions to zero in some Moldovan and Polish universities. These differences depend on the different legal and political situation of universities in these countries. For example, in Finland and Sweden the educational activities of universities are still regarded as a public service and they are not allowed to charge fees for any of their regular teaching activities, although recent changes in their legal status now permit universities to charge some fees for courses that are not part of their mainstream academic work. At the other extreme, the private universities in England, Poland, Spain and Moldova are almost entirely dependent on student fees. The financial strategy of private university in Nottingham (characterized as being research oriented) has led to permanently financial balance, despite the constraints of public financing and entrepreneurial activities which are assumed. This, in part because of the reserve held from the income surplus obtained following the variety of income generating activities. In 2004, the accumulated reserves held attained almost 40% of revenues. Even so, the university could not afford taking significant risks. In Nottingham University the financial strategy and the internal allocation of resources are closely aligned with the management strategic objectives. The strategic objectives to increase disposable incomes for Nottingham University leads to initiate the following entrepreneurial activities:

- *funding of voluntary in advance retirement plan of staff who contribute less significantly to revenues growth of university;*
- *initial funding of those teaching positions that can be auto-financed through results of educational processes and through research findings;*
- *the coverage of at least the costs of providing research services to sponsors and other customers;*
- *use of a part of university invested capital in projects associated with the process of teaching, research and social facilities in order to improve and maintain the pace of development in the future.*
- *increasing the proportion of foreign students who pay full school fees.*
- *finding and developing opportunities for exploitation through government authorities and organisms the research results obtained by teaching staff;*
- *funding allocations to departments based on the gains made by these for university, meaning practicing an incentive funding at departmental level, depending on the incomes generated.*

These income generation strategies are accompanied by procedures for internal allocation of resources including:

- The installation of a new integrated funding and acquisitions system for university to streamline the financial processes;
- Registration of all facilities (utilities) at direct costs of acquisition, including cost of assistance/long-term maintenance;

- The distribution of equipment obtained through grants based on a formula (proportional);
- The selective limitation of cover vacancies ensuring a balance between the need to reduce costs and finding the source of financing by the academic staff and related activities (through self-funding or other explicit resources);
- The consideration of internal model for allocation functions of the available resources.

In their own/internal model of resources allocation at the University of Nottingham, the departments (faculties) receive their gross income from which they have to pay their costs proportionally to: (1) their consumption of utilities (energy, maintenance, library and other important services), (2) their own share in the strategic budget managed by university. The purpose of this work style is to increase transparency of costs for the education services provided, so that the individualized services for departments and faculties to be more effective and efficient. Nottingham University is recognized as a research-oriented university always trying to transfer innovations into commercial products by investing in selling of intellectual property rights obtained. Basic strategy is to create and transfer knowledge to students and commercial exploitation of their intellectual property. The importance of research is demonstrated by creating the Office for Research and Innovation Services, which has 45 employees. The entire entrepreneurial activity research is valued at 222 million per year which is approximately half of total revenues. About 15-20 million of the revenues from entrepreneurial research are from industry. University holds equity capital or is a partner in 27 satellite companies (spin-out companies). This holding of corporate shares expresses explicitly an entrepreneurial behavior.

Lancaster University, which represents an illustrative case study for entrepreneurial behavior, has announced plans to refinance its 1995 Debenture Stock. The redemption became effective through a new facility agreement with the Royal Bank of Scotland (RBS). The University has also secured credit approved terms from RBS for a revolving credit facility to support its ongoing Capital Programme. Officials of university (Vice Chancellor of Lancaster University <http://domino.lancs.ac.uk/info/lunews.nsf/r/8cf2>) commented that the refinancing would give Lancaster greater flexibility to pursue its strategic plan. It seems that this refinancing will give Lancaster opportunities to invest further in exciting new projects to improve the student experience, boost research and maintain excellent teaching. On the other hand, the timing of the refinancing was a prudent move for the University. Current rates of interest are currently low, much lower than when the University issued its bond 14 years ago so it makes sense for Lancaster to make an arrangement which will result in both better terms and in greater flexibility to realize its strategic objectives. Lancaster's financial security places the institution in the top group of UK universities. Over the past 7 years the University's compound annual growth rate has averaged 9.3%, research income has increased by 68% and dependence on HEFCE funds has fallen to 29% as income streams have diversified. In 2007, the University's credit rating was raised to 'A' from 'A-' by Standard & Poor's Ratings Services. The new rating reflects the University's underlying strengths especially its reputation for teaching and research, consistent overall student demand and strong financial performance relative to its peers. Lancaster is one of only a few UK Universities to have a public credit rating. More than £300m has been invested into the estate over the last 5 years, transforming the campus. Key developments include new academic centers of excellence, student social facilities, and improved teaching spaces and one of the largest student residences project in the UK with 3385 new rooms. The latest phase of building has resulted in a further 963 'eco friendly' rooms which have won a number of environmental awards. The revolving credit facility (together with the University's own resources) will be used to drive the next cycle of capital investment at Lancaster. Future plans include: further development of the Lancaster University Management School, new facilities for the Lancaster Institute of Contemporary Arts, new facilities for the School of Health &

Medicine, new sporting facilities. Lancaster University was the first UK University to float a Debenture on the stock exchange and launched its £35 million First Mortgage Debenture Stock in April 1995. This was to fund capital investments on the campus which included an extension to the existing Library and the creation of the Ruskin Library. Around £45 million will be spent on redeeming the outstanding 9.875% debenture, including compensation to the bond holders for redeeming the bond early. The existing bond is due to mature in 2025.

#### **4. Financing and entrepreneurial activity aspects of universities in Romania**

Nowadays, in order to be considered prestigious universities, they should be aggressively, innovative, proactive and responsive to the needs of individuals with interest in education (students, employers, local communities etc.). This means that along with education and research, an entrepreneurial university should be deeply involved in economic and social development of the region and country becoming an agent for promoting the concept of knowledge based economy. University entrepreneurship has promoters both inside and outside the university. Outside the university: first, the government imposes, using public funding, the involvement of universities in the economic and social development and on the other part the economy expects knowledge profit-making to increase its competitiveness on market. Within the university: first, students as customers or consumers of services of higher education requires a better quality of the educational process and a greater awareness of their social and learning needs, and on the other hand, academic departments and colleges have become more aware than ever that their reputation depends on the relevance of their work in the eyes of those who have interest in the education's mission (stakeholders). In this context, universities are focused on the following aspects:

- a) the reaction of universities on the specific markets in which they operate;
- b) the diversification of financial resources types;
- c) the expansion of entrepreneurial activities and the stimulation of entrepreneurial attitude in the academic departments;
- d) encouragement of an entrepreneurial culture within the organizational culture;
- e) Promoting academic entrepreneurial governance.

The three specific and interrelated markets in which universities operate and in which academic competition occurs are:

- A market of consumption of higher education (learning and teaching, research and services / facilities for students);
- A market of universities prestige reflected by ratings and rankings;
- An academic labor market in which academic staff competes.

The competition is manifested more strongly on the higher education consumption market. In post-revolutionary Romania this may be analyzed on the universities entrepreneurial feedback. To the culminant rising demand for higher education recorded immediately after 1990, universities reactions were:

- Growing number of new universities and increasing the number of faculties and departments under their control. If in 1990 there were no private universities, at the end of 2005 were registered and accredited 49 private universities where the number of state-funded ones has doubled. On average, annually, they were set up about 4 public and private universities. For example, Babes-Bolyai University (BBU), Cluj grew departments and faculty from 7 in 1990 to 20 in 2005.
- The Exponential growth of the number of university programs of study (specialization). For example, the BBU has seen an increase of the specializations from 19 in 1990 to over 100 in 2005.

- Diversification of ways of knowledge delivery. Thus, by 2005, new methods such as distance education (distance-learning courses), e-learning (combined web-based learning) and interactive learning in front (face to face interactions) were applied for 26 specializations on more than 4,000 university students.

## 5. Conclusion

In conclusion, at the institutional level the entrepreneurial response to increasing social need for academic education in Romania was the establishment of new universities, the establishment of new faculties, developing new specializations and diversification of teaching-learning methods and assessments. Another aspect characterizing the situation of state-funded universities in Romania is the employment of budget allocations procedures also for university own revenues derived primarily from tuition fees. This limits the eagerness for entrepreneurial behavior and creative allocate limited resources to cover the needs of students in the educational process line (techniques and methods of learning), research (research centers) and institution facilities (sports, leisure, accommodation facilities). Any surplus from universities or faculties own revenues (from study fees) can not be recovered even by saving instruments and are allocated by redistribution to cover financing needs of faculty with a deficit due to the low number of students. In these conditions is at least inappropriate even morally wrong that the income-generating faculties cover the deficits of those faculties without any income from study fees. The example of strategy for internal allocation of financial resources at the University Nottingham may be followed through legislative changes concerning the rules of the universities and faculties own incomes. Investing in corporate ownership could be a first entrepreneurial activity.

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# STUDENT PARTICIPATION IN QUALITY ASSURANCE IN CROATIA

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## Abstract

*In March 2010, Agency for Science and Higher Education organised a workshop for student representatives from all Croatian HEIs with aim to collect data and to emphasise their role, performance, contribution and experience in development of QA system, as well as their role and effectiveness in internal and external evaluation of higher education system. Conclusion of the workshop is that Croatian students are involved in development, implementation, evaluation and enhancement of the QA system/processes at all levels, in accordance with the Berlin Communiqué, good practice and national legislation. A number of areas of good practice were identified, and a number of recommendations were made to students unions at HEIs to enhance the involvement and performance of students in QA processes. Involving students in evaluation processes represents the cornerstone of further democratisation and wellbeing of our society. It is recognised as a great challenge and an ongoing process.*

**Key words:** student, quality assurance, evaluation.

## 1. Introduction

Looking at the education development trends in Europe and throughout the world, Croatia has recognised the need to transform its educational system to meet the new requirements. By signing the Bologna Declaration in 2001, Croatia has started a process of serious transformation of its higher education system.

The aim has been to develop a more flexible and effective higher educational system that is compatible with other higher educational systems within European Higher Education Area (EHEA). Process of harmonisation of Croatian higher education system with EHEA has been accompanied by changing the roles and responsibilities of all stakeholders, changing our legislation as well as building quality culture and developing quality assurance processes. The new Act on Quality Assurance in Science and Higher Education (Official Gazette 45/09 [1]).) was adopted in 2009. This Act has been a final framework that allows for an adjustment of the Croatian higher education system with The Standards and Guidelines for the European Higher Education Area – ESG (ENQA, Helsinki, 2007 [2]). In Croatia, the ESG were officially adopted in 2006 but were not mentioned in the binding legislation until 2009.

Lack of adequate legal framework notwithstanding, the involvement of students as stakeholders in higher education was introduced at all levels long before the adoption of new Act on Quality Assurance in 2009, in both internal and external quality assurance of higher education institutions (HEIs), and the activities of the Agency for Science and Higher Education - only national agency in the Republic of Croatia.

Student participation at all quality assurance levels/activities give us a new and valuable perspective on quality of higher education that sometimes differs from perspectives of other stakeholders.

## **2. ASHE activities in enhancing quality culture**

Agency for Science and Higher Education was established in 2005, and one of its main tasks has always been working on building and enhancing of quality culture at individual, institutional and national level. ASHE faced a challenging task of promoting approach that puts the primary responsibility for developing quality culture – that has to be incorporated in the everyday work of all stakeholders and spread throughout all levels of HEIs - on HEIs, while at the same time respecting HEIs autonomy. During CARDS 2003 project "Furtherance of the Agency for Science and Higher Education in its Quality Assurance Role and Development of a Supporting Information System" (2006-2008) ASHE started with an organised process of assisting HEIs in establishing of their quality assurance units, with the goal of confirming public trust in Croatian HEIs as independent and responsible institutions that are committed to the implementation of the Bologna process. This included a proactive role for students, recognising students as full partners, their inclusion in decision-making bodies of the HEIs, QA units at HEIs, their active participation in internal QA processes, involvement in internal quality assurance procedures and in preparation of self-assessment reports. According to student unions, anti-discrimination policies, gender equality and minority rights issues are being included in Croatian HEIs' statutes and are being strictly followed.

ASHE operates according to ESG, and a student representative is a member of its Management Board. Students are equal members of all review teams that are selected for external quality assurance processes carried out by ASHE. Students are also members of Accreditation Council, ASHE's expert and the decision-making body.

## **3. ASHE workshop on student involvement in the implementation of Bologna process in Croatia**

ASHE's QA Department organised and actively participated in more than 30 seminars/workshops on different topics related to quality assurance as an effort to help HEIs in establishing of their QA units. In April 2009 ASHE organised a workshop aimed at assessing what has been achieved so far with the implementation of the concept. The aim was to capture experience and real effects felt by students of Croatian HEIs. What is students' continuous constructive contribution to the development of Bologna Process at national and international level? We asked the participants to present us analyses of Bologna process implementation at their respective HEIs seen from student perspective.

## **4. Student experiences**

It was obvious that students are highly motivated to fulfil their role as equal stakeholders in implementation of Bologna process. They are competent, active and constructive partners in the establishment and shaping of national higher education although they need to be more active on European scene. National student union and its branches operate independently. Legislation ensures students' involvement in institutional governance and students are fully involved in the decision-making process related to their education. Students are considered and treated as equal partners in institutional governance.



On the other hand, evaluation of their understanding of ESG and the level of commitment to its implementation at their respective HEIs showed that some additional efforts have to be made.

In 2005 study programmes were harmonised with the Bologna Declaration and an accreditation review procedure was carried out for undergraduate and graduate academic programmes proposed by higher education institutions in the Republic of Croatia. This was also the year when the first generation of students was enrolled to programmes accredited according to the Bologna declaration. The process of accreditation of new programmes is still an ongoing one. Five years into the process and at the end of the first decade of implementation of Bologna process, ASHE was reported that implementation of the cycles and inadequate understanding of the purpose of these reforms has negatively affected students, pressuring them to follow longer periods of study in order to reach a position of sustainable employment. Enhancing employability stays the ultimate priority of the reform. The evolution towards process-oriented and interdisciplinary work organisation increasingly requires employees to be adaptable, to develop problem solving skills and to work in teams. It is an important issue considering that Croatia also faces problems with understanding the employability of students that have finished the first cycle by the employers and the business community. Raising the employability is a key issue for improving the functioning of labour markets. Graduates' employability thus has to become a key mission for HEIs.

Critically assessing ECTS implementation in terms of both learning outcomes and student workload, for all the Bologna cycles, students reported that ECTS were not able to fully reflect student workload. To make amends in this respect, HEIs have already started with the ECTS revision process. There is also a need of redesigning the learning outcomes. Students are generally satisfied with the assessment procedure. The appeal procedure is mostly defined and transparently available.

Regarding the issue of drop-out rates, student representatives see many factors that leads to it: failing study orientation policies, low self-esteem, lack of integration in the academic community, lack of proper student counselling, etc. Generally the biggest drop-out occurs during first two semesters of studying. Passing grades range widely.

Mobility is far from satisfactory level. This is the area where a lot of effort has to be made and where there is a lot of space for improvement. This is mostly carried out through ERASMUS programme. Regarding the issue of mobility, students face a lot of difficulties: recognition of the period spent studying abroad, recognition of ECTS credits, organising of teaching process in foreign language, student support services etc.

Students find that HEIs are transparently providing accurate and relevant information on programmes they are offering, learning outcomes of these programmes, qualifications they award, teaching, learning and assessment procedures used, and on learning opportunities that are available to students. With introduction of State Matura (secondary school leaving exam) in 2010 that enables equal access to higher education system to all candidates, a significant improvement of transparency was made.

## 5. Conclusion

The overall experiences of students regarding the involvement in quality assurance processes according to ESG have so far been positive. It is vital that their role as equal stakeholders in



higher education is emphasised (Bologna with student eyes 2009 [3]). At national level students participate at all levels:

- in governance of HEIs
- in internal QA processes
- in preparation of self-assessment reports
- in governance of ASHE (Management Board) and in Accreditation Council (expert and decision-making body)
- in all types of external reviews of HEIs (reaccreditation, audit) as equal members of expert teams.

Special effort has to be made to ensure progress in student participation in implementing ESG at HEIs level. Main goals are to increase mobility and employability, and redefine students' workload and ECTS. It is necessary to make reliable action plans at HEIs, monitor their implementation and evaluate future progress.

### **Acknowledgement**

I would like to thank all participants of ASHE seminar for all the work and presentations they made, providing us the information about their HEIs and student experience in implementation of Bologna process.

I would like to thank all members of ASHE Quality Audit Department for their work and dedication.

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# ALL-CHANGING UNIVERSITY: LEARN, UNLEARN, RELEARN

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## Abstract

The present paper highlights some challenges that universities are confronted with in today society, under increasing information entropy: the multiplication of media and tools for communication with students, deflation or obsolescence of old cognitive patterns, ever greater difficulty on hierarchy establishing, 'massification' of higher education while running the risk of educational-fake values emergence; legal entropy: autonomy, subordination vs. coordination, anti-reform; educational entropy: transversal competences – as higher cross-connections based upon fundamental competences, and not replacement of basics with vague eclectic information. The comparative analysis undertaken between such entropic manifestations led authors to envisage qualitatively differentiated forms of higher education and conclude that reality itself compels human society – so education too – taking the way back, from theoretical analysis to concrete reality, by leaving the old way of linear thinking in favour of non-linear vision.

**Keywords:** university, curricular reform, knowledge transfer, non-linear thinking, multiple-speed-rates-university.

## 1. Introduction: The University as a trainer of skilled actors for society's works

Recent debates on the Romanian Education Bill have noticed that a number of “revolutionary” suggestions included therein had also been of concern to inter-war teachers about ninety years ago, when an educational journal article [1] proposed that student's *portfolio* should record not only their various evaluation grades, but also their *profile* (e.g. demonstrated skills) that could come in support of further vocational guidance. Such an idea reveals care for *continuity*, *consistency* and *quality* on training human resources, as well as a way of giving clues for *tacit knowledge* of the future graduates.

Romanian education in early 20<sup>th</sup> century considered that “the School has the right to remove unsatisfying students, at the same time it is its duty to place them in schools or institutions they are skilled for, in order not to lose any energy.” [2] Bringing this idea in the current context of Romanian higher education integration into the European Higher Education Area, a new pattern might be envisaged, i.e. *multiple-speed-rates-university* [3]: three-stage Bologna process as common academic education with an emphasis on *vocational training*, and Merit Master/PhD with an emphasis on *research and innovation*.

Entering society (socializing) is to contact *works* [4] and to enter certain *works* in order to become actors therein; conversely, leaving society gradually as a result of aging or exclusion through economic and politic disaster is to cease every transaction with the major part of

society's *works*. One's entering some *work* is part in their *training* too, to the extent of their obeying the *work's inner discipline* (grammar, sport, law, mathematic, artistic, politic etc.) Therefore every institution is in fact *an operator for introduction* into various *works*, namely a *socializing and training operator*.

Originally defined as „spare time“ (gr. *skholê*) that could be spent on fair study of society *works*, School as an *introductory operator to society* has turned to School as an introductory operator to *certain works* of society, being now *warrant of agent's competence* (degree, certificate) within *works*. When School becomes a State affair, when State decides it is compulsory, a standardisation is undertaken: *national curricula* (designed to integrate the basics of existing educational practices), repertoires of to-be-studied *works* and *legitimate forms of studies* are adopted within *level-structured* School. Thus School becomes the *main introductory operator to society* (young people who come to school learn about society through learning about certain *works* that it is made of).

### 1.1. Curricular crisis

As current curricular content was largely decided more than two centuries ago, its *updating* proves to be inescapable, for educational curricula are going through crisis, both in terms of *forms of studies* and *study content*.

The *transfer of knowledge* needs motivation on both sides. Motivation of knowledge receivers comes not only from intelligence and specific training of knowledge transmitters, but also from their pedagogical talent and experience in linking theory with practice. Before proceeding to the transfer itself, focus should shift from *must* (“I assist courses for I must be there”) to *want* (“I assist courses for I *want* to be there”). Such inner motivation might arise from scientific curiosity and from actual link between future graduates' competence and their corresponding integration into labour market. Therefore, to prepare knowledge transfer through an academic course includes *identification of existing links between course topics and social stakes* so that provided knowledge might not appear as a theoretical isolated corpus but should be incorporated in a precise area of the student's overall cognitive construction.

Receivers' motivation will be spontaneous when the proposed topics respond to questions that raise beyond the university area too, and provided knowledge is worthwhile to be absorbed, since it will allow receivers to better understand the social and material world in which they live – and therefore to act more efficiently (individually and collectively) in order to transform the world. When it comes to Economics' focusing on satisfaction of people's needs, students' training should be so as to make them understand and want reciprocity: they must know what they want from the world, but also to care about *what the world wants from them* and what direction should be taken by human society so that survival is not jeopardized.

A number of behavioural problems that persist beyond adolescence (irritability, insolence, hostility) are related to the lack of clear sense of provided teaching. Feeling unable to involve in the knowledge transfer and to cultivate and test one's value along provided teaching activities, some young people adopt unacceptable attitudes. This is a good reason for education providers to focus their approach on creating learning contexts in which the body of knowledge could make sense and be rational.

## 1.2. Supporting Pedagogy

Increasing demand for higher education in recent decades confronts HE institutions with the choice between a *rethought meritocratic orientation* and some formula of *availability to knowledge for all* by means of a differentiated *supporting pedagogy*. Simple transfer process grew intricate as information entropy increased. What would seem, from knowledge receivers' point of view, a need for "supporting pedagogy" is in fact a matter of training the trainers. [5].

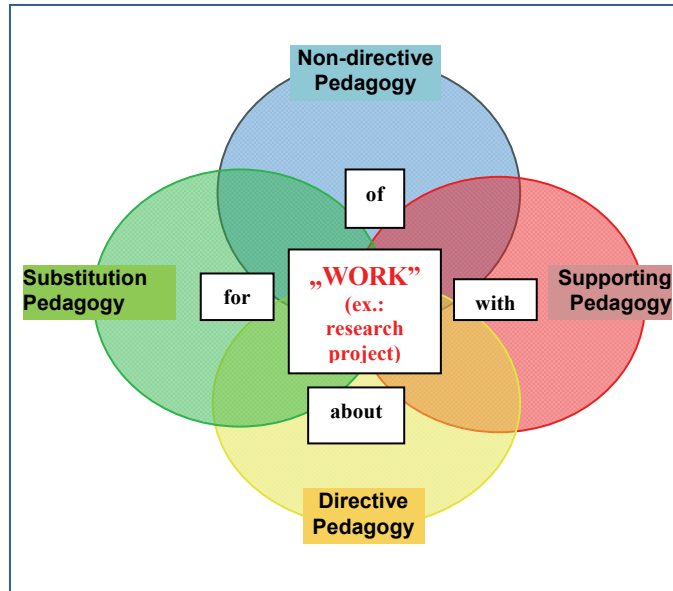


Figure 1. Types of pedagogy that do not exclude each other, but overlap and are sometimes subconsciously applied by the coordinating teacher. (Adapted from: Alain Beitone, *Pédagogie de l'accompagnement, enjeux de savoir(s) et dispositifs didactiques*, December, 2001.)

Learning goals and curriculum in particular, represent a social and political choice that is compulsory to both groups of actors within the process of knowledge transfer. Curriculum is the fix framework where transfer is operated, the stage where professional competence will run inspired, exciting, proactive scenarios – or boring, outdated monologues. In the process of knowledge transfer, the body to be moved over is inert dead-letter – but talent, inspiration and skills of teaching staff can bring back to life such acknowledged bodies of science and turn them into living 'characters' that will ever have to say new things. It is therefore necessary that knowledge receivers learn *how* and *where* to search, and *how* to assemble the selected *works* so that they could endow themselves with *action tools* in society. Once graduates are fitted in specific lots on labour market, their *know-how* of initiating connections according to specific requirements and generating solutions consistent with quality and environmental standards is at least as relevant as the cognitive paradigm they possess.

## 2. Benchmarks of institutional worth

### 2.1. From compliance to efficiency

Cross-border higher education raises a number of challenges that quality assurance agencies try to address in coherent ways. In 2003, Bologna signatory States have invited ENQA (European Network for Quality Assurance in Higher Education) to develop through its members, in

cooperation with EUA [6], EURASHE [7] and ESIB [8], a number of *standards, procedures and guidelines on quality assurance*, and to explore ways that lead to an *assessing system of quality/accreditation assurance agencies or bodies*, while taking into account the expertise of other associations and networks of quality assurance. Such endeavour resulted in the **Standards and Guidelines for Quality Assurance in the European Higher Education Area** (2005).

An increasing number of organizations are focusing their attention and efforts to further improve their processes and systems through adoption of an Integrated Environmental and Quality Management System (EQMS). Environmental audit, unlike quality audit, evaluates only compliance. With rapid changes in world markets, compliance becomes a necessary condition, but it is not enough for survival. Auditing standards changes in step with technology and global market and auditing practices shift their focus from *compliance* to *efficiency*. As a result, future audit practices will probably include assessment of *efficiency*, besides *compliance*. In higher education institutions, *compliance* remains a privilege of government control, while *efficiency* should be generated by *autonomy*.

## 2.2. The culture of knowledge transfer

The growing number of candidates to universities has brought under question the very mission of higher education, for considerable amount increase could entail a quality decrease and one might question whether university still acts as a breeding tool for meritocratic elites or just serves the egalitarian humanist project. [9]

University are expected to be able to detect changes in signals coming from the environment – both internally and externally – and adjusts itself accordingly as an *adaptive body* with learning capacity. Inside this learning community/organization, there is a build-up of tacit unspeakable knowledge within the hearts and minds of its members and this is a precondition for knowledge advantage that is “a sustainable advantage that provides increasing returns as it is used.” [10]

Faced with the challenge of reconfiguring the system of higher education, there is need for assessment of knowledge in its units (universities, colleges). Knowledge audit will identify the cognitive needs, draw up an inventory of resources, will examine knowledge flows, and finally draw up maps of knowledge.

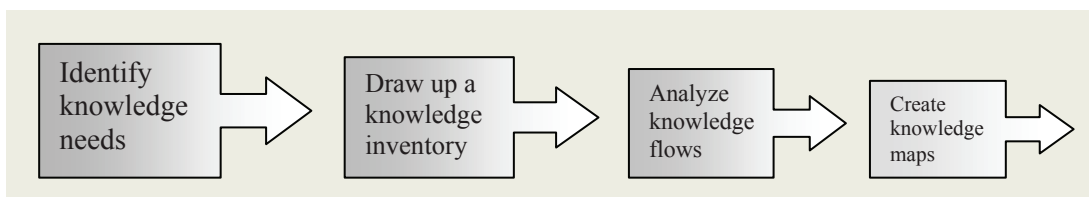


Figure 2. Knowledge Audit Constituents (Source: Asian Development Bank, *Auditing Knowledge*, accessed at <http://www.adb.org/documents/studies/auditing-lessons-architecture/ala3.asp>, in 2010)

## 3. Inseparability of theory from practice

The excessive enrichment of educational offers is an expression of entropy in education. Laws of thermodynamics can be used by educators as a focal point for the unification of knowledge, through passing on those values which are consistent with nature laws. If cropping knowledge into study disciplines is not followed by the way back to inter- and trans-disciplinarity, HE will

probably be stuck into a static model of reality, rather than building capacity of perpetual updating of this model at the pace of challenges given by reality itself [11].

“Documentation is not an end in itself. Education’s aim is to acquire a culture, a way of thinking and a method. Documentation is the starting point for reflection and research.” [12] The more the amount of available information increases, the more the *searching know-how* of documentation grows necessary. The new information gap seems to occur not between *those who have access to technology and those who do not, but between those who know and understand how to use new media technologies and those who don’t*. [13]

### 3.1. The way back, from theoretical analysis to concrete design

Whether unwilling or willing, teachers are managers of knowledge, who ought to have an accurate vision of the Concrete that they unfold in didactically-oriented analyses. Intended receivers of such analyses must understand, at least as well as cognitive message senders, the functioning principles, the optimal ways of approaching and handling natural and social phenomenal flows. To train a student as to become a specialist requires first to strength their general knowledge and to structure it into one comprehensive and consistent picture of the world, that could serve as a basis to further building of new complex tools of understanding, able to deliver answers. Specialization is not to know ever more about ever less until one knows nothing. Specialist is the one who, based upon integrated complex insights of reality, has the ability to find optimal, simple solutions to complex problems.

In the current circumstances of large availability of computer memory, an education that focuses on data accumulation exaggerates a paradigm: students are provided with an entire inventory of ‘parts’, but do not quite know how to assemble them into functional tools for life problems to be solved. Theoretical-knowledge based education develops understanding of connections and phenomena-underlying principles; students possess the syntax, but do not master morphological elements. In a particular case such as a lightning struck building, the all-informed specialist will state something like “storm, lightning, fire”; the all-theorist one will state “electric discharge” – but the genuine knower will state “lightning rod”, for he possesses the necessary paradigmatic elements to recognize the type of specific situation, he possesses theoretical knowledge to understand the operating principles that generated that particular situation and, moreover, he has the necessary know-how to identify specific solution(s).

Didactic processes should be characterized by inseparable *teaching* and *practice* while Professors, being consistent with Latin etymology (“authority”), should handle their explicit and tacit knowledge so as to teach students *to fly*. [14] In all the university departments, it is necessary to apply simulation programmes that enable students to learn the way from *competence* to *performance*.

A key criterion in assessing the quality of higher education should always be the active connection of theory and practice. In Nature, learning processes use *simulation* too when animals train their offsprings to fight for survival, through simulating the adversity by means of playing; human descendants also learn through playing to survive, while developing their capacity of ethical discrimination. Superiority of human beings lies in their ability to discriminate through ethics: knowledge without moral values turns destructive.



### 3.2. Linear thinking developed through classical physics

The current perception of the world is mainly due to the science of physics, that originates in Greece of the 6<sup>th</sup> century BC, in a culture where inseparable science, philosophy and religion sought to discover things' ultimate nature or fundamental make-up – the *physis*. So *physics*, derived from *physis*, originally defined an attempt to see the essence of all things. Early Greek philosophers Thales, Anaximander and Anaximenes (6<sup>th</sup> century BC) were citizens of the wealthy city of Miletus and became concerned about the essence of things in a context of material prosperity and power. Thus they enjoyed a high standard of living that enabled genuine intellectual inquiry; amazement and not desire to master the forces of nature led them to the passion for truth and knowledge.

Miletus philosophers, also called *hylozoists* („those who believe that matter is alive”), did not conceive spirit and matter as split – everything was manifestation of *physis*. Such a vision is very close to ancient Indian and Chinese philosophies. The Eleatic School's placing the Divine Principle above all gods and humans finally brought dualism, spirit and matter were split and this became characteristic of Western philosophy. In opposition to Heraclitus, Parmenides thought changes are an illusion created by human senses, and Being is unique and invariable. Greek philosophers of the 5<sup>th</sup> century BC sought to reconcile these two visions, arguing that Being is manifest in certain invariable substances that, through mixture and separation, give rise to changes in the world. This has led to the idea of the atom – the smallest indivisible particle of matter – and thus, atomists Leucippus and Democritus drew a net line between spirit and matter: the basic units of matter are passive, intrinsically dead particles moving in a vacuum, the cause of their movement being often associated with external forces, supposed to be of spiritual origin and fundamentally differing from matter.

Aristotle systematized ancient scientific knowledge, creating the pattern that would underpin the Western vision of the universe for two thousand years. The late 16<sup>th</sup> century brought an increasing interest in mathematics and scientific theories were stated upon a base of experimentation, being expressed in mathematical language. The father of modern science, Galileo, was first to combine empirical knowledge with mathematics. Cartesian split of mind and matter (17<sup>th</sup> century) is reflected in the attitude of scientists' detached, 'objective' attitude toward the matter they considered inanimate and external. The Newtonian world of classical physics is a multitude of different objects assembled into a huge mechanism. Newtonian model of the universe dominated scientific thought since the second half of the 17<sup>th</sup> century until the late 19<sup>th</sup> century, alongside the image of one God who rules the world from heaven. Fundamental laws of nature sought by scientists were seen as laws of God, invariable and eternal, applying to the world. Descartes' philosophy has led us to see ourselves as isolated egos, existing inside flesh-and-blood bodies. Mind was separated from body and has been assigned the control over it, giving rise to an apparent conflict between *conscious will* and *involuntary instincts*.

On the one hand, man considered himself to be divided into many compartments, according to his activities, talents, beliefs, feelings, etc.; on the other hand, he considered the environment consisted of separate parts that were exploited by various groups of interest. Split vision extends from individual to human society that is divided into nations, races, religions, political groups. The main cause of the current social, ecological, cultural crisis is the belief that the world (people, environment, society) is divided into isolated categories. This point of view made man to estrange himself from his human fellows and generated an entirely unfair distribution of natural resources, and brought about political and social disorder.

Cartesian split and mechanistic view of the world have led to the great development of classical physics and technology, but with many adverse consequences for human civilization. Twentieth-



century science began to leave fragmentation, taking the way back to the original idea of unity, to be found in Greek and Oriental thought.

Eastern thought provides contemporary science theory a firm philosophical foundation through its two axes: (1) *unity and interconnection* of all phenomena and (2) *intrinsic dynamic nature* of the universe. While studying the microcosm, modern physicists has got to see the world as Eastern mystics do: an inseparable component system, in constant motion and interaction, where the observer himself is an included part. There is an essential harmony between the spirit of Eastern wisdom and the Western science when modern physics goes beyond technology and configures a new vision of the world.

### 3.3. Conclusion: modern physics – the old cognitive syntax under reform

Particles physics completes a temporal loop of the spiral of knowledge. Modern physics brought an inventory all-different from the Newtonian one, requiring a necessary reconsideration of the syntax that assembles our model of reality. One cannot know whether the new model will prove itself closer to Reality than the previous ones, but it is certain that a new perception of the universe is being born now and old boundaries between sciences are vanishing, bringing into existence unexpected merges. Faced with such transformations, a still greater rigour is necessary to education, to avoid confusion and uncertainty.

Though the science of physics structured our worldview along time, exploration of atomic and subatomic world in the twentieth century put science basics in a difficult position – the concept of *matter*, for instance, is dramatically different in subatomic physics as compared to the traditional idea of material substance in classical physics. The influence of modern physics passed beyond the area of technology, extending to the way of thinking, to the culture, through the force of a new representation of the relationship between Man and Universe.

The idea of inseparability of *hard* and *soft* aspects of reality is to be found in modern or contemporary thinkers such as Erwin Schrodinger (Nobel laureate in Physics, in 1933), J.S. Bell and Charles Peirce. This opening (collapse of dualism) marks the failure of Cartesian, classical methodology and the transition from the ‘world-as-machine’ model to the ‘world-as-potentiality’ model requires new laws of thought. [15]

The major challenge that the new century brings to higher education institutions is the detachment from linear thinking: *“The illiterate of the 21st century will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn.”* [16]

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# A DECADE OF BOLOGNA PROCESS. CHALLENGES FOR QUALITY ASSURANCE IN HIGHER EDUCATION

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## Abstract

*During the last decade, the higher education system went through dramatic changes, a new approach being envisaged for academic activities. The stress has been put on learning outcomes, efficiency and effectiveness. The quality assurance management must fit in a changing educational environment characterized by diversity, competition, internationalization, etc. Since it is difficult to assign a quality management that satisfies all needs and points of view within the institution, it is of utmost importance that a set of standards and criteria are adopted for each type of activity. As it is well known, most of the universities are comprehensible ones, including several faculties, specializations and departments, the criteria must answer their specific requirements, thus acknowledging diversification. The envisaged set of criteria should include beside quantitative aspects, qualitative ones because, ultimately, they show the degree to which the university meets its mission, meets stakeholders' expectations and fulfils its social responsibility.*

**Key words:** quality, education, diversity.

## 1. Introduction

Quality assurance lacks a broad and widely accepted definition. It is not a “one fits all” term or “best possible way for everybody” [Craven, 2009], because each member of the academic institution has his/her own point of view regarding quality.

Under these circumstances, various types of approaches of quality in higher education can be identified:

1. the quality of academic products;
2. the quality of processes;
3. quality of the management structure.

The key institutions that evaluate the quality in higher education institutions are: the internal quality assurance departments in universities undertaking self evaluations and auditing, the national independent agencies, and international evaluation bodies. Each of them has its own importance given the input and the added value to achieving the targeted outcome.

Among these quality assurance bodies, the internal quality department of the universities is of an utmost importance because it can be tailor made to the needs of the university, it better adjusts to the goals of the institution and its departments, paying attention to its strong and weak points and triggering self reflection, advancement and achievement [Lechleiter, 2009].

In addition, diversity in the educational and disciplinary programs, in research and staff standards, in the possibility to fund education and research, require different approaches of the quality assurance.

## 2. Quality assurance in the Bologna process era

Ten years of Bologna process in higher education brought major shifts in the approach of the academic activities, quality assurance included.

It must be stated that universities are special organisations having, besides educational, research and efficiency goals, a social *responsibility*. Though up to a certain point their managerial approach may resemble the management of any other entrepreneurial organisation, it differs given that the bedrock of their activity is *the human capital formation*.

Under these circumstances, quality assurance means *building trust* within the community, in the sense that the higher education institution has an educational, research and artistic creation offer that meets all stakeholders' expectations and accounts for the efficiency of all resources involved (human, financial, tangible and intangible assets).

The internal quality management includes a set of policies and tools aimed to determine and measure all quality parameters in all the academic departments and are a part of the university's management.

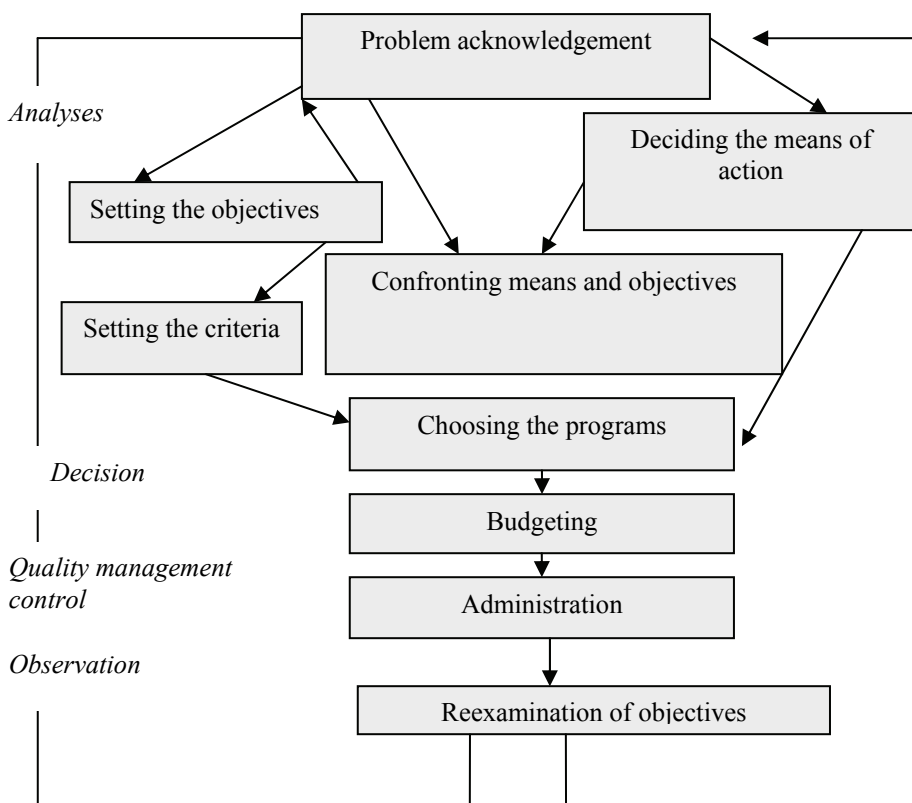
The level of effectiveness of academic activities (both education and research) reflects the impact they generate on the economic and social environment because, in the knowledge society, the mission of the university is to contribute to the welfare of the community through knowledge transfers.

In higher education institutions, quality is essential in a competitive environment. The globalisation trends that touched even higher education led to: the diversification of curricula, transnational and virtual universities appeared, the massification of studies was embraced, the universities lost monopoly over research, the labour market is internationalised, the mobility of students and academics became a priority, the university decentralisation and autonomy are widely accepted, the flexibility of the curricula and the possibility of the students to design their own curricula at master and doctoral level, etc.

Under the new approach brought by the Bologna process, *the final product* of the academic activity is *knowledge* offered to the community as: the competence of the graduates, the technology and knowledge transfer of research, consultancy and expertise, contribution to the welfare of the community, etc.

The main clients (beneficiaries) of the academic activity are the students as well as the internal and external stakeholders, each of them expressing personal views and expectations towards the academic products and processes. From quality assurance point of view the identification of these needs is the starting point of quality management. The degree to which these expectations are met, the perception of the clients is another valuable set of information for improving the activity.

From quality management point of view, the chart illustrating the steps to be undertaken in order to achieve the goals are illustrated in figure no.1.



**Figure 1.** Quality management chart

The quality assurance management is integrated in the management of the university. Consequently, it follows the relationship between criteria, results and characteristics of the activity, according to figure 2.

## 2. Creativity, diversity and quality management in the West University of Timisoara

Though the quality assurance in the West University of Timisoara (WUT) is relatively recent, dating back to 2005, important steps have been recently taken in order to raise the quality culture in the institution. The approach is a holistic one following the view described in Figure nr.3.

As shown in figure nr.1, creativity must be considered when setting up the quality management process in order to meet internal as well as external criteria. Creativity is difficult to define but, broadly, it can be considered as the purpose that implies knowledge advancement and the developing of new, better solutions to old problems.

It requires an integrated approach of students (clients) demand, educational offer, tutorship, academics teaching and research activities, financial resource and outcomes, as shown in Figure 3.

The management of the WUT favours the approach of effectiveness in each area of activity, given that the autonomy of the institution implies responsibility and accountability concerning the rendered education services, the administration of public money, etc.

Broadly, education is framed as a dichotomy between education (critical thinking, involvement in society, individual potential) and training (competence and skills, individual potential, involvement in market competition). Therefore, dealing with creativity ultimately means considering diversity in stating the mission of the universities, in setting the quality procedures, educational and disciplinary diversity.

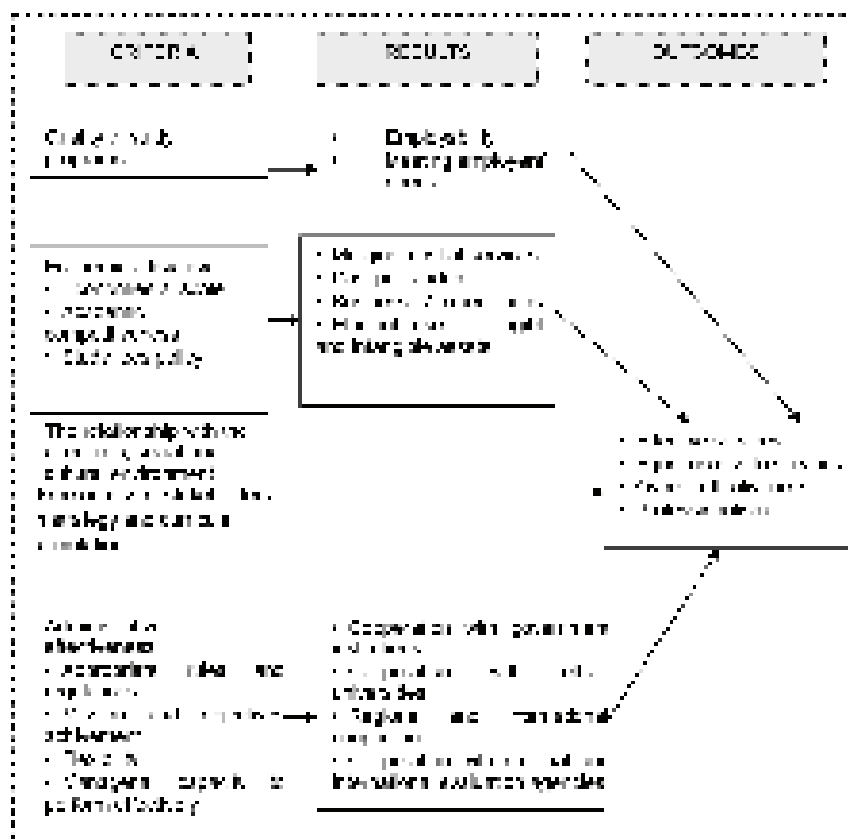


Figure 2 Effectiveness approach of activity



Figure 3 Integrated view of quality assurance

The WUT is endeavouring to pursue the *outcomes* of the academic process (i.e. the quality of the graduate of bachelor, masters' and doctoral studies). The employability of the graduates is considered as well as the opinions expressed by the employers.

Nevertheless there is still room to improve the involvement of major stakeholders in the quality management process.

Diversity of study programs in universities requires a diversified approach of the challenges higher education institutions must face. Therefore, the way in which quality assurance procedures are set up is variable within the national as well as the European higher education system.

Though there are different characteristics of quality and diversity, the former should be anchored in the latter one, otherwise a surmountable gap may appear and quality assurance doesn't fulfil its tasks anymore.

The WUT has taken steps to monitor the effectiveness of the study programs from the contents point of view and well as from financial efficiency. The management is stressing the necessity to improve the masters' studies and to attract a higher percentage of students to follow the second and the third study levels.

The professionalization of quality assurance is an important issue but, nevertheless, it should be strictly connected to the academic activities. The head of quality assurance department should be a trustworthy academic, widely accepted by the university community, who knows best the inner problems of the main activity of the institution. Otherwise, a gap between the academics and quality assurance staff may lead to mistrust. Under these circumstances, trust is essential in quality assurance because it can be the engine in creating a real quality culture in the institution.

### 3. Standards and criteria in quality assurance

Quality assurance can work only when standards and criteria are put in place because it seeks to look for comparisons but, without making judgments. Standards and criteria are strictly necessary because quality is adopted as a conduct by the management and, consequently, quality in universities is paired with accountability, but, also, require good service, good practice and equitable treatment for all parties involved.

The management of the WUT makes efforts to introduce standards and criteria at every level in order to properly measure performance and results, besides using external benchmarks against which to appreciate the level of performance.

As shown in the figures above, presently, the WUT must deal with several issues that need attentive consideration and management:

- a. One of the issues quality assurance, the university, must face nowadays, is the expansion of the number of students. Such a trend requires a more attentive analysis of the study programs, human resource policy, support services, investments. On the other hand, the internationalization of study programs and student /staff mobility means a diversification of the students in terms of gender, age, socio- economic background, nationality, etc.
- b. Under diversification and autonomy, governments cannot maintain a pattern of detailed regulation of higher education institutions [Neave and van Vught, 1991], the latter ones



being decisively responsible for their academic policies. The WUT takes responsibility in that matter by developing its own policy acknowledged by the entire staff.

- c. Another issue that is raised is the financial one, higher education institutions being obliged to reconsider their financial policy in order to cover the cost of education under the financial constraints set by the governments. Efficiency must be the cornerstone in managing available funds. Presently, the financial constraints require a more attentive and creative use of all financial resources in order to support all the activities as effectively as possible.

As universities became quasi public institutions, their activity being financed from public as well as from private funds, they started to take a selective approach to services they offer but, in the same time, become accountable for the use of public and private funds. Obviously, it leads to a higher autonomy of higher education institutions accompanied by a higher accountability. Universities are not simple organization but, particular institutions with a “mission” [Gumpert, 2001] promoting social and cultural values. Therefore it is of utmost importance that universities meet their short term economic targets with their long term mission.

The WUT sets as mission to serve the community and the region through teaching, research and service to the community. Given the constraints in the possibility of staff hiring, often, the academics are overloaded at the expense of quality.

Due to the social accountability of higher education institutions, from quality assurance point of view, it raises the issue of transparency of all decisions concerning the management, education, research, other services provided by the university.

The challenges posed on universities by the changing in the higher education system raise the question of the indicators used in assessing the performance in education (teaching and learning), research and whether they really quantify quality or merely quantity. Questions about the indicators should regard the following aspects [Falk, 2009]: from what perspectives are indicators chosen, by which process are indicators chosen, how the validity of the indicators judged, are they comprehensive enough (the same indicators showing the same values).

The indicators must properly measure performance and quality, “*the side effects*” must be considered and mitigated and, last but not least they must provide support to various departments in addressing specific situations. The obvious approach is, then, to take into account the outcomes of a certain process and not only the inputs.

But, often, these indicators rely on statistical measurements, not saying much about the quality behind (the success rate, i.e. the number of students that graduate a certain degree, dropout rates, the number of incoming and outgoing students, staff exchange, number of students to teaching staff ratio, etc.). But, all these numerical aspect must be sustainable, i.e. doubled by quality aspects (the ratio of the bachelor students pursuing higher study levels – master’s and doctoral –, the quality of a degree paper, the employment ratio in the graduation field, the level to which the acquired knowledge allows further professional development, the differentiation of employment according to the graduation level – bachelor, master’s, doctoral, the quality of the peer reviewed paper in which the research results are published, the actual possibility of technology and knowledge transfer, number of citations etc.). Another aspect the indicators concerns the purpose they serve. They must provide top and middle management with the relevant information to measure the fulfilment of internal goals and the social demand. The

indicators set at top management levels must reverberate in the indicators set at faculties' and other departments' level in order to ensure homogeneity in achieving the goals and the targets.

The success of an indicator is mainly represented of its validity, i.e. to what extent the indicator measures what it should measure. The indicators should be homogenous and not just relying on quantitative aspects (incoming, outgoing students, number of partnerships, etc.).

The relation between an indicator, purpose and the assessed activity is often problematic because of the difficulties in data collections (production of credits, percentage of bachelor graduates, average time till graduation, etc.). They are important from financial planning point of view as well as for the accountability for use of public funds. Eventually it ends up in the qualification system.

Quantitative measurements are good because they offer an image about the outcome/cost ratio and are quite relevant from equitable point of view. But, qualitative measures are, often, treated secondarily. Openness to qualitative indicators and to competition among higher education institutions is compulsory.

Benchmarking becomes also an issue since it allows reference to the local, regional and international standards and statistics. Ultimately, it is important to set separate indicators for the main activities developed in the university: education, research, postgraduate studies, competence supply, funding.

Since each party that is involved in academic life (students, academic staff, administrative staff, etc.) sets its own standards, the upper management can reinforce the positive input flow with the appropriate development opportunities.

#### **4. Concluding remarks**

The new approach of the educational system started ten years ago by the Bologna process also requires a new approach of the quality assurance system in higher education institutions.

The main trends that had been observed over the last decade concern educational and disciplinary diversification, various possibilities of financing the teaching and research activities, internationalization and growing competition among universities, an intensification of students and staff mobility, etc.

All these require a proactive management approach at university level as well as the level of faculties and departments, pursuing efficiency and effectiveness, and the achievement of the stated mission and objectives.

As part of the management, the internal quality assurance must deal with the changing environment of the universities. In order to assure an equitable treatment of all parties involved through evaluations and auditing, it is of utmost importance that a set of criteria and standards are used. Ultimately it allows a harmonized approach of all activities, irrespective of their characteristic and incentives. The standards should not only be statistically quantifiable but should contain qualitative aspects that enrich the institutions with the ability to compete and ensure its trustworthiness in the society.

During the last years, following the trends on national, regional and international level, the West University of Timisoara made considerable efforts to improve the quality culture in the institution by introducing a rigorous concept of quality at all levels and pursuing the efficiency and effectiveness. Therefore, the basic concept of the management in quality assurance refers to autonomy, transparency and accountability.

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# BUILDING MISSION DRIVEN CURRICULA THROUGH INTERNATIONAL PARTNERSHIPS – CASE STUDY: IBAB (ASEBUSS) & KENNESAW STATE UNIVERSITY

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## Abstract

*The paper illustrates the continuous improvement of the curricula for a Romanian EMBA business program, process aligned to the assumed mission of the school and the accreditation requirement of AACSB –the international accreditation agency for business programs. The basic research questions addressed in the paper relate to the proper design of processes, activities and their implementation in order to insure a consistency between the mission of the school and the curricula design in management education. In a world where globalization is a factual element of business decision making the curricula of the EMBA programs should be adapted to the education needs to of the executives enrolled in the program facing on the daily basis the global managerial challenges. The presented case-study illustrates some possible answers to key point of concern for business school such as: **How and why are business schools using international partnerships to strengthen curricular offerings for EMBA students? ; What are successful international partnership models? How might schools strengthen their current international partnership to design more innovative curricula?** The experience of Institute for Business administration in Bucharest and its partnership with KSU will be used as base for critical analysis of the process of continuous curricula design based on the international experience for the executive education.*

**Key words:** Curricula continuous improvement, international partnership, executive education, multicultural teamwork.

## 1. Introduction

Globalization and collaboration require a necessary skill set for employees and organizations as they attempt to compete in a global business environment. One could even argue that organizations whose employees do not have these skill sets may even see a decline in their presence in the market place.

Much has been written about collaborative work environments, work teams, and virtual work teams.<sup>1</sup> However, even with all that is written organizations still seem to have problems establishing and managing collaborative work environments.

In order to proactively cope with the permanent changes in the Romanian business environment, The Institute for Business Administration in Bucharest (IBAB) had a permanent contact with top

<sup>1</sup> For example, the results of a search on Amazon.com finds 3,717 references for “virtual teams” and 497, 398 references „teams”

management of client companies, and continuously adapted curricula to their needs.[2] Frequent discussions with managers and entrepreneurs from the business community in Romania led to a very important strategic decision: to develop from and to permanently improve an international component in the Executive MBA program. Therefore, our goal is to provide insight into how business schools can better prepare the managers for a collaborative virtual work environment and how certain knowledge, skills and attitudes may be built in the curricula in order to equip the students-manager to compete better in a globalized environment. And here the international partnership is the key.

## 2. The two EMBA Programs and the international partnership

The Institute for Business Administration in Bucharest (ASEBUSS) was founded in 1993. Together with faculty and staff from University of Washington, the first Executive MBA program at American standards in Central and Eastern Europe was launched in August 1993. The entire activity was mission driven having as main pillars *“to create a class of competitive leaders able to do business with peers from all over the world, who will be equipped with mindset, skills and understanding required in an increasingly dynamic global business environment”*.

The core program of IBAB, entirely taught in English, is a 20-month EMBA Program launched annually (averaging 70 students per cohort) and alumni in excess of 1000.

Starting with 2003, IBPAB has, as a partner, the American university Kennesaw State University, Atlanta (KSU); the strategic partnership between The Institute for Business Administration from Bucharest and Kennesaw State University, Atlanta (KSU) is based on the strengths of each of the two Executive MBA Programs. The KSU EMBA Program is offered since 1993. It is two cohorts of 19-month Program launched annually (averaging 60 students per cohort) and having alumni in excess of 1,400.

The Institute for Business Administration (ASEBUSS) and Kennesaw State University has created a unique learning experience for their EMBA students: the Joint International Program. From the beginning, it was one of the driving forces of the permanent improvement of the curriculum, so that the quality of the program to be in line with the most demanding international standards.[4] The Joint International Program was designed to give consistency to the global dimension of the Institute's mission, to cover the pedagogical processes for multiple learning goals and multiple layers of activity: that includes visits of American business people in Romania and of Romanian ones to USA, faculty exchanges, preparing common projects, case studies, curriculum development, research between the partners [3].

The learning objectives of the International Project are:

1. Gain knowledge of common business practices in alternative economies.
2. Develop „decision-based” analysis and presentation skills in an international business management setting.
3. Experience learning in a „virtual” and collaborative work environment.
4. Establish an international personal peer network.
5. Apply state-of-the-art collaboration application technologies as a user.

### 3. International Joint Project

The International Project consist in mixed teams of American and Romanian students working together on a business project, complying with a set of requirements set by both faculty, that might vary slightly from one series to another.

This collaboration lasts over 8 months and it implies virtual meetings through videoconferencing and other technologies (Share Point of Microsoft) as well as face-to-face meetings during the Residence Weeks in Romania and Atlanta. The projects are completed with a presentation in front of the American and Romanian professors and some representatives of the business community in Atlanta.

Driven by the learning objectives established jointly by KSU and ASEBUSS-IBPAB on behalf of their Executive MBA students, this project is designed to create a learning environment in which U.S. and Romanian students leverage their personal business experiences and knowledge to their mutual advantage. In addition, the execution of the project is designed to allow for the use of state-of-the art collaboration techniques and technology to assure value-based learning for future business leaders who will be facing a steady flow of opportunities to exploit global business opportunities.

The project framework can be summarized as follows:

- Two concurrent classes of EMBA students from KSU and ASEBUSS-IBPAB will be combined and teams of 7-9 students (consisting of students from each program) will be identified.
- Each program incorporates into their curriculum an orientation to the other program's local cultural and business practices, including assigned readings relevant to preparing the students for an international business learning experience.
- All students are introduced to a customized, Internet-based collaboration technology application (built on Microsoft Corporation's Share Point platform) and personally access the site to initialize their participation and begin to experiment with the collaboration and communication features of the application.
- An individual member of the combined KSU or ASEBUSS-IBPAB EMBA faculty will be assigned to each joint team and also be registered on the Share Point site.
- U.S. students and KSU EMBA faculty will travel to Romania in September, each year and will join their Romanian counterparts in the Residence Week, in Neptune, Romania to work on the project
- Each team will develop their Statement of Work as a starting point of executing the Project Plan in a virtual environment after the U.S. students depart Romania.
- After departure of the U.S. students from Romania, the teams begin a seven-month period during which their project plans are finalized and implemented, relying primarily on the customized Share Point application, and video conferencing facilities provided by both programs, to sustain communications and collaborate on required deliverables.
- Romanian students and ASEBUSS-IBPAB EMBA faculty travel to Atlanta, Georgia, U.S.A. in April, and meet with their teams – including their faculty team leader – to complete their project deliverables, culminating in joint presentations to the combined student and faculty groups.

The focus of the project is on business **practices**, contrasted in a U.S. and Romanian business environment. The project research and analysis can be centered on business practices which

are (a) integral to the unique collection of companies represented by the employers of the team members, (b) common among a single industry or sector in each respective country, or (c) those which broadly apply to all businesses in the U.S. and Romania. In some cases, the project addresses business practices in the context of a specific company (or set of companies) problem, opportunity, or circumstance (i.e., similar to a traditional “case study” common to graduate business education)[2].

Students earn an individual grade for this project based on a combination of (a) grades given by their assigned team faculty member and/or the combined KSU and ASEBUSS-IBPAB faculty; (b) an overall individual team participation grade given by their assigned team faculty member; and (c) individual peer evaluation (a component of an individual student's grade determined by their teammates).

#### 4. Methodology

The EMBA students, after working together during two face-to-face periods and virtually for approximately eight months were asked to respond to the following three open-ended questions at the end of the April face-to-face component after all work was complete.

1. Assume your company is considering the use of virtual or distance project management, what Lessons Learned and Dos and Don'ts would you recommend?
2. What are the three most important attributes of your team's behavior that contributed to the success of your team's achievements and assignments?
3. What are the three most important attributes of your team's behavior that detracted from the success of your team's achievements and assignments?
4. Technology can support or detract from virtual or distance project management and problem solving. What technologies did you use and find most helpful? What alternative technologies would you suggest to enhance team performance?
5. What are your two most important recommendations for the Joint International Project that would improve the learning experience?

In 2010 of the 125 students enrolled in both programs, 108 responded to the questions for a response rate of 86 %.

The responses are subjective free form statements of the respondents. Responses from all five questions were reviewed to establish a classification scheme for summarizing individual responses. The responses were classified as relating to teamwork, technology, project work, individual team member behavior, culture. The results are consistent with those of a previous analysis realized based on data from 2008 [5] but the elements of continuous improvement and some new aspect in the perception of the 2010 respondents are presented.

#### 5. Results

##### Teamwork

Teamwork is common in many organizations. Therefore, it is not surprising that some of the responses focused on teamwork. The most common responses included:

Participant interests should be aligned. As the teams are formed by randomly allocation, apparently, not all team members exhibited the same level of motivation and commitment to the team's activities. However, this may be a common experience when someone is assigned to a work team who has neither the desire nor interest to participate in the project.



**Envisaged improvement:** **a)** the management of the team – student and the faculty mentor -is responsible for assigning the right targets to a project and appropriate teaming activities. **b)** Both schools should ensure the same motivation for the students to be involved in the IP by clearly explaining to the students the importance of the project's grade in the whole logic of the EMBA program.

Team member knowledge should be leveraged. One of the benefits of using a team is being able to bring together a set of diverse people to get improved outcomes from the project. Even when the right people are assigned to a team, the individual team members may not know skills, knowledge, and experience of their teammates unless there is some activity that allows them to share this information.

**Envisaged improvement:** More time allocated to startup activities for a new team includes getting to know each other and sharing individual skill, knowledge, and experience sets.

Face-to-Face (F2F) meetings should be used to start the project. F2F meetings can provide a jump-start when starting project work in a virtual environment. F2F meetings usually establish a greater commitment from individual team members and accelerate the development of project plans.

**Envisaged improvement:** The EMBA students must have this opportunity during the Residency week in Neptune which reinforces the need for this approach to starting virtual work.

Clear assignation of roles and responsibilities in the team. The allocation of roles and responsibilities for the team members is always a challenge. When there is a perception that an inequity exists in term of workload there is the potential for conflict within the team itself. This is particularly true when team members in their basic programs are in different stages of the schedule (exams, deadlines for projects).

**Envisaged improvement:** Reconciling differences can be difficult; however, it should be done before the virtual work starts by the Statement of Work.

## Technology

Technology can play a significant role in determining how well a group of individuals from the same organization or different organizations work together. Some of the common responses included:

Do not rely on just one tool. Many technology collaboration tools are available to support virtual work. Often one tool will be adopted for all team members to use. Reliance on only one tool appears to be risky for the team communication.

**Envisaged improvement:** A communication plan must be adopted from the beginning of the team work: When there is tool failure, then a team can find themselves without a back up or alternative solution to help with their problem. Multiple tools should be adopted (videoconference, e-mails, share point, Skype, telephone).

Not all team member technology skills are equal. When technology skills are not equal one of two things usually happens, one team member ends up doing any task that involves the use of the technology or a team member fails to participate in any activity that is considered technology dependent

**Envisaged improvement:** Organize a dedicated session allowing to all participants to experiment the use of different technologies available in a collaborative environment; simulations and introductory assignments and tasks.

Use the technology provided. Virtual work groups usually have access to a menu of technologies that are designed to facilitate collaboration. However, it is usually up to the individual members of the virtual team to decide how or if these technologies will be used during their project work.

**Envisaged improvement:** An important number of the respondents supported the idea of more often use of video-conference for distance F2F communication and for better communication. Skype has been detected by almost all respondents as the most used tool for communication and the Share Point most used to house and shares the documents.

### Project Work

The principles of project management are well established. However, virtual work group members often lack the training or understanding of these principles so the team can apply them effectively. The EMBA student recommendations address several of these principles.

Have clearly defined deliverables. The focus of any work group is the project deliverables. When a virtual team has failed to clearly define or understand there project deliverables there is a higher probability that project delays or conflicts will occur.

**Envisaged improvement:** Clearly defined content, importance and the due date of deliverables will often result in more effective teamwork and results.

Monitor and report progress. Project team members can lose track of their progress unless they are periodically reminded of their objectives and their progress.

**Envisaged improvement:** Some form of monitoring may be needed to provide periodic reports that allow team members to manage their progress regarding the project schedule, timelines, and deliverables.

Follow the published or agreed to schedule. Project management principles usually include establishing a project schedule or timeline before the project starts. When project team members ignore the schedule, the overall project success can be in jeopardy.

**Envisaged improvement:** The leader's and mentor's effort should be made to follow the schedule.

### Individual Team Member Behavior

Team member behavior can contribute to the team's success or it can detract from the team's success. The choice of contributor or detractor is usually left to the individual team member. However, some behaviors can be mitigated **through education or through team chartering.**

Deadlines should not be missed. There may be legitimate reasons for missing a team established deadline. However, when a team member habitually misses deadlines, the behavior can lead to conflict with other team members or lead to distrust by other team members.

Team members should be held accountable for their actions. Team members will sometimes avoid their own responsibility and choose not to hold their team members

accountable for their actions. When team members are not held accountable, the rest of the team may have to carry more of the workload or suffer other consequences.

Team members should check in periodically. Team members need to maintain a presence with the rest of the team by logging into the collaboration site, the chat site, or through other means that enables the rest of the team know they are available for collaboration. Otherwise, team members may conclude that the absent team member no longer cares about the project or is freeloading off the rest of the team. Usually some agreed to team rule can address this and keep it from becoming a team issue.

Lack of timely responses. Team members should be responsive to each other. Responsiveness may mean different things to different team members. Thus, it becomes important for the team rules to address issues such as how quickly should a team member be expected to respond to a posting from another team member.

Some team members could hide. Team members are considered to be hiding when they do not regularly participate in team meetings, respond to postings, or otherwise fulfill their obligations to the rest of the virtual project team. Team members who behave in this way usually will not go away or change without some form of intervention. The longer the behavior is allowed to go unchecked the more difficult the issue will be to resolve.

**Envisaged improvement:** Permanent communication of the team leader and team mentor with all members of the team and a clear view on the progress in realization of tasks; contingency plan should be prepared.

## Culture

Learn the culture of the individual team members. The culture of individual team members and that of their organization can have a significant influence over the success of a team. Furthermore, cultural differences help explain some team member behaviors that may be interpreted without this added knowledge and understanding.

Do not bias one group of team members against another. In an effort to help team members understand each other some group preparation may be done prior to the teams meeting F2F for the first time.

## 6. Summary and Conclusions

Some of the recommendations or observations of the EMBA students repeating showing the need to focus more on some processes of skills that can be refined working effectively in International joint project. From an organizational standpoint the following may be appropriate when making the decision to implement some form of Multicultural project elaboration using as core vehicle virtual collaboration activity:

- The use of F2F meeting to start or kick off the project or the team is most effective way to coagulate the multicultural teams of managers.
- The distance communication must be channeled by the communication tools accepted by all team members, beforehand prepared to use them.
- The communication has been detected as the most important skill for the success of the team work.
- Even when the language skills are good the team member culture will make a difference if not addressed properly.
- The motivations of all teams' members to participate in the work suppose to align the individual rewards and project goals.

Those points, although not all inclusive, provide an excellent starting point for any organization or business school planning to implement a collaborative multicultural work system. More importantly, the experience of these students is current and it seems to reinforce what others are saying in the literature.

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# PROCEDURES REGARDING THE QUALITY ASSURANCE IN “OVIDIUS” UNIVERSITY OF CONSTANTA

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## Abstract

*At present, “Ovidius” University, Constantza is an education and research institution which is placed under the sign of cosmopolitism and interculturality, a component of the state owned education system in Romania. It is an institution which provides non-profit education, with an open character, with a juridical body, which is organized and functions according to its own University Charta and the regulations attached to this under the Education Law no 84/1995.*

In order to meet the quality assurance standards, “Ovidius” University of Constanta has settled on the following strategic goals:

- a. to promote complex quality assurance systems and mechanisms
- b. to continually improve the quality of the institutional management.
- c. to ensure quality standards compatible with other European countries
- d. to continually improve quality standards regarding the development, evaluation, revision and improvement of performance indicators and to correlate them with job-imposed requirements .
- e. to raise the standard levels of performance indicators
- f. to ensure the compatibility between our curricula and European curricula, in order to render academic degree standards and quality assurance standards more comparable and compatible throughout Europe
- g. to strengthen international cooperation and European cooperation in particular through jointly developed teaching and research programs.

## 1. Procedures regarding the initiation, monitoring and periodical revision of the developed programs and activities

### 1.1. The existence and application of the rules regarding the initiation, approval, monitoring and periodical evaluation of the study programs

Within **“Ovidius” University of Constanta** the Regulation regarding the initiation, approval, monitoring and periodical evaluation of study programs is applied. Based on this regulation, evaluators analyze the opportunity of creating new bachelor or master programs, according to the demands of the labour market, to the available learning spaces and existing equipment, as well as the need to improve the curriculum of each program, both quantitatively and structurally (number of hours allotted on subjects and programs, the structure of the learning plan, etc, their correlation with the financial resources and support).

The monitoring and evaluation of the study programs is accomplished based on the standards for the elaboration of the learning plans and based on the *feed-back* obtained from the students and graduate students, approved subsequently by the Faculty Councils and the “Ovidius” University Senate.

Also, we specify that within **“Ovidius” University of Constanta** there is a permanent activity meant to improve the curricula and the teaching methods evaluation procedures from the part of the students, the colleagues and the management.

The aspects that did not meet the approval of the students' exigency were taken into account when the learning plans and curricula were discussed and also when the examination methods were established.

## 1.2. Correspondence between diplomas and qualifications

The structure of bachelor, master and doctoral school programs is periodically revised according to the European and international institutions, based on a set of standard professional levels in order to correspond to the market dynamics in terms of university and professional qualifications – taking into account (by the adoption of the *National Frame of Qualifications*) the regulations of the *Classification of Occupations in Romania*, the *Tripartite Accord Regarding the National Frame of Qualifications* and the *European Frame of Qualifications*.

In this regard, procedures (<C:\Users\Mariana Stanciu\AppData\Local\Microsoft\Windows\Temporary Internet Files\Low\Content.IE5\2M1DYAK0\ANEXE\UOC 125 Analiza SWOT.pdf> *Analysis SWOT*) and instruments were created to support the optimization of decisions regarding the projection, organization and development of study programs, with the purpose of harmonizing them with the labour market, of respecting the national regulations and convergence to the good practices and demands regarding the quality assurance of higher education in the European space.

The establishment of study programs developed in “Ovidius” University of Constanta is based on the M.E.C.I. List regarding the study fields and specialties in force and the A.R.A.C.I.S. documents about the quality assurance in the higher education. The diplomas offered to the graduates are according to the university qualifications regulated at national level.

Each study program is conceived taking into account the study results regarded as *“The set of knowledge, skills and/or competences that a person acquired or is capable to demonstrate at the end of the learning process,”* the requirements of university qualifications and the dynamics of the labour market.

For Cycle I, the structure of the study programs seeks to help each graduate student demonstrate:

- the advanced knowledge in the field through their capacity to realize critical analyses of the theories and principles accumulated;
- their mastering of the methods and instruments in the specialized field they prepared for;

- the capacity for innovation in the use of methods; to be able to build and support arguments needed for solving problems.

Also, in the field of personal and professional competences, the graduate students of the first cycle of bachelor must:

- demonstrate creativity in elaborating projects and show initiative in the management processes that include the training of collaborators in order to develop the team performances;
- evaluate periodically their own learning process and identify their training needs;
- communicate ideas, problems and solutions both to the specialized and non-specialized audience using a range of techniques that involve qualitative and quantitative information;
- demonstrate the experience of interpersonal relationships at operational level in complex work media.

For Cycle II, the master programs are conceived so that each graduate student:

- should be able to use the most advanced theoretical and practical knowledge in the respective field as a basis of originality in the development and/or application of ideas;
- should demonstrate analytical capacities regarding the knowledge in the field and knowledge related to the interface between fields;
- should demonstrate leadership and innovation in unknown, complex and unpredictable work/study contexts which require problem solving through the implication of many factors that interact;
- should demonstrate autonomy in the learning process, as well as a high level of understanding of the learning processes;
- should communicate to the audience of specialists and non-specialists the results of the projects, methods and basic principles using adequate techniques;
- should carefully observe and reflect upon the social norms and interpersonal relationships and should act to improve them;
- should solve problems by integrating complex and sometimes incomplete information sources into new and unfamiliar contexts;
- should demonstrate the use of experience in an interactive work environment for the management of change in a complex environment.

The curricula of the doctoral schools that function within **“Ovidius” University of Constanta** provide the graduate students with specialty knowledge needed in order to analyze critically, evaluate and synthesize the most recent, complex and advanced ideas in the field. The graduates are thus able to extend and redefine their knowledge and/or the professional practice existing in the respective field or at the interface with other fields, to research, conceive, project, implement and adapt projects that lead to new knowledge and procedural solutions.

The diplomas given by **“Ovidius” University of Constanta** are elaborated according to the university qualification obtained after attending the respective study program. Supplements are annexed to the diploma and they contain elements regarding the competences provided by the respective study program.



The university qualification of the graduates from **“Ovidius” University of Constanta**, regardless of their study program, is given by the official recognition of the value of the learning results on the labour market, as well as for the continuous professional improvement.

## **2. Objective and transparent evaluation procedures for the learning results**

### **2.1. The University has a set of rules regarding the examination and grading of students, which is applied rigorously and consistently**

Considering the importance of learning evaluation for the objectives regarding the improvement of education quality, there has been a continuous preoccupation within **“Ovidius” University of Constanta** for the improvement of student evaluation methods. To this purpose, rules were defined regarding the organization and functioning of student evaluation. They are written in the Regulation regarding the students’ professional activity.

In order to increase the transparency and provide an objective evaluation of the learning results, information regarding the student evaluation principles, types and methods were disseminated by means of the faculties’ web pages. Thus, a guide for the respective subject was offered. Also, the teacher has the obligation to inform the students about the type of evaluation at the beginning of the activity. The specific evaluation methods within certain programs and subjects are specified in the guide and the students are informed in this regard at the beginning of the activities.

Within **“Ovidius” University of Constanta**, the evaluation of results is done according to a plan, the types and methods of examination being defined in the project stage of the study programs, in the learning plan and the course description. They are established by taking into account the transparency and the objective evaluation, as well as the adaptation of the examination methods to the teaching-learning methods and the subject content. It is to be remarked here that the examination and student grading are accomplished based on criteria, rules and techniques that are rigorously and consistently applied.

### **2.2. The integration of examination into the teaching and learning planning on classes and study programs.**

The evaluation procedure is established at department level by the full professor on the following criteria: activity over the semester (formative evaluations: projects, oral presentations, case studies, files) and the final test.

Each course, regardless of the study program within **“Ovidius” University of Constanta** is so planned that it combines the knowledge transfer, learning and student examination.

## **3. Procedures for the periodical evaluation of the teaching staff quality**

### **3.1. The ratio between the number of students and the number of teachers**

**“Ovidius” University of Constanta** has a teaching staff of 756, of which 134 are university professors, 129 are associate professors, 239 are lecturers, 193 are assistant professors and 61 are junior teaching assistants. The total number of students is 21396, resulting a

teachers/students ratio of 1/28, and a students/didactic positions ratio of 17/1, which is an optimum level for all the study programs.

The title lists of the teaching staff are realized annually and the didactic functions and the number of jobs are established by taking into account the Learning Plans and the study formations.

### 3.2. The collegial evaluation

The collegial evaluation is compulsory for those who wish to promote. They occur within the department meetings and during the annual evaluations for the establishment of the salary coefficients, according to the Regulation regarding the evaluation of the annual individual professional performances of the teaching staff.

To this purpose, there is, unitary per institution, a form entitled *Self Evaluation Sheet*, as well as a form with criteria for the evaluation of the annual individual professional performances of the teaching staff in “Ovidius” University of Constanta. The collegial evaluation is organized periodically, it is based on general criteria and on collegial preferences, according to The Procedure for the Collegial Evaluation of the teaching staff. The information obtained from the collegial evaluation is used to quantify the professional deontological aspects and the personal quality compared to the members of the staff.

### 3.3. The evaluation of the teaching staff by the students

Within “**Ovidius**” **University of Constanta**, the students’ involvement in evaluation and quality assurance has become a current procedure. A continuous *feed-back* has become a constant element of the management. There is a system for the collection of suggestions and appreciations from the students and there is a procedure for solving these situations.

The objective of the study was to evaluate the teaching staff within “**Ovidius**” **University of Constanta**. During the first stage of the project, the students were asked to evaluate the quality of the courses and seminars taught by each member of the teaching staff within the faculties of the institution. This evaluation was based on a questionnaire. The purpose was to evaluate at least one of the subjects (course, practical works or seminar) taught by each member of the teaching staff based on 10 criteria.

The evaluation is realized by means of a questionnaire, which is distributed to the students by a neutral person. The filled-in questionnaires are slipped into an envelope which is sealed and handed to the head of department corresponding to the evaluated teacher. Then, the questionnaire is processed and analyzed. The conclusions of the student evaluations are an integral part of the annual evaluations of the teaching staff.

The results indicate a high level of satisfaction from the students. The most favorable appreciations, both in regard to courses and seminars, refer to the availability of the teacher to answer questions and solve problems, which attests to the open character of the communication between students and teachers.

### 3.4. Evaluation by the university management

Annually, at the university level, there is an evaluation of the teaching staff by the management of each department/faculty. The promotion, salary and awards, degrees or merit salary are given according to the evaluation results.

The teaching staff, according to the didactic degree, is evaluated by means of a standard multi-criterion instrument of evaluation, taking into account: elaboration of didactic materials, scientific research, activities with the students, national and international recognition, activities within the academic community and participation to the institutional development.

The promotion of the teaching staff depends on the results of the evaluation, which also takes into account the results of the collegial and student evaluations, and it is accomplished according to the *HG 238/2000* regarding the evaluation of the individual performances of the teaching staff in the higher education system, based on the minimal score for each didactic degree, approved by the Senate (*Regulation regarding the evaluation of the annual individual professional performances of the teaching staff.*)



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# MODERNIZATION OF TECHNOLOGICAL DISCIPLINES' TEACHING AND EVALUATION IN ART EDUCATION IN ROMANIA

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## Abstract

*The problems referred to in this paper are to find modern and adequate ways to support the technical-type courses for the students in visual arts. In the course modules development it is applied the e-learning concept. Specific means of the concept have been used to design the digital course and evaluation of the students. This approach aims at streamlining the process of teaching in the field of visual arts. The paper presents the accomplishment of the course module "Materials for textile finishing". The topics of the modules are structured in the form of text, image and animation connected in logical sequence, with reference to the interrelation of notions. Considering it an experiment, it is a starting point to causal explanation or further investigation in educational methodology. We found that this presentation has led to a faster, more profound and thorough understanding and acquiring by students, who are acquainted to working with the image.*

**Key words:** Practice in Higher Education, e-Learning, Textile finishing

## 1. Introduction

Information and Communication technology (ICT) has a profound impact on society and on Education. ICT not only provides new and supplementary tools able to help improve teaching or learning, but it profoundly transforms Society, Education and Knowledge. In the information and communication society access to knowledge is changing and the structuring of knowledge is evolving.

In the higher education sector today, more so than ever before, academics are presented with many choices in how they can design and deliver their courses. As the use of information and communication technology (ICT) in teaching becomes mainstream, academics are faced with the challenge of making decisions on how best to integrate such technology within their teaching practice. In an environment where there is an increasing number of Internet and media tools available and online educational resources to choose from, this is a challenging task. Coupled with the constant focus in the sector on improving the quality of teaching and learning decisions on how to effectively integrate ICT to design pedagogically learning experiences can be quite overwhelming. To add a further layer of complexity, the concept of a "university course" has broadened from a conventional model of synchronous teaching and learning activities to other dimensions that include the overall use of digital media to present, interact, and communicate in both synchronous and asynchronous modes.

In what concerns purely chemical textile technology, computational technique was used partially to resolve technical problems, efficiency and process optimization or description and color reproduction. Then solving these problems has led to specialized programs, improved over time with newer and newer solutions. The recent involvement of computer technology in textile finishing is digital printing.

Using new technologies in learning facilitates access to resources (and services), improving the quality of education. Digital learning involves a new way of impact on one's abilities, excluding space-time order conditioning.

Not only does technology offer sophisticated tools for learning and autonomy, function as media for transmitting information or situations, but it generates extra knowledge and enriches the learning context. Thus learning processes are improved, as they are more dynamic, fact which requires a greater memory effort. Learning processes activate intelligence, fact which gives one a sense of empowerment and satisfaction in a complex process, all in the benefit of students and teachers alike [1].

### **1.1. Prior Work**

Nowadays, specialists approach the problems raised by the construction of a virtual reality in the textile industry. The multiplicity of the aspects that could be rendered grafically and by animation is the object of the creation of explicit and probatory didactic resources. This is how, in the textile field, a paper describes the internal architecture of a textile [2].

In knitworks field, the author applies the same concept of dynamic simulation of an equipment's components movement [3].

We have also experimented other simulations of chemical reactions in the chemical textile finishing [4].

Our prior work refers to the practical application of using Information and Communication Technology in developing the course module "Dyeing textile material with reactive dyes". This represents a development of the initial application of 3D dynamic simulation of chemical reactions taking place between the textile material and the reactive dye [5].

The idea of the work has started to carry out 3D simulations of chemical that happen at the molecular level among textile fibers, dyes and auxiliary substances coming into contact in various chemical finishing processes. In this respect, we have developed simulation by the virtual model of the physical and chemical phenomena.

In numerous textile development centres around the world, multi-media is used for educational purposes which proves that this type of education is an efficient and modern way of learning. Learning programmes in the textile field are developed both in universities and organisations such as the following presented further.

"Textile Education and Training at Your Fingertips" – is the generic name of a program developed at the Center for e-Learning for textiles and clothing in collaboration with the University of Leeds, one of the peaks in the research and training in the field of textile [2]. At

present the Technical University "Gh Asachi" of Iași extended the computer program product involving the application "Introduction to Textiles" to Romanian [6].

E-textile toolbox is a program within a project which aims to improve the cooperation between Europe and Asia in terms of implementation of IT products. The program is administered by the department "Sustainable Production and Consumption" of the German institution "Wuppertal Institute for Climate, Environment, Energy [7].

An other application developed for Cotton Inc. (USA) is available on electronic media (CD-ROM) as "*An Interactive Guide to the Basics of Textiles*". This application is part of a series of educational programs conducted by Mind Works Multimedia with the collaboration of experts from Cotton Inc. It is designed and operates within a broader program to increase demand for cotton products and profitability in the cotton sector [8].

The "Textiles Training through Technology" program is developed by the Textiles Human Resources Council (THRC) – Canada, as an independent partner of the textile industry. The organization's activities are materialized in training and education programs to attract young people, thus maintaining an environment of continuous learning. All programs are developed by the textile industry for the textile industry, the needs identified by businesses, educational institutions and trade unions becoming targets in the training programs. One of the organization's first initiatives has led to the making of the CD-ROM "Textile Manufacturing Basics", which is an interactive learning tool used in over 30 countries by manufacturers, educational institutions, suppliers and users of textiles [9].

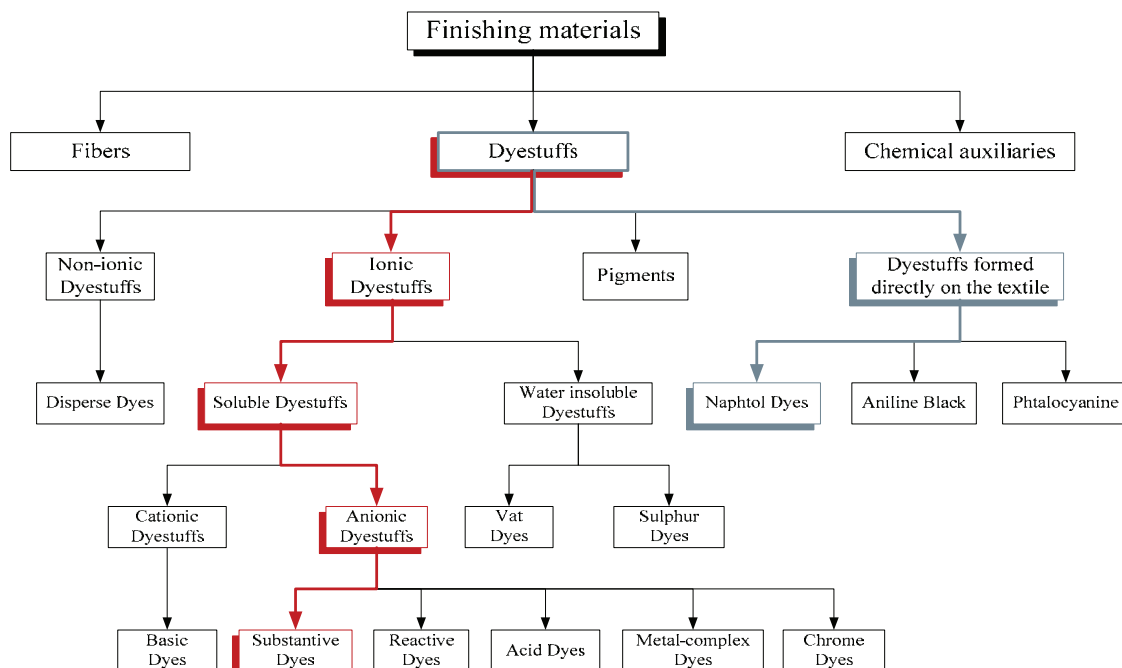
## 2. Objectives and methodology

The purpose of this work is setting up the course module "Finishing Materials for Textile" – part two – (Dyestuffs) using information technology. Thereby place a modern learning tool in the students' hand, application joining the efforts to improve the quality of education through course design in digital format.

The paper responds to the need to offer to the students a course in digital mode to enjoy the facilities offered by information technology; thus it will be revealed important aspects of the approached themes (structures of dyestuffs and chemical reactions) in an interactive manner and inaccessible phenomena of human perception it will be given by 3D simulation. Predominantly visual approach helps to the deepen understanding of phenomena that would not otherwise have access.

Methodology used for the elaboration of the application:

- Information selection in accordance with syllabus;
- Structure of the informative content (Figure 1);
- Insertion of theoretical information in logical sequences, in hypertext format;
- Creation of text references to supplementary specification or edifying in video or photo format;
- Creation of animated 3D simulations of reactions;
- Synchronous interactive test's of knowledge creation.



**Figure 1.** Information algorithm

The paper keeps to the SCORM standard from the structural point of view, according to CAM (Content Aggregation Model) book, section 2.1.1. The following types of documents and html codes have been employed: flash objects, jpeg images, JavaScript functions. The programming language used keeps to SCORM 2004, 4<sup>th</sup> edition, section 3 in the Run-Time Environment book.

It is important to provide students with models that reflect virtually the chemical-physical phenomena that occur at the atomic and molecular levels. The students would be able to recognise, interpret and correlate the simulated theoretical aspects with the effects resulted from the practical processes. This way the students will not only achieve good knowledge which they would be able to apply in laboratory courses, but they will also be able to correlate these phenomena amongst them.

For example, if one follows the pattern marked with grey color (Figure 1), the student will have access to information regarding the work steps. At the end of sequence they have access to 3D dynamic simulations of reactions that take place during dyeing / printing with naphtol colouring matter:

- Rendering naphtolates soluble by natrium hydroxide treating;
- Diazotization of the fast colour base;
- Coupling reaction of the two components [10].

### 3. Findings and discussions

The major difficulties which the students in visual arts are confronted with when they are placed in a position to tackle technical / technological-kind of informations are as fallows: from point of



view of terminological, structure the information, the conjunction of it (the information) with artistic conception and not at last the application in practice.

In this respect the main advantage of an course designed in digital form consist in the presentation which is mainly in visual manner. The images, films or the dynamic simulations bring the information much closer to the students in visual arts.

In addition, the organization and structural and concise construction of the information which is characteristic for the presentation of the information in logical sequences is an advantage to build a large volume of information.

Navigate the application can be run in one direction or in another, depending on student interests and needs. "Object" to learn becomes dynamic "Subject" which answers to the student questions opposite of how to address technical (technological). Students can also determine the steps they have to go to achieve the implementation of their project in an accurate and efficient manner as possible.

The purpose of the application consist in:

- Computerized presentation of the course module;
- Systematization and hierarchical presentation of knowledge from the general aspects of dyeing, to the particular ones;
- Access to additional related information, such as data tables, comparative images, animated simulations of reactions and dictionary pages, which complement and relate information, this leads to profound knowledge and their stability during time;
- Testing of theoretical knowledge;
- Reflecting the knowledge gained through practical application of their transposition in processing the textile material;
- A higher motivation of students using ICT;
- Involvement and interactive participation of students;
- The most important positive impact in the application practice, in the laboratory of transposition to textile material, the phase in which we found the increasing of decision accuracy in the approach work stages

Because of bend structure, each student uses the information in own necessary sequence, specific to his project which is unique both in terms of composition, and the design, color combinations and the final destination of the object designed and developed.

Errors that appear in the finished textile product, practically can also be analyzed and corrected by the initial theoretical information content perspective. The errors can be indentified by accessing the defect archive as an illustrated database of classified defects by criteria: type of defect and type of fabric.

#### 4. Conclusions

The present paper is intended to be a practical contribution to enriching the experience of e-Learning in chemical textile finishing technologies. The material is of interest to a practical application for the academic profile. National Arts University Student's have access to a technical course designed for students of visual arts. It enriches the experience in teaching methodology.

The originality rest in both original layout of the course module "Finishing Materials for Textile" – part two – (Dyestuffs)" and the novelty of the dynamic simulations in presenting the naphtholates solubilization, the diazotization of the fast colour base and the coupling reactions mechanisms.

We found that this presentation has led to a faster, more profound and thorough understanding and acquiring by students, who are acquainted to working with the image (either real or virtual).

As immediate consequences on the educational process we concluded:

- A higher motivation of students using information technologies;
- Students' motivation by explaining phenomena at the molecular level;
- Interactive student participation and involvement;
- The most important positive impact in the application practice, in the laboratory of transposition to textile material, the phase in which we found the increasing of decision accuracy in the approach work stages

Digital course modules are both an answer to students' current needs and a knowledge evaluation method by the adding of an interactive computer-assisted evaluation test.

Applications' structure allows adjusting to study conditions in learning institutes and to individual training.

Courses' modular pattern is a perfectible, flexible and open system.

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AGENȚIA ROMÂNĂ  
DE ASIGURARE A  
CALITĂȚII ÎN  
ÎNVĂȚĂMÂNTUL SUPERIOR

# ASPECTS ABOUT THE QUALITY MANAGEMENT IN UNIVERSITIES FROM ROMANIA AND EU

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## Abstract

*This paper contains of four sections. The first one presents the European and internal normative frame regarding the quality evaluation and assurance system for higher education. The second section presents the properties of the quality evaluation and assurance systems for universities from EU and Romania. The third part shows the particularities of the quality evaluation and assurance system for the University of Oradea, the authors' affiliation. The last section contains the conclusions of the analysis.*

**Key words:** quality, evaluation, management, higher education.

## 1. Preliminary

Quality is one of the current main concerns of the universities that have assumed the role of engine of the society and concerns all the processes inside the university and their effect in the socioeconomic environment [1]. The quality management in the universities is the essence of university management, has the main objective of rising the competitiveness and it's implemented in several stages [2-6]: planning, controlling, assuring and improving the quality. Implementing the quality management in a university also involves generating a new organizational culture based on the assessment concept, which means to accept the idea that the recipients of the training-research-innovation processes are key players in university live. To answer this challenge, universities and assessment institutions should establish quality evaluation and assurance tools.

This paper aims mainly the degree to which such instruments are reflected in national legislation, European recommendations (standards) and internal regulations of universities, without reference to the quality of processes at the mentioned universities. The summary presented next is based on research done on sites of European and Romanian universities and institutions. The final part of the paper covers the evaluation and assurance system at the authors' affiliation university.

## 2. Aspects of quality management in universities in Europe

In the last 10 years universities in Europe have focused their concerns on quality evaluation and assurance, mainly for two reasons:

- Increased competitiveness against American universities, also supported by the EC;
- Fulfilling the requirements assumed through the „Bologna Declaration”.

In efforts to increase competitiveness for survival in a competitive system, more and more European universities accept the business university model, giving up the classic types [7]. The political debates in the EC referring to the improvement of the higher education quality are well known and have resulted in several historic decisions from the Sorbonne Declaration (1998), Bologna Declaration (1999), Lisbon Reunion (2000), Salamanca Convention (2001), Berlin Reunion (2003), Bergen Reunion (2005), London Communiqué (2007), Leuven/Louvain-la-Neuve Communiqué (2009), Budapest and Vienna Conference (2010).

The most important institutions involved in the processes of quality assurance regarding the higher education in Europe are:

- International Network for Quality Assurance Agencies in Higher Education (INQAAHE), founded in 1991;
- European Network for Quality Assurance (ENQA), founded in 2000 as a correspondent of INQAAHE;
- European Committee for Quality Assurance (EUC) responsible for the accreditation of education institutes and professionals such as teachers and trainers.

The ENQA was designated at the Berlin reunion to develop regulations regarding the quality evaluation and assurance systems for the higher education in Europe. This way we have the „Standards and Guidelines for Quality Assurance in the European Higher Education Area [8]. This document presents the principles, objectives, control system done by “equals”, prospects and difficulties. The Standards and Guidelines (S&G) themselves are structured in three parts:

- S&G for internal quality assurance in higher education;
- S&G for external quality assurance in higher education;
- S&G for external quality assurance agencies.

S&G for internal quality assurance in higher education concerns, according to ENQA [8]:

- Policies and procedures for quality assurance should: exist, promote the quality culture, contain strategies for continuous quality enhancement, be official and public, include the recipients;
- Approval, monitoring and periodic review of programs and scholarships;
- Student evaluation based on consistent and transparent procedures;
- Providing quality teaching staff;
- Resources for training and student requirements;
- Information systems should exist and be used for advanced management;
- Ensure public information.

Studying the self-publishing articles (written and electronic) of some European universities [9-21] reflect the fact that only a few of them have developed internal regulations meant to respond to the standards and recommendations made by ENQA. We notice the increase of the business attitude of the universities, highlighted by the higher priority granted to identify resources (material, financial) in research and training, to enhance institutional capacity and education efficiency, granting lower priority to concerns for the quality management by formalizing into proper regulations and procedures. We present next examples to support the above mentioned facts.

**Politecnico di Torino** (PdiT) [9] is well known as being a leader in Italy and Europe for higher education and research in the field of engineering and architecture. The main concerns of PdiT are in consonance with those of the major universities in Italy [10]. The main internal regulation is the Statute, and the main rules concern specific processes: internal orderliness, finance and

accountancy, didactic, management and administration. Quality is regulated under „studying & teaching” activities as „Quality education”, having the next components: a Teaching Coordination Committee, with an equal number of teacher and students; Quality of training, assessment and accreditation of courses and studies and Regional accreditation. There is a pro-rector for quality, assessment and accreditation. Scientific research quality is not explicitly regulated, being left to the research departments. The quality of management and administration processes are enforced by standards included in specific and national regulations.

**École Polytechnique Fédérale de Lausanne (EPFL)** [11] is, together with EPF Zürich, one of the federal interest polytechnic universities in Switzerland. EPFL has developed a quality assurance system that is in the European accreditation process. There is a coordination committee at EPFL, made out of a director and 5 teachers. At faculty level, there is a person responsible for quality assurance (teacher), and at department and institution level the person responsible is the department chief or institution director. Assessment and hierarchy of the teaching-staff is based on five criteria: grades obtained from the students; number of published papers; numbers of patents; involvement in National and European contracts; proceeds from the contracts. Aspects regulations of quality evaluation and assurance are contained in Directive “highlighting and emphasizing education at EPFL”.

German University of Dortmund (**Universität Dortmund** - UD) and from Aachen (**Rheinisch-Westfälische Technische Hochschule Aachen** - RWTH) [12, 13] are typical for German higher education. Regulations regarding the structure and operation of the two universities are extensive, detailed and accurate, well organized on processes and structures. These regulations, as well as the organizational culture specific for the two universities, set a management standard characterized as “continental” [7], a bureaucratic design that uses integration techniques and rules based on bureaucratic hierarchies. The two universities pay special attention to the quality of internal teaching and research processes. Formalization of the management system is more precise and advanced at RWTH than at UD. The quality management system at RWTH is entropic, based on ENISO 9000/2000 standards and EUC criteria.

The two British universities [14, 15] analyzed – **University of Cambridge (UC)** and **City University of London (UCL)** – are essentially different, from the point of view of university management, from the continental bureaucratic model. The regulations of the two universities are extensive, detailed and accurate, concerning – in equal measure – the structure, functions and procedures. The management control is done in a colleague-like manner, bureaucracy and ministry regulations being minimal. There is no direct and comprehensive chain of command between persons in a certain university structure. The management process is based on, in equal measure, regulations, impressive tradition and a well developed organizational culture. Taking into account the increased autonomy of the British system in relation to the continental system (French, German), inside the British universities – including UC & UCL – the strategic a quality management are highly developed. Both universities use a quality assurance system which is part of a quality strategy, sustained by taking responsibility, a quality guide and other documents characteristic for such a system.

From the 87 French universities, only for 12 contain their site an explicit reference to quality management. French universities are subject of assessment from the AERES, an independent agency [16]. The fundamental regulations are the Statute and the “Quadriennial Contract” (CQ) which are simple and accurate. The objectives regarding the quality are often included in the CQ. The management type is the “continental” bureaucratic one, with precise rules. In the

university management are involved mainly three councils: “administrative”, “scientific” and “studies and university life”, each of them having more committees. In the objective statements of the elite French universities appear often the following directions: Initial and continuous interdisciplinary training; Research on international dimension and an innovative scientific policy; Dissemination of scientific culture and information; International cooperation; Successful professional integration of graduates. Couple of examples:

- **Université Bordeaux 2** [16], has a main option for quality that presents regulations specific for training, research and university life;
- **Université Lille 1** [17], has inside the CQ a summary of 13 criteria and indicators for assessment and performance regarding processes and activities, including the quality certification of administrative and financial processes;
- **Université Paris Dauphine** [18] located in the French centre of “Grandes Ecoles”, is the first French university that obtained the EQUIS accreditation (November 2009);
- **Ecole de Mine Paris** (EMP) [19] is a polytechnic university with long tradition that has at present training and research programs in top engineering areas, social and economic sciences. EMP does not have his own entropic system, customized by internal quality assurance. They have internal and external evaluations, in a frame defined by French CNE;
- **Université de Savoie** (US) [20] is putting the quality concerns at the base of the transverse objectives of the General Policy Declaration (Figure 1), focused on university attractiveness.

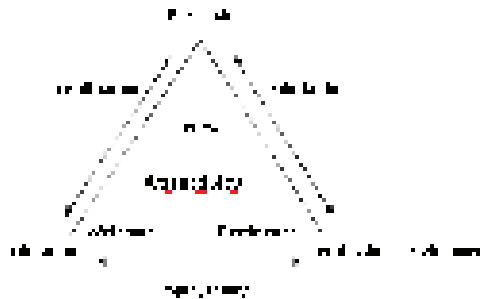


Figure 1. Explaining attractiveness levers at US

**Technical University of Denmark** (UTD) [21] is teaching for more than 170 years. It is an autonomous institution that covers the vast majority of polytechnic profiles. Regulations are simplified compared to British, French and German universities, although the autonomy is more profound at UTD compared to French and German universities. Quality management is not established as a structures system based on specific standards, but it is a lasting concern. At UTD, as well as at other European universities, it is practiced the teachers' evaluation (scheme A) and discipline evaluation (scheme B) by students, usually filling an electronic questionnaire on interactive platforms. In scheme C, students comment on strengths and weaknesses and make suggestions for improvement

### 3. Aspects regarding regulation and formalization of quality in high education in Romania

The subject of quality evaluation and assurance in the high education in Romania is heavily disputed and can be characterized, at national level, by:

- Is regulated mainly by a dedicated law and a methodology [22];
- The evaluation is formalized through internal and external quality evaluation, based on guides regarding standards and indicators [22];

- There is only one agency (ARACIS), under parliamentary control, empowered for external quality evaluation;
- Formalized quality of the training, research and management processes greatly influence the financing level of the universities [23];
- There are some strategic projects [24] that concern the diagnosis of the higher education in Romania and identification of means for increasing its quality and attractiveness. Two goals emerge: classification of universities and ensuring the necessary working conditions in Romania for some elite universities (at least top 500);
- ARACIS began (in 2009) the annual presentation “quality barometer”;
- We find the regulations regarding the quality evaluation to be exceedingly detailed. For example, the form for external quality evaluation visit contains:
  - 62 indicators for “mandatory regulatory requirements”;
  - 52 indicators for “standards and performance indicators”;
  - 6 annexes.
- There are significant overlaps between the two indicator types. There is the risk of quantity supremacy of minor indicators over a small number of exceptional indicators;
- There are differences, parallelisms and mutual evaluations between assessments done by ARACIS, CNSIS, CNFIS.

The majority of public universities (36 out of 50) have completed the external institutional quality evaluation, according to ARACIS methodology [22].

Although there are major and obvious differences between universities in Romania, despite the fact that there were established four marks (distrust, limited trust, trust, elevated trust) we establish that the framing of the evaluated universities does not fit in the normal classical distribution (Table 1).

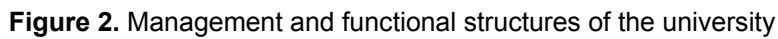
**Table 1** The matrix of the synthetic results regarding the institutional evaluation of the Romanian universities

Type		Public	Private
Number of universities	Accredited (B&M)	50	23
	Institutionally evaluated	36	10
	Quality	Elevated Trust	2
		Trust	1
		Limited Trust	5
		Distrust	1

The university where the authors of the report are active has a Quality Evaluation and Assurance System (QEAS), according to the national regulations [22] that fit the management and functional structures of the university (Figure 2). From an organizational point of view, alongside the Quality Evaluation and Assurance Committee (QEAC) assessed by the Law 87/2006 [22], there have been set up two essential structures for the QEAS:

- The Quality Board (QB) reunites the members of the QEAS and the quality managers of the structures (faculties, departments, offices and administrative logistics), ensuring the demands of integration and operation of the QEAS;
- The Internal Auditors Board (IAB) is the group of people that have adequate training for making the internal evaluation of the syllabus of the research centers and labs.





Type	Process/activity	No. of regulation	Degree of reflection [%]
1. Code	1.1. University Ethics	1	68
2. Regulations	2.1. Procedure	1	59
	2.2.Organization and Operation of Senate	1	32
	2.3. Granting honorary degrees	1	41
	2.4. Elections	1	46
	2.5. Admission	1	76
	2.6. Finishing the studies	1	41
	2.7. Position filling	2	32
	2.8. Quality assessment and assurance	1	84
	2.9. Studies and students	6	59
	2.10 Scientific research	1	43
	2.11. Materials Management	5	23
	2.12.Organization and operation of internal structures	6	33
	2.13. Internal Audit	1	41
3. Procedures	3.1. Curriculum Evaluation	1	43
	3.2. Curriculum Elaboration	1	24
	3.3. Evaluation of teaching staff	1	65
	3.4. Evaluation and management of research centres and laboratories	2	12
	3.5. Study fees	3	18
	3.6. Studies and students	6	14

	3.7. Monitoring of graduates	1	38
	3.8. Development budget	1	5
	3.9. Standards of personal retribution	2	41
	3.10. Financial and material management	3	16
	3.11. Work procedure of the commissions	8	36

Quality management at the University of Oradea is made based on the national and internal regulations [22] that include The Chart, The Code of University Ethics, 28 regulations and 29 procedures, structured on processes and activities (Table 2). The procedures are mainly those recommended by the ENQA [8], complemented with the requirements identified after the external and internal evaluations.

There are universities in Romania [26, 27] that shape QEAS according to the SREN ISO. In our opinion these standards apply more to the administrative processes and less to those of training and research. Without detailing the content of the QEAS from the public universities of Romania, there has been made a research on their websites concerning the existence and visibility of the necessary regulations for the university management, some of them indispensable in the quality management. The results of the analysis are shown in Table 3.

The list of the regulation categories is the one from the University of Oradea [25]. The degree of reflection gives the weight of universities at which was identified the regulation in question. It is important to mention that at positions (2.9) and (2.11) the regulations related to scholarship and student dorms are well represented.

**Table 3** Reflection degree on Romanian public universities' websites of essential requirements regarding the quality management

Indicator	Weighting level	Doesn't exists	Exists on minimal level	Exists with all facilities
Display (visibility) of regulations		3/50	1/50	46/50
"Quality" button		5/50	18/50	27/50
Evaluation procedure of didactic staffs	Auto-evaluation	26/50	7/50	17/50
	Evaluation by students	24/50	0	26/50
	Evaluation by colleagues	30/50	0	20/50
	Evaluation by head of department	36/50	0	14/50
"Students" button		3/50	25/50	22/50
"Graduates" button		24/50	10/50	16/50

The quality evaluation of teaching staffs and courses is a central goal in quality management recommended by ENQA, followed by ARACIS. The analysis made by the authors of the paper also follows the way that this requirement and other essential ones reflect on the websites of the Romanian public universities.

#### 4. Conclusion

Quality is one of the most important actual preoccupations of the universities. In the universities the management of the quality has a central place and the principal objective is to increase the competitiveness and attractiveness. In the last ten years, the European Universities have intensified the preoccupation focusing on evaluation and quality assurance, aiming to increase the competitiveness and to confer the requirements assumed by the "Bologna Declaration". The internal regulations, with

impact on the university's quality management from Europe and Romania, reflect inertness to European and national regulations; the universities being preoccupied to insure, mainly, the resources (institutional capacity and educational efficiency). The regulations and preoccupations in Romania referring to the quality of higher education are in consonance with the European ones, with specification that in Romania the excess of formalism is accentuated. Most of the universities have to recover in field of elaboration and operation of internal regulations dedicated to the management of quality.

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- [21] \*\*\*<http://www.dtu.uk>
- [22] \*\*\*<http://www.aracis.ro>
- [23] \*\*\*<http://www.uefiscu.ro>
- [24] \*\*\*<http://cnefis.ro>
- [25] \*\*\*<http://www.uoradea.ro>
- [26] \*\*\*<http://www.upb.ro>
- [27] \*\*\*<http://utbv.ro>



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AGENȚIA ROMÂNĂ  
DE ASIGURARE A  
CALITĂȚII ÎN  
ÎNVĂȚĂMÂNTUL SUPERIOR

# METACOGNITIVE INFLUENCE OF STATE METACOGNITION LEVELS IN ACADEMIC PERFORMANCES

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## Abstract

*The academics, the students and the higher education managers are increasly concerned about the development of appropriate strategies for teaching, learning and evaluation of student competencies. Metacognition is a key concept for a lot of current issues on learning improvement and can help to ameliorate the quality of teaching and learning practices. In the literature, metacognition is often classified in State Metacognition and Trait metacognition. According to this theory, State metacognition is a transitory state of intellectual activity of people, with variable intensity, characterized by planning tasks, monitoring/self checking, cognitive/affective strategies and self-awareness. Trait metacognition is a relatively stable response of individuals at cognitive tasks (Harold O'Neil, Jamal Aebli, [7]). In our study, we correlate the academic results of the students from two different faculties: Philosophy and Economics with their result in two questionnaires on metacognition. The results show, overall, that students who have a high level of state metacognition obtained higher academic performance compared with students who have low state metacognition. The variation of the level of state metacognition correlates with academic performance only for the students in Economics, but does not seem to affect the students in Philosophy. This finding shows the importance for some faculties to create a cognitive-metacognitive teaching and learning context for better result in academic tests.*

**Key words:** state metacognition, academic performance, higher education, learning improvement.

## 1. Introduction

### 1.1. Perspectives on Metacognition

Into the classic models, metacognition consists in metacognitive knowledge (declarative component) and regulation (procedural component). Metacognitive knowledge refers to the knowledge about cognitive strategies used in tasks and knowledge about themselves and people (Flavell, [5]). Regulation (procedural components) concerns the monitoring and control of one's cognitive processes during learning (Nelson & Narens, [10]).

Recent conceptual developments in the field of metacognition present some new findings (Yan Fung Moka, Ruth Mei-Tai Fanb and Nicholas Sun-Keung [15]). These studies show that metacognitive knowledge required also *the competence to use it* (Schneider, [12], Corsale & Ornstein, [2]). Another major component of metacognitive knowledge is the result of *evaluation of or reflection on* the one's learning. These components suppose a metacognitive activity and it is a global judgment of the result of a learning experience. It provides feedback to the learner on

the refinement of one's metacognitive knowledge (Flavell, [5]; Schunk & Ertmer, [13]). Pintrich, de Groot [11] considers that metacognition is planning, monitoring and modifying one's cognition. We can observe that the classical separation between declarative and procedural metacognition is more and more difficult to do.

Some newer models of metacognition include cognitive, but also motivational processes (Ames & Archer, [1]; Dweck & Leggett, [3]). To explain the development and achievement of learning, the traditional cognitive-metacognitive approach has been completed with the motivational-metacognitive approach. Among the motivationally mediated metacognitive models, two dimensions were especially examined: the *self-efficacy* and the *value of learning*. Studies show that students with high self-efficacy display better-quality learning strategies (Kurtz & Borkowski, [8]). For value of learning, some studies show that students' interest in the materials enhances their comprehension of materials with high difficulty and that task value (perceived by the subjects) is the best predictor of cognitive and regulatory strategy use (Wolters & Pintrich, [14]).

Other theoretical models on metacognition (Harold O'Neil, Jamal Aebli [7]) consider it as part of a more global competence: *self-regulating* that is a construct composed by metacognition, effort and anxiety. Also, *metacognition* consists in planning, monitoring, cognitive strategies and awareness; *metacognition* is the conscious and periodic (not continuous!) self-checking achievement of one's goal and, if necessary, applying different strategies for accomplishing the plan and touching the goal.

A particular theory on metacognition concerns the *state-trait categorization* of their dimensions. According to this theory, *State metacognition* is a transitory state of intellectual activity of people, with variable intensity, characterized by planning tasks, monitoring/self checking, cognitive/affective strategies and self-awareness. *Trait metacognition* suppose a relatively stable response of individuals at cognitive tasks (Harold O'Neil, Jamal Aebli, [7]).

## 1.2. Metacognition measurement

The various dimensions and processes of metacognition were measured in a variety of transversal empirical studies, but also in some developmental studies (Yan Fung Mok, et. al., [15]). Measurement techniques include questionnaires, tests, content analysis. A domain dependent technique for measuring metacognition is *thinking aloud protocol analysis*. In this technique, the subject is asked to vocalize his thinking process while working on a cognitive problem.

The instruments built for identifying one's thinking processes is usually domain independent measures for metacognition. This is organized in subscales, illustrating different conceptions of metacognition at various authors. Some questionnaires are built starting from a *dynamic representation on metacognition* – metacognition as transitory state – and must be applied immediate after some learning or evaluating task. Others start from a *static vision on metacognition* – metacognition as trait, as competence. Both approach offer complementary perspectives on the phenomenon underlying metacognition.

In our study we used an instrument elaborated explicitly for *metacognition as a state* – SMI (State Metacognition Inventory, O'Neil, Abedi, 1996) an we used also MSLQ, Motivated strategies for Learning Questionnaire, elaborated by Pintrich and de Groot in 1990. This second questionnaire measures six core metacognitive components: Self-efficacy, Intrinsic value of learning, Knowledge of metacognitive strategies, Use of learning strategies, Regulation of learning and Evaluation of learning; this instrument aims to evaluate the *metacognitive competence*, relying with *trait theory* on metacognition.

## 2. Methodology

### 2.1 Instruments, sample, variables and hypothesis

#### Instruments:

We used the main instruments of the authors mentioned above:

- 1) SMI (The State Metacognition Inventory);
- 2) MSLQ (Motivated Strategies for Learning Questionnaire)
- 3) A curricular test in Pedagogy

The SMI is composed of 20 items, grouped in four subscales, each with five items: Awareness (*I was aware of my own thinking*), Cognitive strategy (*I selected and organized relevant information to solve the test questions*), Planning (*I tried to understand the test questions before I attempted to solve them*) and Self-Checking (*I almost always knew how much of the test I have left to complete*). Subject must choose between four possibilities: *not at all* (scored by 1), *somewhat* (scored by 2), *moderately so* (scored by 3), and *very much* (scored by 4).

The MSLQ (*Motivated strategies for learning Questionnaire*) is the second instrument used in our research. The six dimensions of this questionnaire: Self-efficacy (*I think I can cope with the difficulties encountered in learning*), Intrinsic value of learning (*I prefer learning material that is challenging*), Knowledge of metacognitive strategies (*I know it is necessary to set a plan and steps for my learning*), Use of learning strategies (*When I read, I try to connect the things I am reading with what I already know*), Regulation of learning (*When I don't understand what I am reading, I will reread to help me understand*) and Evaluation of learning (*After tests and exams, I will figure out errors and mistakes in my answers*). Students responded by rating each item according to their self-perceived competence on a six-point Likert scale, with scores ranging from 1 ('I very much disagree with this statement about me') to 6 ('I very much agree with this statement about me'). Both questionnaires were translated in the Romanian language for our students.

The third instrument was a curricular test on Pedagogy, with multiple responses items and two open items. This instrument was used to measure academic performance in a particular field of knowledge.

#### Sample

Both questionnaires were applied to a sample of 327 undergraduates in Economics FEAA (222) and Philosophy (105) at Alexandru Ioan Cuza, University, Iasi, and were correlated with their results at the curricular test in Pedagogy, applied before testing metacognition.

#### Variables and hypothesis:

The *independent variables* are:

1. State metacognition levels: low and high
2. Trait metacognition levels: low and high
3. College type: FEAA and Philosophy

We establish the two levels for metacognition by reference to the median of each of the types of metacognition, so subjects with scores below the median were classified as low group of metacognition and those with scores above the median were considered as part of the group with a high level of metacognition.

The *dependent variable* is the final score obtained at the curricular test (academic performance) (quantitative).

**Research hypothesis** was that *the type and levels of metacognition influences the academic performance in pedagogy differently depending on the type of faculty.*

The working assumption of study is: *Higher scores on metacognition correlate with higher academic performance at curricular tests.*

## 2.2 Results and discussion

**A.** We test the research hypothesis by variance analysis method ANOVA factorial, first on **State Metacognition** levels (A. Labăr, [9]).

First, we try to find if there is some influence (simple or combined) on the type of college and levels of *state metacognition* on academic performance. The results show that there **is only a main effect of variable levels of state metacognition on academic performance status** [ $F(1, 327) = 8.020, p < 0.05$ ], but no effect of the variable type of college on academic performance [ $F(1, 327) = 3.392, p = 0.066$ ] and no interaction effect of variable levels of state metacognition and type of faculty on academic performance [ $F(1, 327) = 1.802, p = 0.180$ ].

### Tests of Between-Subjects Effects

Dependent Variable: academic performance

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
FACULTY	6.563	1	6.563	3.392	.066
LSMC	15.519	1	15.519	<b>8.020</b>	<b>.005</b>
FACULTY * LSMC	3.487	1	3.487	1.802	.180

Figure 1

However, testing of interaction by applying the analysis of simple effects t-test (A. Labăr, [9]) for independent samples revealed that:

1. For students from the Faculty of Philosophy, there are no significant differences in the level of state metacognition regarding academic performance [ $t(103) = 0.934, p = 0.352$ ];
2. For students from **FEAA**, there are significant differences depending on the levels of **state metacognition regarding academic performance** [ $t(220) = 3.648, p < 0.05$ ]; that means that students from FEAA with a *high levels of state metacognition* show superior academic performance compared to students at FEAA that show low levels of state metacognition;
3. For (all) students who have low state metacognition, **there are significant differences depending on the type of the college regarding academic performance** [ $t(164) = 2.253, p < 0.05$ ], that means that students of Philosophy with low state metacognition obtain higher academic performance compared with students with low state metacognition from FEAA;
4. For (all) students who have a high level of state metacognition, no significant differences in the type of college in terms of academic performance [ $t(159) = 0.356, p = 0.722$ ].

### Therefore:

a. Overall, students who have a high level of state metacognition obtained higher academic performance compared with students who have low levels of metacognition. It is a logically finding and is consistent with other studies on state metacognition. The metacognitive processing help student to better plan, monitoring and correct theirs responses at the curricular test.

b. The state metacognition levels influences especially the FEAA students, while the Philosophy students seems to not be very affected in academic performance by the transitory (state) metacognitive processes; more than that, Philosophy students obtain better academic performance in low state metacognition. These results may be relatively surprising, but we think



we can explain this by the nature of specialization and the curriculum: Philosophy and related disciplines invite her students to a systematic, consistent, introspective and “intensive” cognitive effort, and FEAA is oriented on real-life (economic) problem-solving, case-oriented strategies, various but rather “extensive” cognitive effort. For Philosophy student, loud-thinking (metacognition as processes) is a trait, for FEAA student’s, metacognition as processes is occasionally involved in their cognitive actions.

**B.** We test the research hypothesis by variance analysis method ANOVA factorial (A. Labăr, [9]), on **Trait Metacognition** levels.

We try to find if it exist some influence (simple or combined) of the type of college and levels of *trait metacognition* on academic performance. The results, show that there **is only a main effect of variable levels of trait metacognition on academic performance status** [ $F(1, 327) = 7.413, p < 0.05$ ], but no effect of the variable type of college on academic performance [ $F(1, 327) = 2.834, p = 0.093$ ] and no interaction effect of variable levels of trait metacognition and type of faculty on academic performance [ $F(1, 327) = 0.080, p = 0.777$ ].

### Tests of Between-Subjects Effects

Dependent Variable: academic performance

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
FACULTY	5.572	1	5.572	2.834	.093
LTMC	14.575	1	14.575	<b>7.413</b>	<b>.007</b>
FACULTY * LTMC	.158	1	.158	0.80	.777

Figure 2

Therefore, the students who have a high level of trait metacognition obtain higher academic performance compared with students who have low trait metacognition. Is also an natural conclusions, consistent with our expectations and with others research.

### 3. Conclusion

The main hypothesis of the study was that *the type and levels of metacognition influences the academic performance in pedagogy differently depending on the type of faculty*. We can observe this hypothesis is partially confirmed:

The type of metacognition – state metacognition and trait metacognition – influences, both, the academic performance: high state or trait metacognition correlate with high academic performance. We can’t observe clearly which is more predictive for academic performance.

Regarding the variable *state metacognition* and “college” (or “faculty”), we observe students of Philosophy with low state metacognition obtain higher academic performance compared with students with low state metacognition from FEAA (we explained it above).

The conclusions and the implications of this empirical study on metacognition concern mainly the quality of higher education. Two categories of experts may draw the benefits: the higher education teachers and the quality assessors.

The university staff must pay attention to the structure of didactic activities. Teachers should take into account that metacognitive processing will influence decisively the learning activities of the students. Many studies show that metacognitive training skills may help these students (Frumos, 2008). The systematic stimulation by specific learning tasks will increase students'

interest and academic performance. The FEAA students need to feel more involved (motivated) in metacognitive tasks, because they have lower performances in low metacognition state.

The quality assessor must take into account not only the quantitative indicators, but also the improvement of studying strategies, the ability of the student to self-evaluate, the processes of thinking, searching original solution. In this way, they can make a more suitable evaluation of the educational outcomes.

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# CURRICULA DESIGN BETWEEN PERSUASION AND TRAINING, AWARENESS AND COMPETENCE

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## Abstract

*The paper proposes a mechanism that makes possible some correction in curricula design. In education, Blooms taxonomy of educational objectives is still the reference regarding detailed competencies that can be achieved through learning. This taxonomy allows to define the desired learning level of a target audience. In addition, this taxonomy is useful to build assessment instruments. In order to improve the role of curricula for the undergraduate and graduate level (by point of view of Bologna process) a different approach is proposed. First of all, the different occupation will be identified, and immediately the competence requested, corresponding to the undergraduate level and graduate level (Master's degrees). Curricula design based on project management will be very useful for the labor marketing. It will reflect the competence attended by the employers, and not the teacher's persuasion.*

**Key words:** competence assessment, occupations and competences, employability

## 1. Curriculum Change Cycles (CCC) in Romania

The legal framework for the activity of the teaching staff was established on July 11, 1997 when the Act regarding the Statute of the Teaching Staff was promulgated. Initially conceived as a mere annex to the organic law of education, The Statute became a priority problem and was the subject of special provisions. According to the Statute, the teaching profession is defined as **one of the most prestigious ones**, and the attempt is made that *pecuniary retribution should match this status*; the law also stimulates the interest of the teaching staff for their continuous training and for innovation in the domain of education. Since 1997, attempts have been made to complete the transition period in the domain of education. The reform was meant to be comprehensive, apt to affect the entire structure of the educational system, at the level of content, educational institutions, financing and regulations. Consequently, the education legislation in the period 1990 to present aimed at the introduction and translation into legal terms of the curricular changes, of the evaluation of knowledge and institutions, of the infrastructure and computerization of education, of the domain of financing, of the status of the teaching staff, of the continuous professional training and of the permanent education.

Higher education (including scientific research in universities and international cooperation) had also a curricular reform, and we can mention some positives results: the continuation of study in university colleges of graduates from post-high school colleges; the regulations for entrance examinations in colleges and faculties; the finishing of study in short- and long-time higher education; the organization and unfolding of master's and doctoral programmes; complete university education given in foreign languages; the organization and operation of long-distance

education in universities; criteria for evaluating the strategic plan for the institutional development of state universities; the change of the Regulation on which the activity of the National Council for Academic Evaluation is based; the approval of the methodological norms for the evaluation of the professional performance of the university teaching staff; the authorization for provisional functioning and the accreditation of various fields of study in the private and state higher education; formula-funding for core financing of higher education.

The main conceptual shifts [1] are in general accepted:

- Switching from knowledge-based to knowledge, skills, and attitudes-based curriculum
  - From factual to procedural knowledge
  - From academic-centered to “student’s real needs centered” curriculum
  - From quantity to quality in the learning process
- Encouraging essential higher order learning (i.e. intellectual abilities, values, and skills)
- Integration of subjects
- Stress on co-operative learning
- The impact of new technologies
- Links with non-formal education
- Focus on student’s outcomes and performance assessment

The last one makes the connection with the professional competences, which is established by the Bologna level of qualification: license, master and doctoral.

## 2. Qualifications frameworks / three-cycle system

In the last ten-year period, successive ministerial meetings have refined Bologna objectives, but a qualifications framework is still the main one. The three-cycle system is not well understood yet, because, in my opinion, the engineer is considered in a classic way [2]: the engineers offer an extensive wealth of knowledge in order to apply science, technology, mathematics and practical experiences. An engineer can be described as a problem solver and designer. The application of the design process results in the production and operation of useful products processes and services. Engineering involves a broad spectrum of specialized subdisciplines that focus on issues associated with developing a specific kind of product, process or service, or using a specific type of technology. Engineers design everything from rocking chairs to artificial organs and prostheses. Becoming a successful engineer requires more than a love for math and science.

The Bologna objectives, respectively the employability, look to the engineer in a different manner. The main difference consists in the complexity of the real jobs:

- a) Simple, repetitive, complete defined, assisted by senior engineers
- b) Complex, continuous variable, incomplete defined, working independent
- c) Creative, innovative, research orientated

These three levels are the fundament for the three-cycle system, and the corresponding competences are connected. Thus, the development of the Frame for Qualification in the Field of Superior Education (CNCIS) [3] provides answers for a European need of access and progress in a university career, but regarding also the mobility of students and graduates. At the same time, it expresses a new perspective, more concentrated on the students, in agreement with the present international context. In order to become a reliable mechanism of internal and external regulation in the field of superior education, this complex system, the CNCIS, should be intelligible for all the

interested groups. To the external arguments, stated on an European level, one can also add those which can be identified on a national level, like: the absence of a coherent structure of organizing and classifying the qualifications, a system of university formation that is rather narrow-minded as reported to the financial and social environment, as well as a weak balance between the demand and offer of education and formation.

All the stated arguments show the necessity of developing of the CNCIS and of assuming of responsibilities by the institutions involved in making decisions in the field of Educational Policy, these institutions being directly interested by the principles and mechanisms of development and implementation of CNCIS, and also by the effects that the CNCIS generates on a national and European level. A common point of view on the initial approach and further development of the CNCIS is essential. One of the expected results of the process of realization of the CNCIS is the use of qualifications, expressed in terms of results of studying. Two fundamental elements for the attaining of this objective are the active participation of all the relevant and interested categories, as well as their desire to take active part in the subsequent process of the curricular re-formation. The qualifications description is realized by the competences, because these are the main criteria for the employer. This is the perspective that assessment must be reconsidered.

### 3. The Main Actor: ACPART

As a national authority in the field, The National Agency for the Qualifications in the Field of Superior Education and Partnership with the Financial and Social Environment (ACPART) organizes the frame of qualifications in partnership with the educational institutions and with the financial and social partners [3], by:

- the elaboration, implementation, updating and monitoring of the CNCIS, which will permit a broader acknowledgement of the results of the study, expressed in terms of knowledge, abilities and competences;
- the guarantee of the transparency of the CNCIS on a national and international level;

We can go even further, as we anticipate certain needs that will only arise after the creation of the National Board for Qualifications in the field of Superior Knowledge. This is the bench-mark that defines this exploratory research, the goal of which is to solve complex problems that can only be looked at from an inter-disciplinary point of view (the field of engineering and the educational sciences). The originality resides in the fact that we are in search of an instrument of objective assessment. This demand may seem rather far from realization, mostly because the establishing of the National Register of Qualifications in the field of Superior Education requires a long-term and sustained effort. But the procedure of university qualification validation (ACPART, annex 5, sheet 7: The Qualification Referential) already mentions that, besides the qualification curriculum and the inter-disciplinary sheet, the methodology of evaluation of competences and knowledge are also imperative to be specified at the end of the studies.

Before assessment, a problem occurs if we want to describe the competence. In [3, pag. 11] we can find the mechanism for competence setting up (figure 1). First of all, the transversal (key) competences will be not discussed here. Second, a new category is introduced: the level descriptors for competence. As we can observe in figure 1, these are:

- a) Knowledge and understanding
- b) Explanation and interpretation
- c) Applying and problem solving
- d) Critical reflection
- e) Innovation and creativity

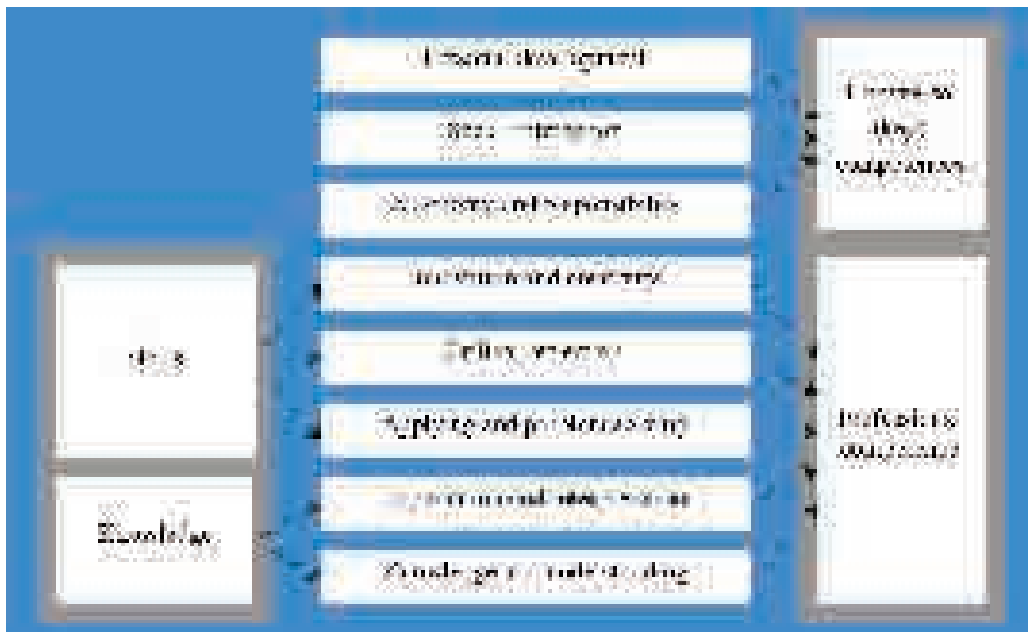


Figure 1. Learning outcomes [3, pg. 11].

At page 13 [3] we can find that “level descriptors describes the qualification and, at the same time, gives the criteria for competence assessment”. The second affirmation is correct and will be underline, but the **first one is totally wrong**. A special affirmation was found very close: “a level descriptor can be reach only if the predecessors are satisfied”. In essence, is correct, but in practice it was used to plan the different teaching disciplines in a wrong order: from beginning (knowledge and understanding....) to the finalization of the learning cycle (innovation and creativity). The result? The senior teacher imposed, using persuasion and paternalism, their point of view. **The obtained curricula were exactly the same like in the past, and no elements of reform were observed.** On observe this on [www ACPART page http://docis.acpart.ro/index.php?page=exemplificari-grile](http://docis.acpart.ro/index.php?page=exemplificari-grile) where we can find *ACCEPTED GRIDS*. These grids [3, pg.33] realize the connection between the Level descriptors for competence (column 2) and Disciplines (Column 4). The result is a classical arrangement (starting with Mathematics, Physics that are associated with the first level of competence: Knowledge and understanding. Here we have a huge mistake, because every Science must be study to attend all levels (until *Innovation and creativity*) as on demonstrate in the next paragraph. For this paper, it will be demonstrate the real meaning of level descriptors.

#### 4. The Bloom's taxonomy versus level descriptors of competence

The learning outcomes (figure 1) have a logical contradiction: understanding is different from knowledge (mechanical recall) and, more important, understanding = explanation and interpretation. In defense of this affirmation, we use Bloom's taxonomy for the Cognitive Domain [5]. This taxonomy is very old, but still accepted, although different taxonomy was developed (for the military science, for example). We don't need complicate demonstration, it is sufficient a direct comparing between level descriptors and Bloom's taxonomy (table 1), helped by useful verbs:

**Table 1** Comparison between level descriptors and Bloom's taxonomy

No	Level descriptors (ACPART)	Bloom's taxonomy	Useful verbs (for Bloom's taxonomy)
1	Knowledge and understanding	Knowledge	Tell, list, describe, relate, locate, write, find, state, name
2	Explanation and interpretation	Comprehension	Explain, interpret, outline, discuss, distinguish, predict, restate, translate, compare, describe
3	Applying and problem solving	Application	Solve, show, use, illustrate, construct, complete, examine, classify
4	Critical reflection	Analysis	Analyze, distinguish, examine, compare, contrast, investigate, categorize, identify, explain, separate, advertise
5	Innovation and creativity	Synthesis	Create, invent, compose, predict, plan, construct design, imagine, propose, devise, formulate
6		Evaluation	Judge, select, choose, decide, justify, debate, verify, argue, recommend, assess, discuss, rate, prioritize, determine

Level descriptors are still useful, they describe the learning process, but, based on Bloom, must be applied at every learning objective, at every step. Reciprocally, even the most complex engineering subdomain or science must cross all stages, together with the learner. Like an immediate conclusion, the assessment will find the efficiency of the learning process. But what we discover? If the level descriptors can't organize the curricula, what can we do? The answer consists in the difference of qualification corresponding to the three cycles. For example, ***a competence will be established in two-step: first using simplified methods (tables, using software, nomograms) for simple tasks, repetitive, complete defined, assisted by senior engineers (license qualification). Second step (master) will complete the gained competence with general methods (fully mathematics, developing software, simulation etc) for complex tasks, in continuous changing, incomplete defined and working independent.*** The descriptors extend the existing Dublin descriptors for Bachelor's, Master's and Doctoral awards that have been imposed by the Joint Quality Initiative ([www.jointquality.org](http://www.jointquality.org)).

This is the point in which working individual it is impossible to obtain good results. Curricula design based on **project management** will be very useful for the labor marketing. It will reflect the competence attended by the employers, and not the teacher's persuasion.

## 5. Curricula design based on project management

Curricula design can be seen like a task that can be accomplished in two different manners:

- With well-known results and table of contents (reserving the existing situation, like a very well one);
- With fuzzy results (new table of contents = improving the process and the results).

Due to [7, pg. 127] we cannot, therefore, declare exactly how every project should have its organization structured. Instead, we can mention some of the properties that are essential for efficient organization. It then describes possible organization options, together with their advantages and disadvantages.

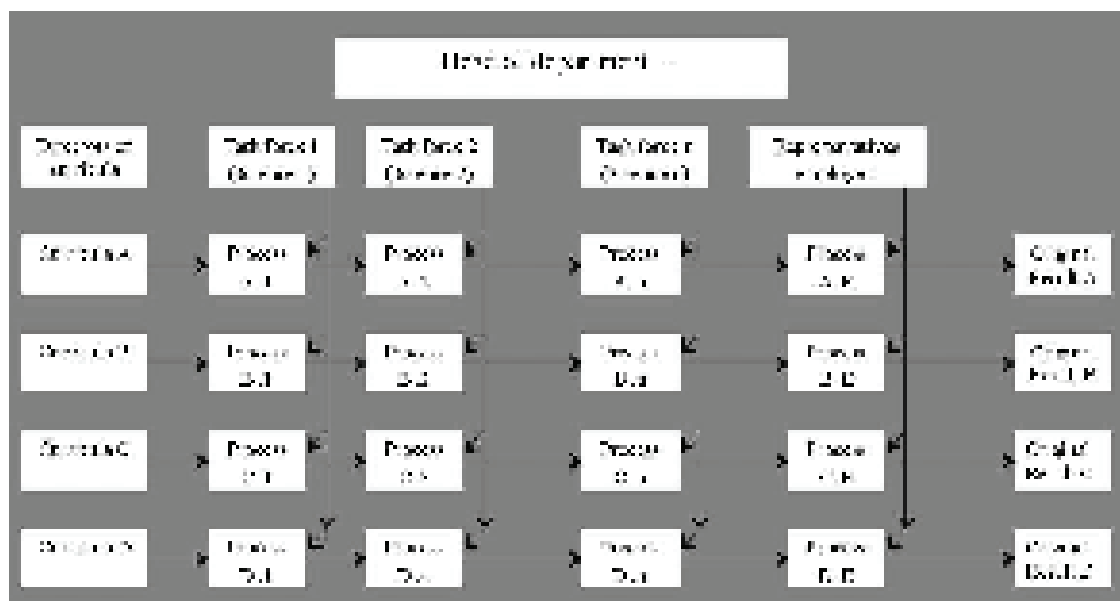
On short, we have two options:

- Project team organization – special dedicated to one project (even task forces);
- Matrix organization – for several simultaneous projects (our case).



Project team organization is well structured, with a strong (and natural) hierarchy. The organization chart (organigram) is a classical pyramid, and the head of it imposes the decisions. This is why the professor's persuasion makes the rules.

Matrix organization is adequate for universities [8, pg.37] like a supreme example for elite society, and the process (the curricula) is the result of a sum of contributions from every *specialist or even employers* involved. Adapting the organigram from [7, figure 9.5, pg.135] we can obtain a very lucrative image about curricula design, using matrix organization in which we can find a place for representatives employers:



**Figure 2.** Matrix organization for simultaneous projects

In order to understand why is so difficult (by author's point of view) but useful to apply the matrix organization, we can study [7, Figure 9.8, pg. 144] *Project team versus matrix organization*, with some original comments:

**Table 2** Project team versus matrix organization

Characteristic	Organization		Our comments
	Team	Matrix	
Maximum authority for the project manager	Yes	No	Authority practicing is very pleasant
Freedom from duplicated or ambiguous lines of command	Yes	No	Time consuming, less than matrix
Maximum motivation of staff to meet difficult targets	Yes	No	And also to impose solutions!
High security of information: by enclosing work in secure areas	Yes	No	Not applicable
High security of information: by restricting the number of staff	Yes	No	Not applicable
Most effective use across the company of those with rare specialist knowledge	No	Yes	All specialists must be involved
Large project, employing many people for a long duration	Yes	No	Not applicable, the process is short

Several small simultaneous projects, each needing a few people for a short time	No	Yes	Exactly our situation
Career motivation of individuals: opportunities for promotion within a person's specialist discipline	No	Yes	Work shops give the possibility for effective communication
Efficient post-project services to the customer	No	Yes	Very useful for curricula improving
Establishment of 'retained' information banks from which future projects can benefit	No	Yes	Very useful for curricula improving in every year

These aspects are very well known, but matrix organization remains a desideratum, thus we can find the university as a typical example for resistance at changing [6, pg.175].

## 6. The Competence Assessment

This is the area where we intend to revolutionize the assessment, by looking for an approach which makes the difference between the classic evaluation, influenced by all the tolerated deviations [6, pg.275], on one hand, and the pragmatically assessment of the employer, on the other. This new vision, which comes in contradiction to the traditional view that "teachers know how to evaluate the best", will draw the universities nearer to the business area and to the employers, a priority that can be in this way fulfilled. The regulation of such an evaluation instrument is extremely difficult to realize, mostly because of the negative reactions of both teachers and students. One of the assessment instruments of applied units of competence will allow a more thorough knowledge of the truth regarding the results of learning [3]. This aspect is important on an individual level (How competent have I become?), but also from the point of view of the organizations whom are either preparing, or looking for specialists. As for the European opening of this instrument, it will allow us to have a broader view on the competence phenomenon on a European scale. What can be more motivating for a graduate than to be able to compare him with specialists all over the world?

This comparison is not possible in present, because the traditional evaluation give a mark, a rank, describing a learning relation between teacher and student (not necessary objective, affected by *tolerated deviations*) at one moment, but gives no description about real competence, especially in connection with a particular job.

If the role of the traditional subjective evaluation decreases, man will become a competitor willing to self-surpass himself. This is how this paper intends to bring a qualitative chance, the student being thus able to place himself on a multi-annual, European even, scale of competences he has gained. This way, the educator's value will increase too, because he will be seen as the main generator of plusvalue for society. The traditional teacher-student relationship will become a real co-operation for every student to achieve competences in accord with his own professional development. As soon as the objective evaluation instrument will be regulated at a quota imposed by the employer, the relationship between the universities and the business climate will change considerably. This objective represents a huge and very important change for the current educational frameworks, and ACPART with DOCIS project [3] is a process converging to this. The employers will give up the stereotypical phrase: "Give me graduates so that I will prepare them for the job I need". The universities will be able to enter periodical evaluation mechanisms of continuous learning, being thus able to certificate the progresses of the individuals engaged in formal or informal learning processes.

A process of re-formation of the curriculum can already be noticed nowadays. The goal of this research is to create for each applied unit of competence a set of procedures to test the attained

level. Of course, this means a different assessment, more detailed, of the knowledge obtained so far [9]. What is more important is that this instrument needs time to become credible, because it is necessary not only to create and validate the evaluation instrument (which will function on the basis of problems and situations simulation in a specific evaluation software), but also to organize a system of description of the competences not from the teachers' point of view, but from the point of view of the business specialists, who prove their competences on a daily basis. This is the most difficult approach, but at the same time it is the only one able to make this assessment instrument credible. By testing specialists already occupying different functions, the actual degree of the acquired competences will become clear.

## 7. Conclusions

Using level descriptors for competence (close to Bloom's taxonomy), both educators and students will be able to evaluate their performance in a detailed way and to give answers to questions like: "Which is the degree of qualification of a specialist who wants to work in a certain field of activity, after graduating a university stage?"

Competence is something which belongs to the experienced specialists? No, it must be fixed this believes. Now, the professors but also the students must be able to measure the level of the competence after license or master study, for a specific occupation and role.

The assessment must function based on PC network, and with a special software. Based on this, each student will solve specialized problems to reveal the level of the competence (not only knowledge!). It is important to emphasize this: it is a difference to evaluate knowledge and it is more difficult to describe and to evaluate competence!

Using project management to define the requested competences and only after that starting the design, we believe that the curricula will be more efficient and close to Bologna expectations.

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# STUDENTS VIEW ON THE EXTERNAL EVALUATION PROCESS. ENHANCING QUALITY THROUGH STUDENT FEEDBACK

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## Abstract

*The present paper aims at identifying issues that can be improved in the institutional quality assurance process. This is done by surveying student quality evaluators about their perceptions on the review process on its different aspects: general perception about the efficacy of the evaluation process and perceptions about the pre and the post - visit phase, teamwork in the review panel, higher institutions' openness to the evaluation. A peek on the perception of students that have been involved in external reviews points out strong aspects of the quality evaluation process and also, and more important, points that are still missing or that can be improved in the process. The study is also sharing essential insight about how the review members work as a team. This is of high relevance because students not only play an active role as a team member in the review teams, but they can offer a valuable and valid feedback on the process that can be used in order to enhance quality at institutional level. Based on the present status highlighted by the results of the questionnaire, there are a series of concrete solutions for improvement of the institutional quality evaluation process and also for further research in the domain.*

**Key words:** student involvement, improvement of QA, student feedback.

## 1. Present Context

When we talk about quality assurance in higher education, it is important to start with its fundamental principles, the ones that stand at the very basis of the concept of QA. In Romania, the quality assurance agency – ARACIS – through its membership in ENQA – the European Association for Quality Assurance in Higher Education – and EQAR – European Quality Assurance Register for Higher Education – submits to and applies to the following principles: respect for the diversity among higher education institutions with the engagement of enhancing quality for all institutions at a desirable level, strengthening the relationship between education and research, cooperation with other quality assurance agencies in the European Higher Education Area, inclusion of students as partners in the academic community, periodic review of own actions in order to meet compliance with the European Standards and Guideline- ESG.

### 1.1. External QA in Romania

Since 2005, ARACIS carried out activities, mainly under the following forms: provisional authorization study programme, study programme accreditation at Bachelor level, study programme accreditation at Masters level, periodical evaluation and quality external evaluation.

The ultimate goal of the external evaluation is to develop an internal quality culture, which ensures that quality is a focus of the institutions on all levels and is incorporated in the everyday work of the whole institutional community (ESIB, 2004).

## **1.2. Students' involvement in external QA**

In the Romanian context, students' formal involvement in quality assurance at national level has started with the foundation of ARACIS in 2005. It has mainly implied the participation of students as full members in the external review panels, involvement of students' feedback regarding external evaluation methodology – elaboration of standards, procedures and guidelines – also student participation in scientific manifestations and events regarding quality assurance.

On the decision level, students have been involved as observer members of the national agencies decision making body, which is the ARACIS Council, since 2006.

Students participation in the external quality assurance process has been regarded as beneficial and as constantly improving itself over the years and also the process as a whole. This is due to the efforts directed into students' training in quality assurance, hence students have to attend a one week training, simulation of a site visit and a complex evaluation process before actually being part of an external review panel. An example of this kind of training is prepared and conducted by the National Alliance of Student' Organizations in Romania in close collaboration with ARACIS.

Since there has been an involvement of students in the process of institutional evaluation, there was a strong need for a comprehensive evaluation of the participation of students on this level in order to see the effects of student participation and also to measure student feedback on the whole process and draw some conclusions about what can be done differently in order to improve the external quality assurance process.

In this regard, the National Alliance of Students' Organizations from Romania – ANOSR – established a Students' Expert Pool since 2007, training more than 80 students in becoming quality assurance experts so far, and has involved 60% of them in actual external evaluation processes.

Among those involved in institutional evaluations, ANOSR has conducted a survey to capture their perception regarding different facets of the evaluation process. From the students that are still active in the process of institutional evaluation, a number of 24 students evaluator had answered to our questionnaire, which confers the interpretation based on the answers a high validity and good generalization of the data.

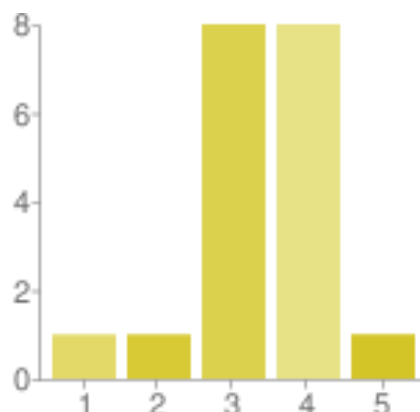
## **2. Students' perception on external QA**

### **2.1. Students' perception regarding the external QA process**

We all know that it is of core importance the way students are involved like equal partners in the educational processes at all levels and that their opinions and perceptions bring added value to the whole quality assurance process. In this sense, students were asked about the way they perceive the external quality assurance process in terms of effectiveness and bureaucratizes.

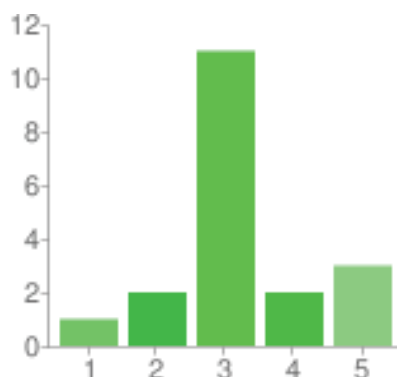
When asked to rate the level of bureaucratization of the process on a scale from 1 to 5 (1 meaning "not bureaucratic at all", 5 meaning "totally bureaucratic") a vast majority of students

involved in the process **rated it as being on a medium to high level of bureaucratization (see fig. 1).**



**Figure 1.** Level of Bureaucratization of External Evaluation process, as perceived by students

In terms of effectiveness, students were asked to rate the external evaluation process on a scale from 1-5 (1 meaning “totally inefficient” and 5 “fully efficient”) , 58% of the respondents viewed the process as being of medium efficiency, while the other had either similar opinions (22%) or extreme point of views (21%), as can be seen in figure 2.



**Figure2.** Level of Efficiency of the External Evaluation process, as perceived by the students

All in all, we can conclude that the level of trust that the students have in the process is at a medium level, meaning that students have sufficient awareness of the processes flaws and bonuses, as thus they can engage in an active manner with trust in the system but also a dose of critical thinking and perception of the overall efficiency of the process.

## 2.2. Students' perception on the review panel

As we all know, the Ministers responsible for Higher Education in the countries participating in the Bologna Process described students as competent, active and constructive partners in the establishment and shaping of a European Higher Education Area (Prague, 2001) in almost every ministerial meeting. Although we can notice consistent improvements in students' opinions

regarding this partnership, there are many aspects we should think about when trying to include students in evaluation teams. In the same time, many students that answered the survey said that they don't feel being treated as if they were members with equal rights in the review panel.

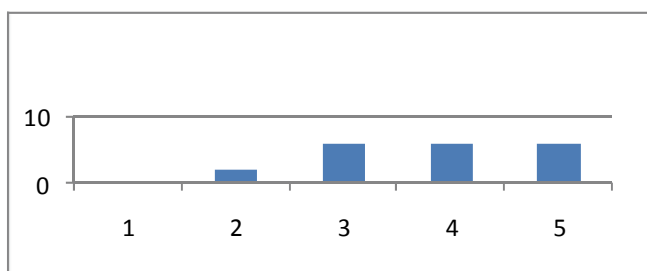


**Figure 3.** The way that students describe their belonging to the evaluation teams.

### 2.3. University Openness to external evaluation

Less than 25% of the students involved in external evaluation review team have stated that the evaluated higher education institution was opened and willing to share information as it believed that the institutional evaluation was a process of quality enhancement rather than an obligatory audit. Also, 26% of the students observed that the information obtained from the HEI were irrelevant in order to get a general overview on the institutions' quality. In many of these cases, on a closer look on the site visits, there were found aspects not matching the data from the self evaluation report, concluding thus an unwillingness of the institution to fully open and trust de evaluation process.

A quite significant part of the student experts involved in the external evaluation process in the last year – more precise, 64% of the respondents – **have stated that the meetings during the site visits are staged, lacking authenticity.**



**Figure 4.** Student perception on the level of "preplayed" meeting during the evaluation process

As a consequence, 95% of the students consider that they also had to organize separate meetings in order to extract more accurate and unbiased data.





**Figure 5.** Number (percentage) of students organizing separate meeting with the academic community for extra information

### 3. What can be done

The goal of quality assurance is to improve education therefore it should take place at every level of education (course, programme, institutional level and all its subdivisions) and be a continuous process. As we can see, this is a common trait of the Romanian practices regarding quality assurance, but still we notice that students' participation can be seen only at institutional evaluation and merely at the internal evaluation. Given the fact that programme evaluation can be considered as being of extreme importance for students as it has a direct impact on what they are learning and how the teaching-learning process takes place, there is clear evidence that students need to be involved in the study programme accreditation review teams as full members. As this primary level of evaluation is best done through a peer to peer approach, again there is the need for student involvement at this level.

As we could easily notice from our study, when it comes to students experience and perception of the external evaluation process, there tends to be a lack of trust from the higher education institution side towards the external evaluation process. It could also be that the institution perceives the process as being an exclusive process of evaluation, without regarding it as an opportunity to improve and enhance its internal evaluation process.

Institutional quality assurance and evaluation is primarily a responsibility of the higher education institution. The first step of the process is defining the goals and mission by the decision making body of the institution and also at faculty level. The learning environment of the students should be at the core of this goals and missions (ESIB, 2004). Taking all of this into consideration, we consider that redefining the external evaluation process in the eyes of the institution so that it can be seen also as a process from which the institution can benefit, can get external and objective feedback in order to better attain its goals and objectives.

Also, even though there seems to be a quite good sense of partnership when it comes to the participation of students in quality assurance, there are still many things that can improve. As it is of great importance to be involved also in at the decision level in order to bring your genuine input to the process, there is a clear need for students to be fully involved in the decision making body of ARACIS as members with equal rights.

### 4. Conclusions

This brief questionnaire was a first good step towards taking a valid input from one of the most important part of all the stakeholders as it permits us to reflect on the process we've made this 5 years of working together for enhancing quality in the higher education area.

We strongly believe the students must be given full trust in order to accomplish this partnership, breaking the differences, generation gaps and stereotypes. However, students are an essential part of the quality assurance domain bringing different perspectives, backgrounds and needs but still, they must be considered equal right partners in programme evaluation or even being part of the decision making process in the national agency.

On the other hand, higher education institutions should truly and honestly prepare for the evaluation visit, not showing a false reality, but considering an opportunity to improve quality management.

Moreover, we believe that higher education institutions should intensify the efforts in reducing the bureaucracy, focusing on the practical aspects of the evaluation process, instead of documents.

As for future studies, we believe that there is a clear need for obtaining a feedback from all of the other stakeholders involved in the process: the experts comprised in the review teams and also we'd see as beneficial a feedback from the higher education institutions concerning what can be better done in order to help them improve their quality management system and to establish a genuine quality culture in their institution.

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# QUALITY, CREATIVITY AND COMPETENCY OF HIGHER EDUCATION GRADUATES

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## Abstract

*The higher education graduates should have attributes that overcome sustainable development needs. Quality and creativity are associated to higher education students and graduates, as permanent state of spirit, attitude and action. Competency is associated to higher education graduates, as an important operational feature. Higher education institution environment, as structure, management and resources, strongly influences the profile and professional development of students. The concepts and specific characteristics of quality, creativity, and competency are presented in a synergism approach. A case study illustrates an university environment with quality, creativity and competency as core values. A conceptual modeling regarding the entities associated to higher education is developed, as a ground for a system of databases. Final conclusions are presented.*

**Key words:** quality, creativity, competency, graduates, higher education.

## 1. Introduction

The objective of this paper is to strengthen the importance of the quality, creativity and competency as major attributes of higher education graduates.

The work methodology has been based on the formulating a general need and definite assets to overcome this, followed by presenting a state of matter, a certain development of the main entities features, a relevant case study, and a conceptual modeling for structuring and organizing the associate information in a system of databases, as below.

The higher education institutions are supporting more and more complex processes and systems contributing to the environment, society and economy's sustainable development, by their high qualified human resources and expertise [1, 2], study programs content, research and development themes and solutions, activities in specific partnerships.

In order to overcome the sustainable development needs, the higher education graduates should have proper attributes. Quality, creativity and competency are among these.

Quality, creativity and competency are invoked in relevant higher education matters, individually or in a group, on different levels of development, i.e. regarding: graduates, but students, staff, institution, study programs, etc., too; knowledge, skills, innovation, services, qualification, career, etc.; attitude, relationships, loyalty, teamwork, interactivity, teaching, learning, etc. Some views are as follows.

**Quality** means: as *standard* - how good or bad something is; a *feature* of someone or something; a *high standard* [3]. The *quality of education* represents all the *features* of a *study program* and of its *provider*, by which the expectations of the *beneficiary* and the *quality standards* are fulfilled [4]. Consumers may focus on the '*specification quality*' of a product/service, or how it compares to competitors in the marketplace. Producers might measure the '*conformance quality*', or degree to which the product/service was produced correctly [5].

There are two important quality-related functions: quality assurance and quality control. The *quality assurance* is *prevention* of defects, by preventative activities [5], and can be defined as any systematic process of checking to see whether a product/service being developed is meeting specified requirements [5] or those systems, procedures, processes and actions intended to lead to the achievement, maintenance, monitoring and enhancement of quality [6]. The *quality control* is the process of looking at goods when they are being produced to make certain that all the goods are of the intended standard [3] or the *detection* of defects, by testing as verification and validation [5], and is related to a set of minimum of management processes and procedures for accreditation purposes, also refer to the established level of process organisation and achievement [7].

**Creativity** is the ability to generate innovative ideas and manifest them from thought into reality. The process involves original thinking. The term creativity is reserved to apply specifically to the generation of novel ideas by individuals or groups, as a necessary step within the innovation process [8]. The world needs people who can combine their knowledge, skills and capabilities in creative and adventurous ways to find and solve complex problems. Creativity is important to our inventiveness, adaptability and productivity as an individual, and to the prosperity and functioning of our organizations and more generally to the health and prosperity of our society and economy [9]. If the moral purpose of education is to make a positive difference to students' lives, and the purpose of higher education is to help students develop their potential as fully as possible at this level, then enabling students to be creative should be an explicit part of their higher education experience [10].

**Competency** is an important skill that is needed to do a job. Competence is the ability to do something well [3]. *Competence* is: the capacity of someone to decide, to do something; a set of theoretical and practical information [11]. Competency is person's ability, formally confirmed by some document, to perform a certain valid (relevant, qualified, at a concrete quality level) and reliable (precise and fast) part or function of occupation [12]. Competence is a standardized requirement for an individual to properly perform a specific job. It encompasses a combination of knowledge, skills and behavior utilized to improve performance. More generally, competence is the state or quality of being adequately or well qualified, having the ability to perform a specific role [13]. *Competences* are major attribute of *graduates* of a certain study level, and should be defined and achieved so that to make distinction between the graduates of different: degree levels - Ba, Ma, PhD; study fields; study programs. *Skills* and *knowledge* are major attributes of *students* and, implicitly, of graduates, acquired through certain activities, according to circumstances. Skills and knowledge should be determined so that to contribute to the creation of one or more well-defined competences [1].

Capacity for creativity and innovation is part of the professional attributes, and examples of teaching and assessment activities contributing to its development are open-ended problems, field trips, debates/ challenges, cross-disciplinary tasks, etc. [14]. The desired attributes of the higher education graduates include transferable competencies and capacity building. Learning-oriented courses challenge students' creativity, and excitement of discovery [15].

Striving towards a creative mix of individual talents and experiences among students and staff, providing common fora for researchers from different disciplines and offering diverse learning experiences will likely result in conditions favourable to the creativity of the higher education community. Structured exchanges between the arts and other disciplines can be particularly fruitful [16]. Promoting inspiration and creativity, the framework for quality assurance should be created so that, on the one hand, forces faculties and programme directors to engage in quality assurance, and on the other hand, leaves enough room for creativity and to accentuate their own priorities [17].

## 2. Major entities

The quality, creativity and competency are concepts and characteristics/attributes, too, depending of the contextual clues, such as defining matter, application, and author competence.

Quality, creativity and competency are associated to higher education matters, on abstract, general or particular level.

The quality, creativity and competency of the higher education graduates are the result of various factors - linked to students, graduates themselves, staff, institution, etc. these all co-exist and inter-act multi-directionally and reciprocally.

Let be  $F_a$  a factor of type of student, graduate, staff, institution, etc., and  $F_{ab}$  - a matter of type of feature, activity, etc. associated to  $F_a$ . A correlation between  $F_a$ ,  $F_{ab}$ , on the one hand, and the quality, creativity and competency, on the other hand, is proposed as in Table 1, where H and n denote: H - a high level of quality, creativity, competency, which is desirable or defined by a standard/ indicator; n - a normal/ natural level of quality, creativity, competency.

The considered correlations have to be interpreted contextually, i.e.: the higher education graduates should denote a high level of their quality, creativity, and competency; the students should manifest a normal/ natural level of competence required to do the study activities, etc.

Few properties of the considered entities and their correlations have to be strengthened.

Quality is associated to all factors. Creativity should be associated to higher education students and graduates as permanent state of spirit, attitude and action. Competency should be associated to individual(s), and, in context, to higher education graduates as an important operational feature.

The *state* of student, the academic staff, the working environment and the infrastructure of the higher education institution, the society and economy strongly influence the quality, creativity and competency of the graduates. Higher education graduates themselves could contribute to the development of the quality, creativity and competency - by their daily activity within the society/ economy, and by supporting, as *alumni*, their higher education institution(s).

The concepts and specific characteristics of quality, creativity and competency should be approached and developed in a synergism way.

**Table 1. Correlation between  $F_a$ ,  $F_{ab}$ , Quality, Creativity, Competency**

$F_a$	$F_{ab}$	Quality	Creativity	Competency
...	...			
Graduate	Whole	H	H	H
Student	Whole	H	H	n
	Learning	H	H	
	Project work	H	H	
	Research	H	H	H
	Lab work	H	n	
	Communication	H	n	
	Teamwork	H	n	
Academic Staff	General	H	H	H
	Teaching / Training	H	H	H
	Research	H	H	H
	Communication	H	n	
Administrative Staff	Whole	H	n	H
	Communication	H	n	
	...			
Institution	Environment	H	H	
	Infrastructure	H	H	
	Institutional Structure	H	n	
	Information System	H	n	
	Financial Services	H	n	
Study Program	Whole	H	n	
	Curriculum	H	n	
	Project content	H	n	
	...			
...	...			

A higher education institution should include definite statements and actions in its university Charta, strategic plan, and operational programs on the quality, creativity and competency.

### 3. Case study

The Linköping University, LiU, and, in particular, its Institute of Technology, LiTH, from Sweden [18], have been chosen in order to illustrate advanced characteristics of an university environment based on a functional quality assurance system.

LiU offers education at Ba, Ma and PhD levels for 25,000 students, having 3,500 employees. The offered study programmes cover the areas of engineering, management, teaching and medicine. An increasing number of courses and master programmes are offered in English throughout all faculties. More than 1,500 foreign students attend classes at the university each year. Over 100 guest researchers a year take advantage of the research environment at LiU.

#### **Quality / Equal Opportunities for students and employees**

At LiU, the rules, norms and routines assist quality assurance and reflect an attitude characterized by respect for individuals and their varying circumstances.

LiU works with the issues of 'equal opportunities', EO, for all people, regardless of gender, ethnicity, religion, background, age, sociability, life situation.

LiU contributes to a good attractive study and work environment, development and creativity, quality in education and research, equitable structures and processes. The content of LiU's study programmes should deal with EO perspectives wherever relevant.

LiU has wide-ranging contacts in various sectors of society that promote EO in the academic world and the community at large.

LiU should be highly accessible in terms of activities, information and premises. Admission and recruitment processes are not discriminatory. New students and employees are received in such a way that they all feel welcome.

EO should prevail in terms of employees' working conditions, salaries, influence, career prospects and scope for combining a professional career with responsibility for the home and family. Equal distribution of the sexes should prevail at various levels and within the different types of posts and professions and in the deciding and advisory sphere. LiU should help students to combine their studies with parental responsibilities.

### ***Open-mind spirit***

The exchange students being at LiU like the open-mind spirit present at the university. The students can knock on the door of the professors and they will speak with the students and answer questions, without any problem. The students don't have to book an appointment in advance. Of course, if the professor is busy, the student has to come back some other time.

At LiU, all the persons call each other for their first name. It is believed that a person can be rude, even using family name of a person, but polite when using his/her first name. The foreign students studying in Sweden are very happy with this system. On the contrary, for the Swedish students who have been studying in certain foreign countries, the levels in behaving between teachers and students are considered quite unusual.

The administrative staff from LiU is also trying not to complicate things, if they can be solved in an easy way. If some papers are needed, they use as few as possible, this fact meaning a win-win situation for both sides. But of course forms have to be used, to ensure the system.

The relationships between employees are based on respect, trust and involvement from both sides. The people are encouraged to do their best, sometimes with the option of working from home, because this is faster, not being under different interruptions. But the staff are at the university most of the time to be available for the students.

The administrative staff develops their level of competency by participating to conferences in Sweden or abroad due to their tasks, or by doing any other special activity useful for the job, for instance going in France to exercise their French if working with lots of French students.

### ***Questionnaire to the staff***

LiU considers its main asset its employees. A key success factor for the university is that every employee understands LiU as an attractive workplace. In this direction, LiU implements employee surveys every two years, to investigate the working conditions, through a questionnaire survey.



The results are presented in separate reports broken down by each institution and its subdivisions.

The inquiry should be seen as a mapping of the working conditions and the integration of systematic work in institutions and units. The need for action and change will continue to be documented in the action plans and follow-up.

The summary from the employee survey in 2008, for example, is showing the followings: employee index rose from 59 in 2004 to 65 in 2008; employees feel involved in the design of their duties and also feel that they have sufficient skills and experience to perform their activities in a satisfactory manner; employees feel proud of continuing to work within LiU and a high proportion can recommend LiU as an employer; 79% say that the next manager is easy to work with; 68% of employees indicate that performance appraisals are meaningful.

### **Areas dedicated to students**

There are a lot of areas, small rooms or similar, where the students can study individually or in groups. In addition, there are rooms where the students can bring their own food, use the microwave ovens and eat.

## **4. Conceptual modeling**

The relevant information about the higher education graduates, students, quality, creativity, competency, etc., as above, could be structured and organized in a system of databases.

A conceptual modeling regarding the considered entities associated to higher education has been developed, as a ground for a system of databases, as follows.

Let's consider the entities  $E_i$ ,  $i = \overline{1, e}$ , where  $E_i$  could be graduate, student, ..., quality, creativity, competency, etc.

Relevant themes,  $T_{i,j}$ ,  $j = \overline{1, n}$ ,  $n = n(E_i)$ , are associated to each entity  $E_i$ , i.e.,

$$T_{i,j} | T_{i,j} \quad E_i, j = \overline{1, n}, n = n(E_i) \quad (1)$$

The significance, the name,  $N(T_{i,j})$ , and the code,  $C(T_{i,j})$ , of  $T_{i,j}$  are given in the context, mainly depending of  $E_i$ . For instance,  $N(T_{i,j})$  could be General Characteristics, Quality Assurance, Creativity Culture, etc., and the code - GC, QA, CC, etc.

Thematic groups,  $G_{i,j,k}$ ,  $k = \overline{1, q}$ ,  $q = q(T_{i,j})$ , are constituted inside of each theme  $T_{i,j}$ , i.e.,

$$G_{i,j,k} | G_{i,j,k} \quad T_{i,j}, k = \overline{1, q}, q = q(T_{i,j}) \quad (2)$$

The name of a group  $G_{i,j,k}$ ,  $N(G_{i,j,k})$ , is defined as  $N(T_{i,j,k}) - N(SE)$ , i.e.,

$$N(G_{i,j,k}): N(T_{i,j,k}) - N(SE), k = \overline{1, q}, q = q(T_{i,j}) \quad (3)$$

where  $N(T_{i,j,k})$  is the conventional name of the thematic area  $T_{i,j,k}$ , derived from the name of the theme  $T_{i,j}$ , and  $N(SE)$  – the name of the state entity or similar.

For instance,  $N(T_{i,j,k})$  could be General Characteristics 01, Quality Assurance 01, Creativity Culture 01, etc., and  $N(SE)$  - Romania, European Union, etc.

The code of a group  $G_{i,j,k}$ ,  $C(G_{i,j,k})$ , is defined as  $C(T_{i,j,k}) - C(SE)$ , i.e.,

$$C(G_{i,j,k}): C(T_{i,j,k}) - C(SE), k = \overline{1, q}, q = q(T_{i,j}) \quad (4)$$

where  $C(T_{i,j,k})$  is the code of the thematic area  $T_{i,j,k}$ , and  $C(SE)$  - the code of the state entity or similar.

For instance,  $C(T_{i,j,k})$  could be GC01, QA01, CC01, etc., and  $C(SE)$  - RO, EU, etc.

A thematic group  $G_{i,j,k}$  is constituted of definite characteristics  $C_{i,j,k,p}$ ,  $p = \overline{1, r}$ ,  $r = r(G_{i,j,k})$ , i.e.,

$$C_{i,j,k,p} | C_{i,j,k,p} \quad G_{i,j,k}, p = \overline{1, r}, r = r(G_{i,j,k}) \quad (5)$$

Each  $C_{i,j,k,p}$  has a significance in the context, as legislative stipulations, quality standards, etc.

Thematic documents  $D_{i,j,k}$ ,  $k = \overline{1, q}$ ,  $q = q(T_{i,j})$ , are determined, so that, the content of each of them,  $Cont(D_{i,j,k})$ , includes the content of the thematic group  $G_{i,j,k}$  / the definite characteristics  $C_{i,j,k,p}$ , i.e.,

$$\begin{aligned} D_{i,j,k} | Cont(D_{i,j,k}) &= Cont(G_{i,j,k}) \\ Cont(D_{i,j,k}) &= \{C_{i,j,k,p} | p = \overline{1, r}, r = r(G_{i,j,k}), k = \overline{1, q}, q = q(T_{i,j})\} \end{aligned} \quad (6)$$

The name of a document  $D_{i,j,k}$ ,  $N(D_{i,j,k})$ , is defined as  $N(E_i) - N(G_{i,j,k})$ , i.e.,

$$N(D_{i,j,k}): N(E_i) - N(T_{i,j,k}) - N(SE), k = \overline{1, q}, q = q(T_{i,j}) \quad (7)$$

where  $N(E_i)$ ,  $N(T_{i,j,k})$  and  $N(SE)$  have the significances presented above.

The code of a document  $D_{i,j,k}$ ,  $C(D_{i,j,k})$ , is defined as  $C(E_i) - C(G_{i,j,k})$ , i.e.,

$$Cod(D_{i,j,k}): Cod(E_i) - Cod(T_{i,j,k}) - Cod(SE), k = \overline{1, q}, q = q(T_{i,j}), \quad (8)$$

where  $C(E_i)$ ,  $C(T_{i,j,k})$  and  $C(SE)$  have the significances presented above.

Thematic databases,  $BD_{i,j}$ , associated to the themes  $T_{i,j}$ ,  $i = \overline{1, e}$ ,  $j = \overline{1, n}$ ,  $n = n(E_i)$ , are determined

as union of the documentes  $D_{i,j,k}$ ,  $k = \overline{1, q}$ ,  $q = q(T_{i,j})$ , i.e.,

$$BD_{i,j}, i = \overline{1, e}, j = \overline{1, n}, n = n(E_i) | BD_{i,j} = \bigcup_{k=1}^q D_{i,j,k}, k = \overline{1, q}, q = q(T_{i,j}) \quad (9)$$

The name,  $N(BD_{i,j})$ , and the code,  $C(BD_{i,j})$ , of  $BD_{i,j}$  are given in the context.

Structural databases,  $BD_i$ ,  $i = \overline{1, e}$ , are determined as union of the thematic databases  $BD_{i,j}$ ,  $j = \overline{1, n}$ ,  $n = n(E_i)$ , i.e.,

$$BD_i, i = \overline{1, e} \mid BD_i = \bigcup_{j=1}^n BD_{i,j}, j = \overline{1, n}, n = n(E_i) \quad (10)$$

The name,  $N(BD_i)$ , and the code,  $C(BD_i)$ , of  $BD_i$  are given in the context.

The system of databases, SBD, is determined as union of the structural databases  $BD_i$ ,  $i = \overline{1, e}$ , i.e.,

$$SBD = \{ BD_1, BD_2, \dots, BD_i, \dots, BD_e \} \quad (11)$$

The name,  $N(SBD)$ , and the code,  $C(SBD)$ , of SBD are given in the context.

Based on the above model and by integrating real data, an operational system of databases could be determined.

## 5. Conclusions

In order to realize the understanding, design, production, exploitation and recycling processes and systems satisfying the sustainable development needs, the higher education graduates should have proper attributes. Quality, creativity and competency are among these.

There are various views on quality, creativity and competency, being associated to graduates, students, staff, knowledge, skills, innovation, services, qualification, attitude, teaching, etc., individual or in a group, on different levels of development, etc.

The quality, creativity and competency of the higher education graduates depend on numerous factors - linked to students, graduates themselves, staff, institution, etc., which co-exist and interact multi-directionally and reciprocally. Quality is associated to all factors. Creativity should be associated to higher education students and graduates as a permanent state of spirit, attitude and action. Competency should be associated to higher education graduates as an important operational feature.

The concepts and specific characteristics of quality, creativity and competency should be approached and developed in a synergism way.

The relevant information about the higher education graduates, students, quality, creativity, competency, etc., should be structured and organized in a system of databases.

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AGENȚIA ROMÂNĂ  
DE ASIGURARE A  
CALITĂȚII ÎN  
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# THE ROLE OF STUDENT-CENTERED EDUCATION IN CONTEMPORARY SOCIETY

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## Abstract

*This paper outlines an overview of what student-centered education is, one of the main reference points of the European higher education reform, known as the Bologna Process. The goal of the student-centered education is to transform students from passive receivers into active participants in the knowledge process.*

**Key words:** student-centered education, quality, skills, implementation strategies, challenges.

## 1. Current issues related to student-centered education

The knowledge society, the contemporary world issues, the gap between education systems in Europe, North American and Pacific countries, led to the transformation of European Universities which have imposed a new way of thinking and designing the entire higher education system. Thus, student-centered education becomes „one of the most important tendencies that guides the academic teaching” [1]. Under its influence, nowadays, teaching and learning interact with each other, combining training with skill-development and learning with evaluation, in accordance with the aims set. In the professor-centered education, characteristic for the previous period, professors used to provide students with finite cognitive products that stimulated memorization, while in the student-centered education, professors focus on students' thinking, on their involvement in building-up projects, in research and in scientific investigations. Now, the professor has the role of a knowledge moderator who facilitates students' learning, guides their evolution, and encourages them to have cognitive experiences [2]. Between the two educational agents, a partnership is created in order to guide learning towards training and developing a new set of skills necessary to the optimal socio-professional insertion and lifelong education [3]. The student becomes responsible for his own training. He must show concern for knowledge, explores, suggests solutions to problems, formulates opinions, draws conclusions, and cooperates with his peers and professors [4], [5]. By showing interest for the activity and becoming an active partner of the professor, the student will make a contribution in achieving education focused on his own needs. Together with students and professors, higher education institutions have an important role in achieving the student-centered education, thereby facilitating optimal interaction between the two participants in the educational process. The university must provide the necessary conditions, material and other resources, programs and services appropriate to a modern, incentive education and involve students in all the decisions made at that level [6]. The programs suggested by the university should always relate to the demands of the society and the labor market and they should be flexible in order to distinguish training stages, whereas optional training becomes significant, leading to multiple academic alternatives.

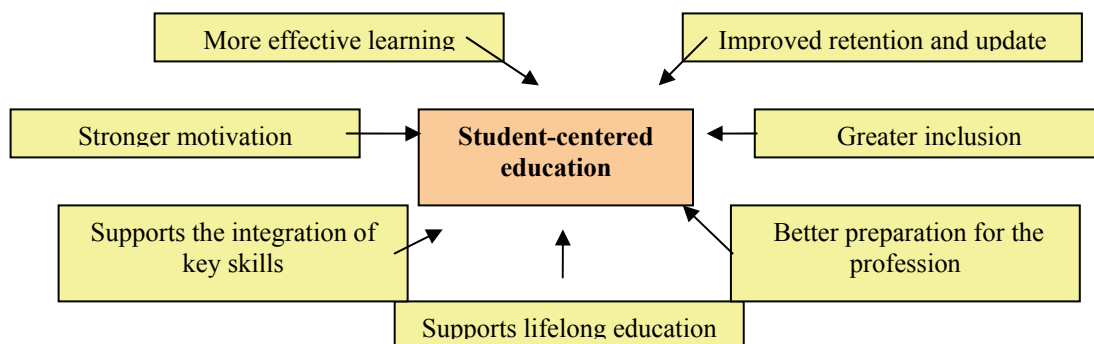
As a conclusion to the findings so far, one can sense the need for a paradigm shift, from the professor who teaches the student to the student that teaches the professor, from a professor-centered educational process to a student-centered one with an active role within the university.

**Table 1** Teaching and learning paradigm

Teaching paradigm (teacher-centered)	Learning paradigm (student-centered)
<b>University</b>	
Offers courses and programs	Creates learning environments
Delivers education	Produces learning
Transfers knowledge from the professor to the student	Encourages students to discover and produce knowledge
<b>Professor</b>	
Emphasizes the content of the disciplines that he has to teach	Follows the learning outcomes
Does not collaborates with the students	Insists on a partnership with the student in the educational process
Evaluates only at the end of the class	Evaluates permanently
<b>Student</b>	
Memorizes the contents submitted by the teacher	Brings his own contribution in identifying and exploring the content
Does not express his opinions	Formulates opinions and brings arguments to his judgments
Does not get involved in his own development	He is responsible for self-study and self-education

## 2. The importance of student-centered education

In the last few years, research and studies have shown that student-centered education motivates students in learning, increases their awareness and involvement in the knowledge process and creates a positive attitude towards their own training. This type of education contributes to the development of problem solving skills, creativity, curiosity and critical thinking. The professor's responsibility is to find those interactive methods that help students develop and improve the quality of the educational process. "Authentic" learning means "Passionate" learning and requires "curriculum which considers questions more than answers...creativity more than reproduction of information...individuality rather than conformity...and excellence more than standard achievements" [7].



**Figure 1.** The benefits of student-centered education [7]



The student-centered education is valuable also because it describes interactive, responsible and effective ways in approaching the teaching-learning-evaluation process [8]. Thus, a transition is made, from a school that does not adapt to the student's needs and to the market demands, a school that closes the horizon of the individual and does not prepare him for life, to a more active school, full of initiative which facilitates problem-solving by seeking genuine solutions and makes the student more responsible in his own development process and also puts an emphasis on the quality of education [9]. From the traditional perspective, the most important thing was the content, although most of the times this was insignificant to what students had to accomplish at their work place. In the modern approach the emphasis falls on processing methods and application of content and skills improvement that enable the student to make decisions and be responsible for their consequences. Henson pointed out that in this perspective "learner-centered education involves the learner and learning in the programs, policies and teaching pedagogy that supports effective learning for all students" [10].

Teamwork is encouraged, although difficult, but with great effects in improving interpersonal relationships, in getting faster connections and transfers, in supporting view points with strong arguments and in accepting the diversity of other people's opinions. Major changes also occur in the professor's role who, from an information provider turns into a facilitator professor, ensuring the student's access to knowledge, an advisor professor, trying to solve the difficulties encountered by students, and a master professor who, based on his skills, activates the skills and competences of his working partners in education. The professor's lectures must be interactive in order to stimulate the students' curiosity and to involve them in the understanding and use of content focusing on practical and concrete situations. From the Bologna Process perspective, the professor is seen as a specialist, very passionate when it comes to education, using technology and efficient methods for training the students of tomorrow's society. A Bologna professor examines and responds to the moral and ethical needs of his students, decodes information in an appropriate language and gains the attention of the student through professionalism, speech craft and the confidence that he manifests towards the development capacity of those he trains. He does not attract students by checking attendance, as the traditional professor used to, but causes them to be interested in education and its discovery. Student-centered education methods shift the focus of activity from the teacher to the students. These methods include active learning, in which students solve problems, answer questions, formulate questions of their own, discuss, explain, debate, or brainstorm during class; cooperative learning, in which students work in teams on problems and projects under conditions that assure both positive interdependence and individual accountability; and inductive teaching and learning, in which students are first presented with challenges (questions or problems) and learn the course material in the context of addressing the challenges. Inductive methods include *inquiry-based learning*, *case-based instruction*, *problem-based learning*, *project-based learning*, *discovery learning*, and *just-in-time teaching*. Student-centered methods have repeatedly been shown to be superior to the traditional teacher-centered approach to instruction, a conclusion that applies whether the assessed outcome is short-term mastery, long-term retention, or depth of understanding of course material, acquisition of critical thinking or creative problem-solving skills, formation of positive attitudes toward the subject being taught, or level of confidence in knowledge or skills [11].

### 3. The applicability of student-centered education

There are multiple student-centered education implementation strategies, but they require time, effort, resources and funds and also desire to change the current situation into a one that can favor the evolution of students. The results are the ones desired by everyone who contributes to the improvement of teaching, learning and evaluation, namely: quality improvement of the initial

and continuous skill development educational services; mutual recognition at European level of diplomas and university studies; protection of the beneficiaries' best interests regarding the performance standards of the graduates; demonstration of the institution's responsibility regarding the way in which the financial resources are exploited in order to carry out a mission which increases information and educational offer transparency towards the public. The quality of educational services reflects the efforts of university management and aims to focus the synergetic effect of all human resources to develop a culture of quality in planning, organizing, conducting, controlling and guiding activities in accordance with the performance standards. The applicability of student-centered education is noted in the implementation of strategies specific for this type of education:

- emphasis on scientific and interdisciplinary character of education as well as on its practical-applicative content in accordance with the national and international academic standards and the requirements of the main beneficiaries of the student training process;
- the promotion of student-centered learning through the transfer of preparation responsibility from the professor to the student, without diminishing the professor's role in the development and completion of the teaching act;
- encouraging the opinion pluralism through constructive debate and confrontation of ideas on various theoretical, methodological and practical issues;
- continuous adjustment of the educational curriculum to the specialization opportunities, vocational routes and university structures;
- continuous rise in the level of objectivity in evaluation by clearly establishing the criteria and the performance indicators;
- the development of educational offer, continuous updating and modernizing curricula and syllabuses, so as to make them attractive, competitive, efficient and appropriate to the demands of the future society;
- involvement in the educational process of professors ready to implement student-centered education and evaluate them through an open, honest and formative system, with the participation of higher education leaders, colleagues and students;
- improvement and diversification of the teaching resources to support the educational process, emphasis on the role of counselor and psychologist in the development of students;
- monitoring student progress in identifying possible failures in the educational process, in order to improve the educational curriculum;
- obtaining continuous feedback from companies or institutions which employ students, in order to adjust the syllabuses to the job requirements;
- continuous challenge to ensure professional practice of students to develop skills and competences;
- concern of the university to involve students and professors in national and international research projects.

In a meta-analysis of 42 studies conducted over the previous 10 years finding indications that education (teaching and learning) with technology has a small, positive, significant ( $p < .001$ ) effect on student outcomes when compared to traditional instruction. So, in this case, has been observed to result in significant changes in teaching and learning while also often leading to more collaborative learning environments as students take more responsibility for their own learning [12].

Researchers in some schools measured student engagement in learning by attendance and behavior referrals in an effort to show growth in student learning enhanced by the

implementation of one-to-one computing environments [13]. The role of the teacher in this classroom has transformed from one of purveyor of knowledge to a facilitator who guides children in the construction of their own knowledge [14].

Cuban was critical and skeptical of the need for schools to adopt a one-to-one computing environment. He claimed that what most districts find from adopted one-to-one environments is increased student motivation, more engagement in lessons and increased interest in education [15].

On the basis of studies analyzed I also contribute by identifying barriers in student-centered education:

- lack of educational research;
- inadequate national policies;
- unfavourable staff working conditions;
- insufficient student participation;
- low level of cooperation between academic staff and students;
- other priorities at national level;
- lack of expertise;
- negative attitudes of teachers and students.

Although there are many aspects identified up to now, regarding student-centered education, its implementation in the academic environment remains a challenge not only for the student and the professor but also for the university to which they belong. The role of student-centered education is vital in contemporary society, especially when everything is constantly evolving and the demands of the society grow each day.

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## AUTHORS INDEX

### A

Albu, C.	125
Antal, C.	215
Arditti, J.C.	429
Augusti, G.	13

### B

Băișan, C. E.	21, 243
Berniyazova, A.	287
Berniyazova, M.	287
Belokopytov, A.	447
Bilge, A. N.	27
Birke, B.	33
Bjerke, Ch. H.	39
Borri, C.	13
Braathen, K.	47
Briški, G.	175
Bumbaru, S.	55
Buzea, C.	65

### C

Cămășoiu, C.	71
Caragea, N.	71
Cavaco, C.	97
Cepoiu, A. L.	275
Cernat, M.	77
Clipa, O.	83
Cocoradă, E.	91, 97
Cocoradă, S.	91
Constantin, C.	105
Constantin, G. D.	111
Costea, Șt.	459
Costreie, S.	119
Curtu, I.	125

### D

Debeleac, C.	137
Dima, A. M.	143
Dinescu, I.	153

Dinescu, R.	119
Diyaen, H.	161
Dobre, E.	169
Dodiković-Jurković, V.	175
Dogaru, A.	179
Donath, L.	187
Duhaneanu, M.	195
Dumitrescu, D.	195
Dura, C.	401

### E

Emin, D.	203
----------	-----

### F

Fărnoagă, L.	209
Felea, I.	215
Frederiks, M.	47
Frumos, F. V.	223

### G

Gălățanu, C. D.	229
Gavra, A.	237
Gheorghe, M.	21, 243
Grigoriu, A.	209
Guberti, E.	13
Guranda, M.	253

### H

Helerea, E.	407
-------------	-----

### I

Ianole, R.	119
Ianos, I.	275
Ignat, A.A.	83
Ilie, A. G.	439
Ionescu, G.	283

Ionica, A.C.	395, 401	<b>O</b>	
Ispas, D.	283		
Ivan, S.	475	Ocak, Z.	381
		Oprean, C.	389
		Oprean, R.	357
<b>K</b>			
Kainazarova, M.	287	<b>P</b>	
Kozlovsky, M.	293		
Krasnikova, V.	287	Pirnuța, O. A.	153
		Pop, E.	395, 401
<b>L</b>		Popa, C.	331
Labăr, A. V.	223	Popa, I.	125
Lache, S.	299	Popescu, D.	319
Lascu, A.	307	Popescu, M.	65, 407
László, D.	501	Postolache, F.	55
Leba, M.	395, 401	Potolea, D.	413
Lupu, A.	313	Prisăcariu, A.	237
Luțaș, A.	209	Pușcă, A.	55
		<b>R</b>	
<b>M</b>		Răileanu, M.	421
Maican, A.	91	Remaud, B.	429
Maican, A.M.	97	Rinderu, P.L.	319
Maican, C.	91	Roșca, I.	439
Mangra, M.	319	Rubin, Y.	447
Manoliu, I.	13	Rusu, B.	451
Martin, R.P.	429	Rusu, C.	451
Măță, L.	325		
Mellberg, M.	21, 243	<b>S</b>	
Mihuț, L.	495	Sánchez, T.	429
Mironeasa, C.	331	Sârbu, R.	439
Moga, D.	187	Seiz, J.	21, 243
Moldovan, L.	343	Sicoe, A.	357
Moraru, F.	351	Sima, I.	243
Moruțan, C.	357	Soboleva, E.	447
Müller, W. B.	365	Stanciu, M.	83
Munteanu, F. D.	495	Stoica, I. V.	275
		Szép, Al.	501
<b>N</b>			
Nagy, Șt.	215	<b>Ș</b>	
Nastac, S.	137		
Năstase, P.	125	Ștefănescu, D. O.	519
Năstăsescu, V.	373		

**T**

Talaba, D.	299
Talpoș, I.	179
Toma, S.	413
Tsokov, G.	467

**Ț**

Țăranu, A. M.	459
---------------	-----

**U**

Urs, I.	475
---------	-----

**V**

Vâga, V.	485
Valdiserri, J.	13
Vârlan, S. E.	491

**Z**

Zamfir, A. D.	495
Zamfir, D.	275



