

ՀՀ Ինտերնացիոնալ Գլոբալիզացիայի Միջազգայնացման  
Ծրագրի շրջանակներում իրականացվող  
Ծրագրի շրջանակներում իրականացվող (առաջնություն)

MINISTRY OF EDUCATION AND SCIENCE OF REPUBLIC OF ARMENIA  
YEREVAN STATE UNIVERSITY  
STATE ENGINEERING UNIVERSITY OF ARMENIA (POLYTECHNIC)  
MIDDLESEX UNIVERSITY, UK  
GENOA UNIVERSITY, ITALY

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Ծրագրի  
23-24 սեպտեմբեր, 2008



## PROCEEDINGS OF THE DISSEMINATION WORKSHOP

Internal Quality Assurance:  
Experience, Problems and Trends

YEREVAN  
23-24 September, 2008

**ՊՐԻՄ – 2009 – YEREVAN**

ՀՀ Ինքնիշխանության նախարարության Գերատեսչության  
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ՀՀ Գերատեսչության  
23-24 հոկտեմբեր, 2008



## WORKSHOP PROCEEDINGS Internal Quality Assurance. Experience, Problems and Trends

YEREVAN  
23-24 September, 2008

ՀՀ Գերատեսչության – 2009 – YEREVAN

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ĀáŌárĪáoŸ ÁÝĪ-nĪáoŮ ĭ  
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 27178-2006 “ARMQA” Ý³ĕ³.ĪÇ ßñç³Ý³ĪÝ-náoŮ 2008Ā. ĕ-ài>Ům-n̄Ç 23-24-Á  
 Ī³ĭ/₂Ů³Ī-n̄áí³Ī ĭ>Ō>Ī³íáoĀŮ³Ý ĩ³ñ³Ů³Ý šàñ³ĪÇ Ý-nũÇÝ ³à³NáíáoŮ.  
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Materials presented at the Tempus Dissemination Workshop  
 “Internal Quality Assurance. Experience, Problems and Trends” organized  
 on 23<sup>rd</sup> and 24<sup>th</sup> September, 2008 in the frame of the TEMPUS JEP № 27178-  
 2006 “ARMQA” **“Internal Quality Assurance System in Armenian HEIs”**  
 Project

¶Ø, 23+74.58

ISBN 978-5-8084-1070-1

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## Foreword

Quality is not an act. It is a habit.

Aristotle (384bc-322bc)

Quality is an elusive concept and has been defined in various ways including : something good (transcendental view), fitness for purpose (customer based), conforming to design, specifications, requirements (manufacturing based), has something others do not (product based) and the best combination of price and features. Such views apply more easily to tangible products. However, education and its quality are much more complex social activities and hence the difficulty in defining, practicing, managing and improving present more challenges.

It is commonly expected that higher education engages in imparting and generating knowledge, and should strive to contribute to the broader economic, social, and cultural well-being of communities. For worldwide acceptability and competitiveness, national higher education institutions need to ensure that the quality and standards of their academic programmes and procedures are comparable with competitors' standards set by international Quality Assurance bodies. While individual countries have increased activities in quality assurance and enhancement, developing procedures and monitoring higher education institutions, such efforts have become internationalised and quality assurance has recently become a global concept rather than simply the sum of individual national initiatives. This has led to an increase in European as well as international cooperation on the development of agreed guidelines and standards to support quality assurance.

Within the last 20 years the Armenian educational system has become increasingly diversified and universities have to cope with multiple problems related to the university management in particular with issues of quality assurance, and providing education, related to currently existing social and political needs of newly democratised society and specific requirements of the internal and international labour market. Since gaining independence Armenia has made significant steps towards full integration in European structures, most notably with the accession to the Council of Europe. As an important part of this process the higher education system in Armenia is currently undergoing a comprehensive reform. One of its main aims is the harmonisation with the European Higher Education Standards and the Bologna Process. Armenia signed the Bologna Declaration in Bergen in May, 2005 and according to the objectives of the Bologna Process has to introduce a quality assurance system in the higher education sector.

ENQA (the European Association for Quality Assurance in Higher Education) and national agencies such the UK QAA (Quality Assurance Agency) have been disseminating information, experiences and sharing of good/best practices in the field of quality assurance (QA) in Higher Education. Quality Assurance agencies aim to safeguard the public interest in sound standards of higher education qualifications and inform and encourage continuous improvement in the quality of HE through conducting external reviews (including audit) in universities and colleges, describing clear academic standards in the Academic Infrastructure, advising government on applications for degree awarding powers and university title and offering advice on academic standards and quality.

The main aim of the ARMQA project (JEP No. 27178-2006 - ARMQA) <sup>1</sup> aims to develop a framework for Internal Quality Assurance initially for two Armenian Universities (Yerevan State University and State Engineering University of Armenia).

This workshop reports the interim results of the project which are primarily concerned with the study of the current state of practice, challenges and aspirations in Armenian Higher Education, the comparative study of existing quality frameworks, processes and practices in European Union institutions. In particular, expertise, know-how, methods and mechanisms within the participating EU institutions are considered with the view to identify good, workable and applicable practice to Armenian Higher Education institutions.

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<sup>1</sup> **Internal quality assurance system in Armenian HEIs**

Project partner institutions :

**Great Britain, London - Middlesex University Coordinator & Grantholder**  
**Armenia, Yerevan - Ministry of Education and Science of Republic of Armenia**  
**Armenia, Yerevan - State Engineering University of Armenia (SEUA)**  
**Armenia, Yerevan - Yerevan State University**  
**Italy, Genova - Università degli studi di Genova**

## **Internal Quality Assurance System in Armenian HEIs**

A. Markarov, A. Grigoryan (Yerevan State University),  
R. Aghgashyan (State Engineering University of Armenia)

*The Project will develop internal QA system in YSU and SEUA. It will establish the internal QA mechanisms and structures in YSU and SEUA, will develop new standards for internal QA methodology and practice coherent with the ENQA standards including: curricula and syllabi design, criteria of the student knowledge assessment, teaching staff professional performance etc.*

*One of the key points of proposed Project is the dissemination of the Project achievements to promote the QA culture in other Armenian HEIs. The achieved Outcomes should be sustainable and planned to be permanent factors supporting and promoting the internal QA in Armenia.*

### **1. Project Background and Needs Analysis**

- Within the recent decade Armenian educational system has become increasingly diversified. Universities have to cope with multiple problems related to the university management, in particular with issues of quality assurance.
- Universities have to provide education, related to currently existing social and political needs of newly democratized society and specific requirements of the internal and international labor market.
- Need for harmonization with the European Higher Education Standards and the Bologna Process.
- Armenian HEIs have to introduce a quality assurance system in the higher education sector.

The main stream of the educational reforms in Armenia is the establishment of the structures and overall system corresponding to the ENQA standards. Thus, currently required transformations in the educational system of Armenia must include the transfer to the three-grade educational system, adoption of the European Credit Transfer and Accumulation System (ECTS) and the Internal Quality Assurance System development.

Next step within the YSU and SEUA reforms requires creation of a system for IQA, its assurance and monitoring, including that via internal and external monitoring, assessment and evaluation.

That requires addressing needs in university management practices, especially within: (a) policy and procedures for quality assurance including curricula and course programs, (b) system of verification and assessment of student knowledge, (c) standards for teaching staff qualification and competence, (d) making public programs and awards offered by HEIs.

The Project addresses the needs in creation and development of sustainable, durable and efficient internal quality assurance system for a wide range of disciplines presented in SEUA and YSU such as technical (engineering), social, humanitarian, and natural sciences etc. and allows their testing at the SEUA and YSU using the modern experience and expertise of EU partner universities.



## **2. Consortium presentation**

The project is a result of long term co-operation between the consortium members. The consortium members have co-operated in: a) evaluating the current situation in higher education system of Armenia related to the project objectives; b) drafting the project; c) studying national higher educational reform policies relevant to the project; d) distribution of roles and responsibilities among the project participants and endorsement of the project.

The main role of Ministry of Education and Science of the Republic of Armenia (MoES) in the project consortium is to co-ordinate the creation of standards for the internal quality assurance system and dissemination of the project results on the national level.

Yerevan State University (YSU), established in 1919, has more than 100,000 graduates and more than 14,000 students studying at 20 faculties and the regional branch in Ijevan. Annually more than 70 international grants are executed at the University. YSU has successful history of implementation of various TEMPUS grants, including those in the fields of university administration, developing new curricula or improving library facilities –with the Middlesex University. Web-Site: [www.ysu.am](http://www.ysu.am).

State Engineering University of Armenia (SEUA) with its 3 regional campuses is the premier provider of engineering and technical education in Armenia, has prepared over 100 thousand graduates. Today the advancement of the University is going to internationalization of Education and Science, sharing its experience and being ready to learn more from partners. For more details about the SEUA please visit [www.seua.am](http://www.seua.am).

Middlesex University (MU) has 25000 students in four Schools (Faculties) namely School of Arts, School of Computing Science, Middlesex University Business School, School of Health and Social Sciences (includes: Institute for Community Development and Learning) and School of Lifelong Learning and Education. MSU has extensive experience and expertise in both IQA and External Quality Assurance and Accreditation matters. Many academics serve on validation and audit panels in peer assessing other HEIs. University collaborators are over 100 Universities worldwide.

University of Genoa. Connection has been developed and in result a TEMPUS UM-JEP “Environment Driven Strategic Planning at SEUA”. The UoG is one of the older and larger universities of the North of Italy. It was founded in 1773 and has about 40000 students specializing in economic-political, humanitarian and engineering sciences. Now it has 11 faculties with more than 1700 academic staff and 1300 administrators and technical support staff members.

## **3. Wide Objective of the Project**

Wide objective is to bring the university management culture and practice in Armenia in accordance to the internationally recognized standards, address university management process in general and in particular the issue of internal quality assurance (IQA), allowing creation of the IQA system, its constant monitoring and further enhancement aimed at providing quality education.

### ***Indicators of Progress***

- Correspondence to European standards.
- Correspondence of Armenian HES to the local labor market requirements.

### ***Project Objectives.***

- To develop framework for quality assurance mechanisms in Armenian higher education institutions.
- To develop and establish Internal Quality Assurance System in YSU and SEUA.
- To train quality assurance related administrative staff in YSU and SEUA.
- To disseminate achieved innovations and know-how's among Armenian higher education institutions.

### ***Indicators of Progress***

- Developed recommendations for the policy, standards and methodology in internal QA in Armenian higher education.
- Developed models of organisational structures, policy and methods for QAS in YSU and SEUA.
- Trained QA administrative staff on the basis of developed training programs.
- Submitted new internal quality assurance regulations to MoES.
- Established precise mechanisms of internal quality assurance in YSU and SEUA by the end of the 2009, in accordance to internationally recognized standards, within the spirit and the content of the Bologna process and ENQA standards and requirements.

## **4. Project Outcomes and Related Activities**

### ***Outcome 1***

- Study and evaluation of existing experience in creation of internal quality assurance systems.
- Study and evaluation of European and local experiences and advanced practices in creation and implementing internal quality assurance systems.

### ***Activities to Achieve Outcome 1***

- Setting up an evaluation task force, evaluation of QA methodology and practice already existing in YSU and SEUA.
- Study and critical analysis of the existing quality assurance mechanisms and regulations in YSU and SEUA.
- Study and evaluation of European quality control systems and measures, comparative analysis of internal QA mechanisms in European HEIs, YSU and SEUA.
- Preparation of the evaluation report with the recommendations for the future development of the QA structures in Armenian HEIs, developing guidelines and support materials.

### ***Outcome 2***

- Development of the framework for the internal quality assurance standards establishment in Armenian higher education institutes.

#### ***Activities to Achieve Outcome 2***

- Elaboration and discussion of the internal QA issues in YSU and SEUA.
- Elaboration and discussion of the model, policy and methodology of the internal.
- Quality Assurance Systems in YSU and SEUA.
- Elaboration and discussion of the model for the redesign of YSU and SEUA curricula as well as developing curricula review and validation mechanisms.
- Elaboration and discussion of the model for the redesign of YSU and SEUA course syllabi as well as developing courses review and validation mechanisms.
- Determination and finalization of the standards for curricula and courses content and their introduction within YSU and SEUA Departments.
- Development of the mechanisms supporting human resources management, including staff evaluation, staff hiring and promotion, staff training/retraining and life long education (second specialty).
- Development of the criteria for students learning assessment.
- Elaborating principles and minimal level degree descriptions for the degrees **at BA and MA levels.**
- Development of recommendation for the internal QA establishment in Armenian higher education institutions.

### ***Outcome 3***

- Establishment of the Internal Quality Assurance structures in YSU and SEUA.

#### ***Activities to Achieve Outcome 3***

- Establishment of the permanent units of organisation responsible for quality assurance mechanisms development and implementation.
- Setting up organisational structure of the QA units in YSU and SEUA, development of the functional responsibilities.
- Elaboration of the structural relationships between the QA units and other units of organisation in YSU and SEUA with EU experts.
- Equipment purchase for the quality assurance units in YSU and SEUA.

### ***Outcome 4***

Training of administrative and academic staff related to QA at YSU and SEUA.

#### ***Activities to Achieve Outcome 4***

- Preparation of the training course for the YSU and SEUA teaching and administrative staff.

- Training of Armenian experts (future trainers) at EU partner Universities.
- Development of the course program and content.
- Support materials preparation.
- Preparation of materials to be published.
- Organisation of trainings for the YSU and SEUA teaching and administrative staff.
- Course delivering for the YSU and SEUA teaching and administrative staff.
- Carry out workshops, round tables devoted to the problems of internal QA.

#### ***Outcome 5***

- Dissemination

#### ***Activities to Achieve Outcome 5***

- Organisation of seminar devoted to QA at Universities, its current state and tasks to accomplish.
- Discussion groups organisation using the Universities Web pages.
- Reports, bulletins and proceedings preparation and publishing.
- Carry out workshops and round tables devoted to the established QA structures and mechanisms in YSU and SEUA.
- Discussion of the developed recommendations for the internal QA establishment in Armenian higher education institutions.

#### ***Outcome 6***

- Sustainability.
- Development of a long-term plan for the establishment of QA culture in Armenian higher education system.

Úáo. êñ.ëÛ³Ý (ÐäÖÐ), ². ´áo¹³ÕÛ³Ý (°äÐ),  
Ð. ´³É³µ³ÝÛ³Ý (ÐäÖÐ)

Y.. Sargsyan, H. Balabanyan (State Engineering University of Armenia),  
A. Budaghyan (Yerevan State University)

# 1. Ü3Ė3μ3Ý

<sup>1</sup> Úáo, é³ñ·èÛ³Ý, ², áó¹³ÔÛ³Ý, ÐÐ µ³ñÓñ³·áoÛÝ ĩñÁáoĀÛ³Ý áñ³Ĵ ³³³ÑáĴÛ³Ý Ñ³Û³Ĵñ·Ĵ Ñ³Û³á³³éĒÝ»óáoÛÁ ĩñáá³³³Ý (ENQA) é³Ý¹³ñĴÝ»ñĴÝ ~ áóÔ»ÝĴĴÝ»ñĴÝ: ³ñ»÷áĒáoÛÝ»ñĴ é³½Û³³ñáoĀÛ³Ý Ñ³Û»ó³Ĵñ·³ÛĴÝ ĩñáoÛÁÝ»ñ, ³ñÓñ³·áoÛÝ ĩñÁáoĀÛ³Ý é³½Û³³ñ³ĴÝ Ñ³Ĵ³/áááoĀÛáoÝÝ»ñĴ ³½·³ÛĴÝ Ĩ»ÝñáÝ, ²ñ³Ý, 2007:

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·ánlÁŌ Ñ³Ù³İ³ñ·Ý Çñ ³é³ÝÓÝ³Ñ³İlÁŌĀŪáoÝÝ»ñái:

È³ŪÝ ÇÙ³ēīār án³İÇ Ý»ñùÇÝ ³ā³ÑáiáŌŪÁ Ñ³ēİ³ŌíáŌŪ ħ āñā»ē Ū»È³ÝÇ½Ū, ánÇ ŪÇçáŌái máŌÑÝ ³ā³ÑáiáŌŪ ħ μ³ñŌñ³·áoŪÝ İñĀáoĀŪ³Ý Çñ³İ³Ý³ŌŪ³Ý án³İĀ ³ēÑŪ³Ýİ³İ ēİ³Ý¹³ñİÝ»ñĀ (máİ³Ý¹³İlÁŌĀŪáoÝÁ, »Èù³ŪÇÝ ³ñ¹ŪáoÝùÝ»ñĀ): àñ³İÇ ³ā³ÑáiŪ³Ý ·ánlÁÝĀ³ŌÝ»ñÝ áŌÝ»Ý āāñē É³ŪÝ ³ēā»İrÝ»ñ Ñ³Bí»İrİ³ÝáoĀŪáoÝ, Ñ³Ū³ā³ēÈ³ÝáoĀŪáoÝ, İ³ē³ñáoŪ ³ μ³ñ»É³íáŌŪ: °İñāā³İ³Ý ēİ³Ý¹³ñİÝ»ñÝ ÁÝ¹Ñ³Ýáoñ Ñ³Ū³»İñāā³İ³Ý ÝánŪ»ñ »Ý án³İÇ ³ā³ÑáiŪ³Ý ·ánlÁÝĀ³ŌÝ»ñÇ í»ñ³μ»ñŪ³É, āñáÝù ³ñİ³·ŌáÉáoŪ »Ý °İ-áoŪ μ³ñŌñ³·áoŪÝ İñĀáoĀŪ³Ý ÑÇŪÝİ³Ý Ñ³Ñ»İÇŌÝ»ñÇ ēā³ē»ÉÇùÝ»ñĀ ³Ūē ·ánlÁÝĀ³ŌÝ»ñÇŌ: ñ³Ýù āÇ İ³ñ»ÉÇ Ñ³·áĀ»É μ³ñŌñ³·áoŪÝ İñĀáoĀŪ³Ý án³İÇ ³ēİ³Ý¹³ñİÝ»ñÇ Ñ³İ:

## 2. Ð³Ū³İ³ñ·Ç »É³İ»İŪÇÝ ēİ½μáoÝùÝ»ñĀ, ÑÇŪÝİ³Ý Ýā³İÝ»ñÝ áŌ ÈÝ¹ÇñÝ»ñĀ

°İñāā³İ³Ý ēİ³Ý¹³ñİÝ»ñĀ Ó³İ»ñāáoŪ »Ý 4 ÁÝ¹Ñ³Ýáoñ ēİ½μáoÝù, āñáÝŌ ā»İù ħ Ñ³Ū³ā³ēÈ³Ý»Ý án³İÇ ³ā³ÑáiŪ³Ý máŌÑ³İ³Ý Ñ³Ū³İ³ñ·»ñĀ.

- máŌÑ»ñÝ »Ý İñáoŪ ³é³ÇÝ³ŪÇÝ ā³ēÈ³ÝİlÁŌĀŪáoÝ μ³ñŌñ³·áoŪÝ İñĀáoĀŪ³Ý án³İÇ ³ēİ³Ý¹³ñİÝ»ñÇ Ñ³Ū³ñ,
- máŌÑ»ñĀ Ñ³Bí»íáŌ »Ý áŌēáoŌŪ³Ý án³İÇ ³ñ¹ŪáoÝùÝ»ñÇ Ñ³Ū³ñ μ³ñŌñ³·áoŪÝ İñĀáoĀŪ³Ý ÑÇŪÝİ³Ý Ñ³Ñ»İÇŌÝ»ñÇ áŌē³ÝáoŪ»ñÇ, ·ánlÁíáoÝ»ñÇ, ÑÇŪÝ¹ÇñÝ»ñÇ, ýÇÝ³ÝēİlÁñāŌÝ»ñÇ ³éç,
- máŌÑ»ñĀ ā»İù ħ áŌÝ³İ ÉÇÝ»Ý Ñ³ēİ»Éáo Çñ»ÝŌ İlÁŌŪÇŌ ³éç³ñİlÁŌ İñĀáoĀŪ³Ý án³İÝ áŌ ³ñ¹ŪáoÝùÝ»ñĀ »ñİñáoŪ ³Ýñ³ ē³ÑŪ³ÝÝ»ñÇŌ ¹áoñē,
- Ñ³Ū³İ³ñ·Ā ā»İù ħ Ý³È³»ēÇ áŌēáoŌŪ³Ý án³İÇ Ñ³ñáoÝ³İ³Ý μ³ñ»É³íáŌŪ áŌē³ÝáoŪ»ñÇ ³ μ³ñŌñ³·áoŪÝ İñĀáoĀŪ³Ý ŪŪáoē Ñ³Ñ»İÇŌÝ»ñÇ ēā³ē»ÉÇùÝ»ñÇÝ Ñ³Ū³ÁáoÝā:

²Ūē ēİ½μáoÝùÝ»ñÇ ÑÇŪÝ İñ³ İ³ñ»ÉÇ ħ Ó³İ»ñā»É án³İÇ ³ā³ÑáiŪ³Ý máŌÑ³İ³Ý Ñ³Ū³İ³ñ·Ç 5 ÁÝ¹Ñ³Ýáoñ Ýā³İİ.

- »ñ³BÈ³íáñ»É μ³ñŌñ³·áoŪÝ İñĀáoĀŪ³Ý ēİ³Ý¹³ñİÝ»ñÇ (³½·³ŪÇÝ, ŪÇç³½·³ŪÇÝ) ā³Ñā³ÝáoŪÁ ³éç³ñİlÁŌ İñĀ³İ³Ý máÉāñ İñ³·ñ»ñÇ ³ñ³İlÁñáoŪÝ»ñÇ Ñ³Ū³ñ,
- ³ā³Ñái»É máŌÑÇ Ñ³Bí»İrİ³ÝáoĀŪáoÝÁ áŌē³ÝáoŪ»ñÇ, ·ánlÁíáoÝ»ñÇ, ÑÇŪÝ¹ÇñÝ»ñÇ, ýÇÝ³ÝēİlÁñāŌÝ»ñÇ ³éç ³ μ³ñŌñ³·áoŪÝ İñĀáoĀŪ³Ý án³İÇ ³ēİ³Ý¹³ñİÝ»ñÇ Ñ³Ū³ñ,
- ēİ»Ōİ»É Ū»Āā¹³İÝ/İ³½Ū³İ»ñā³İ³Ý ÑÇŪù` máŌÑÇ ³Ýñ³ İñĀ³İ³Ý İñ³·ñ»ñÇ án³İÇ ³ñİ³ùÇÝ ·Ý³Ñ³İŪ³Ý/Ñ³İ³ñŪ³·ñŪ³Ý Ñ³Ū³ñ,
- ÈĀ³Ý»É áŌēáoŌŪ³Ý án³İÇ μ³ñŌñ³áoŪÁ, án³İÇ İlÁŌÉíáoñ³ŪÇ ½³ñ·áoŪÁ,
- Ýā³ēİ»É máŌÑÇ ½³ñ·áoŪÝÁ ³ēñ»ÉáoĀŪ³Ý Çñ³İ³Ý³ŌŪ³ÝÁ ³Ýñ ēİñ³İ»Ç³İ³Ý Ýā³İİÝ»ñÇÝ ³ ÈÝ¹ÇñÝ»ñÇÝ Ñ³Ū³ā³ēÈ³Ý:

³ñİ³İ Ó³İ»ñāáoŪÝ»ñÝ ³ñİ³ŌáÉáoŪ »Ý án³İÇ ³ā³ÑáiŪ³Ý ·ánlÁÝĀ³ŌÇ Ý³·È³μ³ÝáoŪ ÝBİİ máÉāñ ³ēā»İrÝ»ñĀ:

Ō³İ»ñāİİ Ýā³İİÝ»ñÇŌ μÉáoŪ »Ý án³İÇ ³ā³ÑáiŪ³Ý ·ánlÁÝĀ³ŌÇ máŌÑ³İ³Ý Ñ³Ū³İ³ñ·Ç Ñ³İŪ³É ÈÝ¹ÇñÝ»ñĀ.

- ³ā³Ñái»É ³éç³ñİlÁŌ İñĀ³İ³Ý İñ³·ñ»ñÇ ùÝÝ³ñİlÁŌŪÁ, Ñ³ēİ³íáoŪÁ, ā³ñμ»ñ³İ³Ý ÷ánŌ³ùÝÝáoĀŪáoÝÁ, ŪáÝÇĀāñÇÝ·Ý áŌ Ñ³ñáoÝ³İ³Ý İ³ñ»É³·ánlÁŌŪÁ,
- ēİ»Ōİ»É ÁÝĀ³Ō³İ³ñ·»ñ İñĀ³İ³Ý İñ³·ñ»ñÇ Çñ³İ³Ý³ŌŪ³Ý án³İÇ ³ēİ³Ý¹³ñİÝ»ñÇ Ý»ñùÇÝ ·Ý³Ñ³İŪ³Ý Ñ³Ū³ñ ēİlÁñ³μ³Á³ÝáoŪÝ»ñÇ Ū³İ³ñ¹³İlÁŌŪ, Ý³È³ā³ñēİ»É ¹ñ³ÝŌ ³ñİ³ùÇÝ ·Ý³Ñ³íáoŪÁ,
- ēİ»Ōİ»É Ñ³İ³¹³Ō Í³ā` ·Ý³Ñ³İŪ³Ý ·ánlÁÝĀ³ŌÝ»ñÇ ³ñ¹ŪáoÝùÝ»ñÇ ³ñ³B·È³íáñáoĀŪáoÝÝ»ñÇ Ýİ³İŪ³μ, í»ñ³Ñēİ»É ¹ñ³ÝŌ Çñ³İ³Ý³ŌáoŪÁ,
- ēİ»Ōİ»É İ³ā án³İÇ Ý»ñùÇÝ ³ñİ³ùÇÝ ·Ý³Ñ³İŪ³Ý ā³÷³ÝÇBÝ»ñÇ ³·ánlÁÝĀ³ŌÝ»ñÇ ŪÇç,

- Ý³Ë³á³ñ³ë»É áñ³İÇ Ñ³Ù³ñ µáoÑÇ Ñ³Bí»ir³İ³ÝáoÃÙ³Ý ÁÝÃ³ó³İ³ñ»ñÝ áó Ìñ³Ýó Çñ³İ³Ý³óáoÙÁ,
- ëi»Œİ»É ³ç³İóáo ÙÇççáoÝ»ñ áó ËÃ³ÝÇã Ù»Ë³ÝÇ½ÙÝ»ñ` áóëÙ³Ý áñ³İÇ B³ñáo-Ý³İ³Ý µ³ñÓñ³óÙ³Ý Ñ³Ù³ñ,
- Ñ³Ù³İ³ñ-Ç Bñç³Ý³İÝ»ñáoÙ ³á³Ñái»É Ñ³Bí»ir³İ³ÝáoÃÙ³Ý · áñ³İÇ µ³ñÓñ³óÙ³Ý ·ánÍÁÝÃ³óÝ»ñÇ Ñ³Ù³ñ»ÉÇáoÃÙáoÝÁ,
- ³á³Ñái»É áóë³ÝáoÝ»ñÇ · ¹³ë³ËáëÝ»ñÇ ³é³i»É³·áoÙÝ Ý»ñ·ñ³íáoÙÁ áñ³İÇ Ý»ñùÇÝ ³á³ÑáiÙ³Ý ·ánÍÁÝÃ³óÝ»ñáoÙ,
- í»ñ³Ñëİ»É áóëáoÙÝ³éáoÃÙ³Ý Ñ³Ù³ñÁ»ù á³ÙÙ³ÝÝ»ñÇ/ÑÝ³ñ³íáñáoÃÙáoÝÝ»-ñÇ ëi»ŒİáoÙÁ` İñÃ³İ³Ý İñ³·ñ»ñÇ ë³ÑÙ³Ýİ³İ »Éù³ÙÇÝ ³ñ¹ÙáoÝùÝ»ñÇ Ó»éùµ»ñÙ³Ý Ñ³Ù³ñ,
- ³á³Ñái»É áñ³İÇ Ý»ñùÇÝ ³á³ÑáiÙ³Ý ù³Œ³ù³İ³ÝáoÃÙ³Ý Ñ³Ù³á³ë³Ë³ÝáoÃÙáoÝÁ µáoÑÇ ½³ñ·³óÙ³Ý é³½Ù³İ³ñáoÃÙ³ÝÁ:

ÊÝ¹ÇñÝ»ñÇ ³Ùë ó³ÝİÁ İáŒÙÝáñáBÇã µÝáoÙÃ áóÝÇ, ³ÙÝ İ³ñáo ħ ÷á÷áËi»É ·/İ³Ù Êñ³óí»É İ³Ëİ³İ µáoÑÇ áñáyÇÉÇó · ³é³ù»ÉáoÃÙáoÝÇó:

### 3. Ð³Ù³İ³ñ-Ç ÑÇÙÝ³İ³Ý İ³éáoó³Ù³ë»ñÁ

Ð³Ù³ó³ÙÝ °ñáá³İ³Ý ëi³Ý¹³ñiÝ»ñÇ` áñ³İÇ Ý»ñùÇÝ ³á³ÑáiÙ³Ý Ñ³Ù³İ³ñ»ñÁ á»iù ħ Ñ³Ù³á³ë³Ë³Ý»Ý 7 ÑÇÙÝ³İ³Ý ëi³Ý¹³ñiÝ»ñÇ: Ð³Ù³á³ë³Ë³Ý³µ³ñ, Ùáoñ³ù³ÝáÙáoñ Ý»ñµáoÑ³İ³Ý Ñ³Ù³İ³ñ· á»iù ħ á³ñáoÝ³İÇ Ñ»İ·Ù³Ë İ³éáoó³Ù³ë»ñÁ.

1. áñ³İÇ ³á³ÑáiÙ³Ý é³½Ù³İ³ñáoÃÙáoÝ/ù³Œ³ù³İ³ÝáoÃÙáoÝ · ¹³ Ñ»i İ³áİ³ ÁÝÃ³ó³İ³ñ»ñ áó á³÷ánáBÇãÝ»ñ,
2. İñ³·ñ»ñÇ · áñ³İ³íáñáoÙÝ»ñÇ Ñ³ëi³Ù³Ý, á³ñµ»ñ³İ³Ý í»ñ³Ý³ÙÙ³Ý · ÙáÝÇÁáñÇÝ·Ç Ñ³ëi³İ³İ Ù»Ë³ÝÇ½ÙÝ»ñ,
3. áóë³ÝáoÝ»ñÇ ·Ý³Ñ³Ù³Ý Ñ»İ·áŒ³İ³Ýáñ»Ý İÇñ³éíáŒ · Ññ³á³ñ³İ³İ á³÷³ÝÇBÝ»ñ, İ³ÝáÝ³İ³ñ»ñ · ÁÝÃ³ó³İ³ñ»ñ,
4. ¹³ë³ËáëÝ»ñÇ İ³ñáoáoÃÙáoÝÝ»ñÇ ·Ý³Ñ³Ù³Ý Ã³÷³ÝóÇİ Ù»Ë³ÝÇ½ÙÝ»ñ · á³÷³ÝÇBÝ»ñ,
5. İñÃ³İ³Ý İñ³·ñ»ñÇ á³Ñ³ÝÇÝ»ñÇÝ Ñ³Ù³ñÁ»ù áóëáoÙÝ³İ³Ý · ³ÙË ³ç³İóáo é»ëáoñëÝ»ñ,
6. áóëáoÙÝ³İ³Ý ·ánÍÁÝÃ³óÇ ³ñ¹ÙáoÝ³i İ³é³İñÙ³Ý Ñ³Ù³ñ á³iB³× i»-Œ»İ³íáoÃÙ³Ý Ñ³İ³úáoÙ, í»ñÉáoİáoÃÙáoÝ · ù·İ³·ánÍáoÙ,
7. İñ³·ñ»ñÇ · BÝáñÑíáŒ áñ³İ³íáñáoÙÝ»ñÇ í»ñ³µ»ñÙ³Ë ÙBİ³á»ë Ýáñ³óíáŒ, ³Ý³áë · ùµÙ»İÇİ İ»Œ»İ³íáoÃÙ³Ý á³ñµ»ñ³µ³ñ Ññ³á³ñ³İáoÙ:

Áİ³ñİ³İ İ³éáoó³Ù³ë»ñÇ µ³Œİ³óáoóÇã İñ³·ñ³ÙÇÝ/á³÷ánáBÇã ÷³ëi³ÃŒÃ»ñÇ · ÁÝÃ³ó³İ³ñ»ñÇ İ³½ÙÝ áó µáİ³Ý¹³íáoÃÙáoÝÁ á»iù ħ áñáBí»Ý Ñ³Ù³á³ë³Ë³Ý ëi³Ý¹³ñiÝ»ñÇÝ áóŒ»İóáo áóŒ»óáoÙóÝ»ñÇ ÑÇÙ³Ý in³ »ÉÝ»Éái İáÝİñ»i µáoÑÇ İ³éáoóİ³İù³ÙÇÝ/Ù³ëÝ³·Çİ³İ³Ý ³é³ÝÓÝ³Ñ³İáoÃÙáoÝÝ»ñÇó · ³é³ù»ÉáoÃÙáoÝÇó: Ù³Ë³-İíáŒ Ñ³Ù³İ³ñ·Á á»iù ħ ³á³ÑáiÇ 4.1.-áoÙ Ó³İ»ñáİ³İ Ýá³İ³Ý»ñÇ · ÊÝ¹ÇñÝ»ñÇ ÉÇñÁ»ù Çñ³İ³Ý³óáoÙÁ:

#### 4. ÛÊ³·ÍÇ ÊÝ¹ÇñÝ»ñÝ áð èà³éíáÕ ³ñ¹ÙáoÝùÝ»ñÁ °íñáá³ÝÝ è³Ý¹³ñÝ»ñÇ Ñ³Ù³»ùéíáðÙ

ÀÝ¹Ñ³Ýáoñ ³éÙ³Ùµ, Ý³Ê³·ÇÍÁ Íáá³Í ÷ Ûß³Í»Éáð ³ÝÑñ³Á»ßì é³¹²Ù³³ñáoÀÙ³Ý Ì³éáðð³Íù³ÙÇÝ/Ì³¹²Ù³Í»ñá³ÝÝ è¹¹²µáoÝùÝ»ñ, ÁÝÁ³ó³Íñ·³ÙÇÝ Ñ»Ýù áð ì»Õ»Ì³¹³ÝÝ/Ù»Áá¹³ÝÝ ·ánÍÇù³Í³¹²Ù ÷ Ó³íáñ»É Û»¹Ý³ñ³ÙÇÝ Û³éÝ³·Ç³Í³Ý ³ßÊ³³Í³¹²Ù ð»Đ ÷ ĐäÖĐ án³ÍÇ ³á³ÑáíÙ³Ý Ýán³è»ÓÍ Ñ³Ù³Íñ»ñÇ Ñ³Ù³ñ ÷ ññÁ µ»ñ³Í ENQA è³Ý¹³ñÝ»ñÇÝ Ñ³Ù³³³éÊ³Ý:

Đ³Ù³³³éÊ³Ý³µ³ñ, Ì³ñ·áníáðÙ »Ý ÛÊ³·ÍÇ Ñ»¹·Ù³É ³ñ¹ÙáoÝùÝ»ñÁ.

- »ñ³ßÊ³íáñáoÀÙáoÝÝ»ñ áðéáððÙ³Ý án³ÍÇ ³á³ÑáíÙ³Ý/µ³ñ»É³Ù³Ý µáoÑ³Í³Ý é³¹²Ù³³ñáoÀÙ³Ý ÷ ñ³µ»ñÙ³É,
- ÷Ç³á³ñ³ÙÇÝ Ì³¹²Ù³Í»ñá³ÝÝ Ûá¹»É ÷ Û»Áá¹³ÝÝáoÀÙáoÝÝ ð»Đ ÷ ĐäÖĐ án³ÍÇ ³á³ÑáíÙ³Ý Ñ³Ù³Íñ»ñÇ Ì³éáððÙ³Ý Ñ³Ù³ñ,
- ÁÝÁ³ó³Íñ·³ÙÇÝ ÷³Á»Á ÷ Û»Áá¹³ÝÝ ·ánÍÇù³Í³¹²Ù ÌñÁ³ÝÝ Íñ³·ñ»ñÇ áÉ³ÝíáñÙ³Ý, Ûß³ÍÙ³Ý, ·Ý³Ñ³Ù³Ý, µ³óÙ³Ý ÷ ÷³ÍÙ³Ý ÷ ñ³µ»ñÙ³É,
- »ñ³ßÊ³íáñáoÀÙáoÝÝ»ñ ð»Đ ÷ ĐäÖĐ ³éÍ³ ÷ Õ»Ì³¹³ÝÝ Ñ³Ù³Íñ»ñÇ ¹²ñ·³óÙ³Ý ÷ ENQA è³Ý¹³ñÝ»ñÇÝ Ñ³Ù³³³éÊ³Ý»óÙ³Ý ÷ ñ³µ»ñÙ³É,
- Ì³ñÁ³Ýù³ÙÇÝ Íñ³·ñ è¹»ÕíáðÙ ÷ Çñ³Í³Ý³óáoÙ» án³ÍÇ ³á³ÑáíÙ³Ý µáoÑ³Í³Ý Ì»ÝíñáÝÝ»ñÇ ³ßÊ³³Í³¹²ÙÇ Ñ³Ù³ñ,
- µáoÑ»ñÇ (èíáñ³µ³Á³ÝáoÙÝ»ñÇ) ÇÝùÝ³í»ñÉáoÍáoÀÙ³Ý ³éÍ³ ·ánÍÁÝÁ³óÝ»ñÇ ÷ ñ³Ý³ÙáoÙ ÷ ñ³ÍÇ³Í³Ý³óáoÙ,
- èíáñ³µ³Á³ÝáoÙÝ»ñÇ án³ÍÇ Ý»ñùÇÝ ³áo¹Ç¹Ç ÷ ÛáÝÇÁáñÇÝ·Ç ÁÝÁ³ó³Íñ»ñÇ Ý»ñÙáoÍáoÙ,
- Û»Áá¹³ÝÝ óáoóáoÙÝ»ñ án³ÍÇ Ý»ñùÇÝ ·Ý³Ñ³Ù³Ý ·ánÍÁÝÁ³óÝ»ñáoÙ» áðè³·ÝáoÝ»ñÇ ÷ ¹³é³ÁéÝ»ñÇ Û³éÝ³ÍóáoÀÙ³Ý ÷ ñ³µ»ñÙ³É:

ÛÊ³·ÍÇ ÁÝ¹Ñ³Ýáoñ Ñ³çáÓáoÀÙ³Ý ÷ áÉ³Ýíáñ³Í ³ñ¹ÙáoÝùÝ»ñÇ Ó»éùµ»ñÙ³Ý ÷ è³Ý¹ÙáoÝÝÇ ß³ Ì³ñ·án ÷ ÛÊ³·ÍÇ ÍáÝéáñóÇáoÙÇ ³Ý¹³Ù »íñáá³ÝÝ Ñ³Ù³Éè³ñ³ÝÝ»ñÇ ³éÇ³íáñ ÷ ánÓÇ áðéáðÙÝ³éÇñáoÀÙáoÝÝ áð ÷ áÉ³ÝóáoÙÁ, ÇÝáÝ ÷ É Ñ³Ý¹Çè³ÝáoÙ ÷ ³éÍ³ ÷ áðÉÇ ÑÇÙÝ³ÝÝ ÊÝ¹ÇñÁ: ÷ Õ³Í³Ý ÷ »íñáá³ÝÝ Ñ³Ù³Íñ»ñÇ Ñ³Ù»Ù³³³Ý ÷ ññÉáoÍáoÀÙ³Ý ÛÇçáoáí ³ÝÑñ³Á»ßì ÷ ×ß·ñ»É »íñáá³ÝÝ ÷ ánÓÇ ÷ áÉ³ÝóáoÙ³Ý ÑÝ³ñíáñáoÀÙáoÝÝ»ñÝ áð è³ÑÙ³Ý³÷³ÍáoÙÝ»ñÁ, óáoÙó Ì³É ·ánÍáÕ Ñ³Ù³Íñ»ñÇ ÷ ñ³Í³éáoóÙ³Ý ÷ §»íñáá³Ý³óÙ³Ý: Ýá³·³³Ñ³ñÙ³ñ áðÓÇÝ»ñ, ³Ù¹ ÁíáðÙ» ùñ»Ýé¹ñ³ÝÝ ³ÝÑñ³Á»ßì ÷ á÷áÉáoÀÙáoÝÝ»ñÇ ³éÇ³ñ³ÝÝ»ñ: áðéáððÙ³Ý án³ÍÇ ³á³ÑáíÙ³Ý ÷ µ³ñ»É³Ù³Ý µáoÑ³Í³Ý é³¹²Ù³³ñáoÀÙáoÝÝÁ á»ù ÷ »ÉÝÇ µáoÑÇ ¹²ñ·³óÙ³Ý ÁÝ¹Ñ³Ýáoñ é³¹²Ù³³ñáoÀÙ³Ý Ýá³³ÝÝ»ñÇ ÷ ÊÝ¹ÇñÝ»ñÇ ÷ ß³ñáoÝ³Í»Éáí ÷ ÍáÝÍñ»í ·ánÍáÕáoÀÙáoÝÝ»ñÇ ÷ ñ³Í³»Éáí µáoÑÇ é³¹²Ù³³ñ³Í³Ý áÉ³ÝÇ Ñ³Ù³³³éÊ³Ý ³éÇ³ñ³ÝùÝ»ñÁ: ÝáoÁ³·ñ³ÝÝ ùñÇÝ³Í ÷ ĐäÖĐ è¹ñ³»·Ç³Í³Ý áÉ³ÝÁ 2006-2010 ÁÁ. Ñ³Ù³ñ¹, ánÇ 2.4. »ÝÁ³µ³ÁÇÝÁ ÝíÇñ³Í ÷ án³ÍÇ ³á³ÑáíÙ³Ý µáoÑ³Í³Ý é³¹²Ù³³ñáoÀÙ³Ý ¹²ñ·³óÙ³Ý ÑÇÙÝ³ÝÝ áðÕÓáoÀÙáoÝÝ»ñÇÝ:

#### 5. °ñ³ßÊ³íáñáoÀÙáoÝÝ»ñ án³ÍÇ ³á³ÑáíÙ³Ý µáoÑ³Í³Ý Ñ³Ù³Íñ»ñÇ Ì³éáððÙ³Ý Û»Áá¹³ÝÝáoÀÙ³Ý ÷ ñ³µ»ñÙ³É

ÆÝáá»è ³ñ¹»Ý Ýßì»ó, Ûáoñ³³ÝáÙáoñ µáoÑ Çñ ÇÝùÝ³³ñáoÀÙ³Ý ßñÇ³Ý³ÍÝ»ñáoÙ ÇÝùÝáoñáoÙÝ ÷ ánáßáoÙ án³ÍÇ ³á³ÑáíÙ³Ý è»÷³Í³Ý ù³Õ³ù³ÝÝáoÀÙáoÝÝÁ ÷ Ì³éáoóáoÙ Ñ³Ù³³³éÊ³Ý ·ánÍÁÝÁ³óÝ»ñ °íñáá³ÝÝ è³Ý¹³ñÝ»ñÇ ÍáÕÙÇó áðñ³·ÍíáÕ ÁÝ¹Ñ³Ýáoñ ßñÇ³Ý³ÍÝ»ñáoÙ:

èíáñ» µ»ñ³Í »ñ³ßÊ³íáñáoÀÙáoÝÝ»ñÁ Ñ»ÝíáoÙ »Ý ³Ùè ³éá³ñ»¹²áoÙ »íñáá³ÝÝ ³éÇ³íáñ ÷ ánÓÇ Ìñ³ ÷ ÍáÕÙÝáñáßÇ µÝáoÙÁ áðÝÝ:

- Đ³Ù³Íñ·Ç Ì»ÝíñáÝ³ó³Í Ì³ÝáÝ³Íñ·áoÙ ÷ Íñ³·ñ³ÙÇÝ/ÁÝÁ³ó³Íñ·³ÙÇÝ Ì³ñ·íáñáoÙ: áðÑÁ á»ù ÷ áðÝÝ³ ÛÇ³éÝ³ÝÝ Ì³ÝáÝ³Íñ·

<sup>1</sup> ĐäÖĐ è¹ñ³»·Ç³Í³Ý áÉ³Ý (2006-2010), ĐäÖĐ, 2006:



·ÚÇÝ/ÁÝÃ³İ³ñ·ÚÇÝ Ñ»Ýù ··Ý³Ñ³İÜ³Ý ã³÷³ÝÇßÝ»ñ ăñ³İÇ ³ă³ÑáfÜ³Ý ·ăñÍÁÝÃ³Ý»ñÇ Ñ³Ü³ñ, ăñáÝó İÑ»İ»Ý Ýñ³ μăÉăñ áôéáoÜÝİ³Ý ěíăñ³μ³Ă³ÝáoÜÝ»ñÁ: ²Úē Ü³İ³ñ¹İáoÜ ÑÇÜÝİ³Ý Ñ³Ü³ñ·áo ¹»ñÁ í»ñ³ă³ÑáfÜ ħ μáoÑÇ ·Çİ³Ý ÉăñÑñ¹ÇÝ, ăñÁ ă»iù ħ Çñ³İ³Ý³óÝÇ Ñ³Ü³ă³ēÉ³Ý ³BÉ³ÝùÝ»ñÇ ăÉ³ÝíăñáoÜÁ, İ³ÝáÝİ³ñ·ÚÇÝ/ă³÷ăñăßÇă ÷³ēİ³ĂŌĂ»ñÇ ·· ÁÝÃ³óİ³ñ»ñÇ Ñ³ēİ³íáoÜÁ, ăñ³İÇ ³ă³ÑáfÜ³Ý Ý³É³İ»ēİİ ·ăñÍÁÝÃ³Ý»ñÇ í»ñ³· ÑēİăŌáoĀÚáoÝÁ ·· ăñ¹ÚáoÝùÝ»ñÇ ùÝÝ³ñİáoÜÁ: °ñ³BÉ³íăñíáoÜ ħ ěİ»Ōİ»É ·Çİ³Ý ÉăñÑñ¹Ç ăñ³İÇ ³ă³ÑáfÜ³Ý Ñ³ñó»ñÇ ÜBİ³İ³Ý Ñ³ÝÓÝ³Ăáoáf ·· ăñ³İÇ İ³· ē³İ³ñÜ³Ý ÜēÝ³·Çİ³óİİ μ³ĂÇÝ μáoÑÇ İ³ăñ³İ³Ý İ³éáoóİİáoÜ: Ð³Ü³İ³ñ·Ç İ³½Ü³İ»ñăİ³Ý ēÉ»Ü³Ý Ýă³İ³İ³Ñ³ñÜ³ñ ħ ăñăß»É ăñ³İÇ ³ă³ÑáfÜ³Ý Ý»ñμáoÑ³İ³Ý ē³½Ü³İ³ñáoĀÜ³Ý ÜBİ³İ³Ý Bñç³Ýİ³Ý»ñáoÜ:

- **ăñ³İÇ ³ă³ÑáfÜ³Ý Ý»ñμáoÑ³İ³Ý ·ăñÍÁÝÃ³Ý»ñÇ ³ă³İ»ÝİăăÝ³óİİ Çñ³·İ³ÝáoÜ:** °Ă» μáoÑÁ ÁÝ¹Ñ³Ýáoñ ă³ēÉ³ÝİáoĀÚáoÝ ħ İăáoÜ Çñ İñĂ³İ³Ý İñ³·ñ»ñÇ ăñ³İÇ Ñ³Ü³ñ, ăă³ ăé³ÝÓÇÝ ÜēÝ³·Çİ³İ³Ý ăēăñ»½Ý»ñáoÜ İñĂ³İ³Ý ěİ³Ý¹³ñİ³Ý»ñÇ ·· ăñ³İÇ ³ă³ÑáfÜ³Ý ·ăñÍÁÝÃ³Ý»ñÇ Çñ³İ³Ý³óÜ³Ý Ñ³Ü³ñ ă³İē·É³Ýíáo »Ý ÑÇÜÝİ³ÝáoÜ ý³İáoÉİ»İ³Ý»ñÁ (¹»ă³ñİ³Ü»Ýİ³Ý»ñÁ): Ð³Ü³ă³ēÉ³Ý·μ³ñ, μáoÑÇ ÜēÝ³·ÚáoŌ»ñÁ ă³ēÉ³Ýíáo »Ý Çñ»Ýó İñĂ³İ³Ý İñ³·ñ»ñÇ ăñ³İÇ ³ă³ÑáfÜ³Ý Ñ³Ü³ñ: ăñ³İÇ ³ă³ÑáfÜ³Ý ă³İ»ÝİăăÝ³óİİ ·ăñÍÁÝÃ³Ý»ñÇ Ñ³Ü³·ă³ēÉ³ÝáoĀÚáoÝÁ Ñ³Ü³μáoÑ³İ³Ý ÜÇēÝİ³İ³Ý ă³÷³ÝÇßÝ»ñÇÝ ³ă³ÑáfÜ³Ý ħ İ³ÝáÝİ³ñ·ÚÇÝ/ÁÝÃ³óİ³ñ·ÚÇÝ ÜÇēÝİ³İ³Ý Ñ»ÝùÇ ·· ăñ³İÇ ³ă³ÑáfÜ³Ý İ»ÝİăăÝ³İ³Ý İ³éáoÜóÝ»ñÇ ÜÇÇáoáf:
- **³ēÉăēİ³İ³Ý ·· İ³ăñ³İ³Ý İ³½ÜÇ ÁÝ¹É³ÜÝİİ ÜēÝ³İáoĀÚáoÝ:** ¹áoÑÁ ă»iù ħ ăă³ÑáfÜ ¹³ēÉăēİ³İ³Ý İ³½ÜÇ ·· İ³ăñ³İ³İ³ÜÇ ³Ü»Ý³É³ÜÝ ÜēÝ³İáoĀÚáoÝÁ ăñ³İÇ ăă³ÑáfÜ³Ý ·· μ³ñ»É³İÜ³Ý ·ăñÍÁÝÃ³Ý»ñáoÜ, ÉĂ³ÝÇ ³ÝÑ³İ³İ³Ý ·· ĂÇÜ³ÜÇÝ Ý³É³Ó»éÝáoĀÚáoÝÝ»ñÁ μáoÑÇ ăñ³İÇ ³ă³ÑáfÜ³Ý Ñ³Ü³İ³ñ·Ç Bñç³Ýİ³Ý»ñáoÜ: Ă»· ³Üē Ñ³ñó»ñÁ ÑÇÜÝİ³ÝáoÜ Éáoİİ»Éáo »Ý İ»Ō³ÜÇÝ (ý³İáoÉİ»İ, ¹»ă³ñİ³Ü»Ýİ) Ü³İ³ñ¹İáf, ē³İ³ÜÝ ·Çİ³İ³Ý ÉăñÑăñ¹Á ă»iù ħ Ñ³Ü³ă³ēÉ³Ý í»ñ³ÑēİăŌáoĀÜ³Ý Ü»É³ÝÇ½ÜÝ»ñ áóÝ»Ý³:
- **İñĂ³İ³Ý İñ³·ñ»ñÇ ăñ³İ³ÇÝ ÷ăñÓ³ùÝÝáoĀÚáoÝ:** ²Ýİ³É ăñ³İ³ÇÝ ÷ăñ·Ó³»İ³Ý»ñÇ Ý»ñ·ñíáoÜÁ Ñ³İ³ă»ē İ³ñ·ăñíáoÜ ħ Ýăñ áôéáoÜÝİ³Ý ăÉ³ÝÝ»ñÇ ·· ăéăñİ³Ü³İ³Ý İñ³·ñ»ñÇ ùÝÝ³ñİÜ³Ý ·· Ñ³ēİ³İÜ³Ý, ÇÝăă»ē Ý³· ·ăñÍăŌ İñ³·ñ»ñÇ ăñ³İÇ ÜăÝÇĂăñÇÝ·Ç ·ăñÍÁÝÃ³Ý»ñáoÜ: ăñ³İ³ÇÝ ÷ăñÓ³ùÝÝáoĀÜ³Ý ÝB³ÝİáoĀÚáoÝÁ Ñ³İ³ă»ē Ü»Í ħ ³ÜÝ ¹»ă»ñáoÜ, »ñμ Ýăñ İñ³·ñ»ñÇ Ñ³ăŌáoĀÚáoÝÁ İ³Ü ·ăñÍăŌ İñ³·ñ»ñÇ İ»ÝéáoÝ³İáoĀÚáoÝÁ İăİİ »Ý ăñăßİÇ ēÇēİ»ñÇ Ñ»İ, İ³Ü »ñμ Ý»ñùÇÝ ÷ăñÓ³ùÝÝáoĀÚáoÝÁ ăÇ μ»ñ»É ăñăßİÇ »½İ³İ³áoĀÚáoÝÝ»ñÇ:
- **ăôē³ÝăŌÝ»ñÇ, Bñç³Ýİ³İ³İ³Ý»ñÇ ·· ·ăñİ³íáoÝ»ñÇ Ý»ñ·ñ³íáoÜ:** ăôē³ÝăŌÝ»ñÇ, Bñç³Ýİ³İ³İ³İ³Ý»ñÇ ·· ·ăñİ³íáoÝ»ñÇ ·ăñÍáoÝ ÜēÝ³İáoĀÚáoÝÁ ăñ³İÇ ăă³ÑáfÜ³Ý Ý»ñμáoÑ³İ³Ý ·ăñÍÁÝÃ³Ý»ñáoÜ Ñ³Ü³İ³ñ·Ç ăñ¹ÚáoÝ³İáoĀÜ³Ý ÑÇÜÝİ³İ³Ý »ñ³BÉÇùÝ»ñÇó ħ, ÇÝăă»ē Ý³· °İăăİ³İ³Ý ěİ³Ý¹³ñİ³Ý»ñÇ ăă³Ñ³ÝÇÁ: ¶»ñ³İ³ē»ÉÇ »Ý ÜēÝ³İáoĀÚáoÝ Ñ»İ·Ü³É Ó»ñÁ (ăÉăñİ³Ý»ñÁ)
- İñĂ³İ³Ý İñ³·ñ»ñÇó áôē³ÝăŌÝ»ñÇ ·· Bñç³Ýİ³İ³İ³İ³Ý»ñÇ μ³İ³ñİ³íáoĀÜ³Ý áôéáoÜÝ³ēÇñáoĀÚáoÝ,
- İñĂ³İ³Ý İñ³·ñ»ñÇó (»Éù³ÜÇÝ ăñ¹ÚáoÝùÝ»ñÇó) ·ăñİ³íáoÝ»ñÇ μ³İ³ñİ³íáoĀÜ³Ý áôéáoÜÝ³ēÇñáoĀÚáoÝ,
- ÇÝùÝ³İ»ñÉáoİáoĀÜ³Ý/ÇÝùÝ³·Ý³Ñ³İÜ³Ý ÇÝēİÇíáoóÇăÝ³É ·· İ»Ō³ÜÇÝ (ý³·İáoÉİ»İ³ÜÇÝ, ¹»ă³ñİ³Ü»Ýİ³ÜÇÝ) ·ăñÍÁÝÃ³Ý»ñ:
- **ôăÉ³¹³ñŌ İăă ăñ³İÇ Ý»ñùÇÝ ·· ăñ³İ³ÇÝ ·Ý³Ñ³İÜ³Ý ·ăñÍÁÝÃ³Ý»ñÇ ÜÇÇ:** ăñ³İÇ Ý»ñùÇÝ ·Ý³Ñ³íáoÜÁ ăñ³İ³ÇÝ ·Ý³Ñ³İÜ³Ý ÑÇÜÝ ħ ·· ă»iù ħ İ³éáoóİÇ í»ñÇÇÝÇē ă³÷³ÝÇßÝ»ñÇ ·· ÁÝÃ³óİ³ñ»ñÇ Ñ³BİéáoÜáf: ØÜáoē İăŌÜÇó,

μáoŃÇ 3ĩ31»ÙÇ3ĩ3Ý 3áo1ÇiÇ ŃÇÙÝ3ĩ3Ý Ýá3ĩ3Ý ĺ .Ý3Ń3ĩ»É áñ3ĩÇ 3á3ŃáíÙ3Ý Ý»ñμáoŃ3ĩ3Ý .áníÁÝĀ3óÝ»ñÇ 3ñ1ÚáoÝ3ĩ»íáoĀÚáoÝÝ áó ÉÇ3ñĀ»úáoĀ-ÚáoÝÁ: 2ÚeāÇeái, μáoŃÇ ÇÝùÝ3ĩ»ñÉáoÍáoĀÚáoÝÁ/ÇÝùÝ3.Ý3Ń3íáoÚÁ ŃÇÙÝ3ĩ3Ý ÷áĒĩ3á3íóáŌ ūŌ3ĩÝ ĺ áñ3ĩÇ Ý»ñùÇÝ 3ñĩ3ùÇÝ 3á3ŃáíÙ3Ý .áníÁÝĀ3óÝ»ñÇ ÛÇÇ:

## 6. ÀÝ1Ń3Ýáoñ »1/2ñ3ĩ3óáoĀÚáoÝ

1. °íñáá3ĩ3Ý ěĩ3Ý13ñĩÝ»ñÁ ÁÝ1Ń3Ýáoñ ÝáñÙ3ĩÇĩÙÇÝ Ń»Ýù »Ý áñ3ĩÇ 3á3ŃáíÙ3Ý μáoŃ3ĩ3Ý Ń3Ú3ĩñ»ñÇ Ń3Ú3ĩñ»ÉÇáoĀÚ3Ý 3ĩ»ñ13ĩ3ĩ»óÚ3Ý Ń3Ú3ñ, áñáÝó ßñÇ3Ý3ĩÝ»ñáoÙ Úáoñ3ù3ÝáÚáoñ μáoŃ ÇÝùÝáoñáoÙÝ ĺ Ó3íáñáoÙ áñ3ĩÇ ù3Ō3ù3ĩ3ÝáoĀÚáoÝÁ 3ĩ»ñ3ĩñ.Á »ÉÝ»Éái Çñ 3é3ù»ÉáoĀÚáoÝÇó 3ĩ»ñ.3óÚ3Ý é31/2Ú3ĩ3ñáoĀÚáoÝÇó:
2. áñ3ĩÇ Ýáñ3ĩ»ŌÍ μáoŃ3ĩ3Ý Ń3Ú3ĩñ»ñÁ á»iù ĺ Ń3Ú3ĩ»Ō»Ý 3ĩ»ñ3ĩ3ĩ»ó»Ý áñ3ĩÇ 3á3ŃáíÙ3Ý .áníÁÝĀ3óÇ 4 ŃÇÙÝ3ĩ3Ý 3éá»íĩÝ»ñ Ń3ĩ»ñ3ĩ3ĩ»óĀÚáoÝ, Ń3Ú3ĩ3ĩ»É3ÝáoĀÚáoÝ ěĩ3Ý13ñĩÝ»ñÇÝ, áñ3ĩÇ Ĩé3ĩ3ñáoÙ 3ĩ»ñ3ĩÇ μ3ñ»É3íáoÙ:
3. ÀÝĀ3óáo TEMPUS JEP Ý3Ē3.ÇíÁ ŃáÚ3ĩ3á ŃÝ3ñ3íáñáoĀÚáoÝ ĺ 3ĩ»ñ.án3.áoÙÝ .áníÇù áñ3ĩÇ Ý»ñùÇÝ 3á3ŃáíÙ3Ý 3éá3ñ»1/2áoÙ »íñáá3ĩ3Ý 3éÇ3íáñ ÷áñŌÇ Úáoñ3óÚ3Ý 3ĩ»ñ3ĩ3ĩ»óÚ3Ý ÷áĒ3ÝóÚ3Ý Ń3Ú3ñ: 2ÚÝ Íááĩ ĺ ěĩ»ŌÍ»Éáo áñ3ĩÇ ÇÝěĩÇíáoóÇáÝ3É Ń3Ú3ĩñ.Ç ĩÇá3ñ3ŪÇÝ Úá1»ÉÝ»ñ 3ĩ»ñ3Ýó Çñ3ĩ3Ý3óÚ3Ý Ń3Ú3ñ 3ÝŃñ3Ā»βĩ Û»Āá13ĩ3Ý/ÁÝĀ3ó3ĩñ.3ŪÇÝ μ31/2 3ĩ»ñ3Ōñ3.áoÙÝ ĨñĀáoĀÚ3Ý 3é3ÝŌÝ3Ń3ĩíáoĀÚáoÝ»ñÇ Ń3ĩ3éáoÚái:
4. áñ3ĩÇ 3á3ŃáíÙ3Ý Ý»ñÚáoÍíáŌ .áníÁÝĀ3óÝ»ñÁ ĩ3ĩ3Ý 3ĩ»ñ1ÚáoÝ3ĩ»ĩ ĨÉÇÝ»Ý, »Ā» μáoŃáoÙ 3éĩ3 »Ý Ń»ĩ3Ū3É Ý3Ē3á3Ū3ÝÝ»ñÁ.
  - ÁÝ1Ń3Ýáoñ Ń3Ú3Ō3ŪÝáoĀÚáoÝ 3ĩ»ñ3áoĀÚáoÝ 3ĩ»ñ3Ýó 3ÝŃñ3Ā»βíáoĀÚ3Ý 3ĩ»ñ3ĩ3ñáoĀÚ3Ý ĩ»ñ3μ»ñ3ĩ3É,
  - ó3ÝíáoĀÚáoÝ μ3ó3Ń3Ū3»Éáo 3óáoÚó ĩ3Éáo ě»÷3ĩ3Ý ÁáoÉáoĀÚáoÝÝ»ñÁ μá-Éáñ Ū3ĩ3ñ13ĩÝ»ñáoÙ, ÇÝáá»é Ý3 3ĩ»ñ3Ýù ĩ»ñ3óÝ»Éáo á3ĩñ3ĩ3ĩ3ÚáoĀÚáoÝ,
  - μ3ĩ3ñ3 ÇÝěĩÇíáoóÇáÝ3É ÇÝùÝ3ĩ3ñáoĀÚáoÝ .Ý3Ń3ĩ3Ý .áníÁÝĀ3óÇ »É-ù3ŪÇÝ 3ñ1ÚáoÝùÝ»ñÇ 3ĩ»ñ3ĩ3íáñáoĀÚáoÝ»ñÇ ÉÇ3ñĀ»ù Çñ3ĩ3Ý3óÚ3Ý Ń3-Ū3ñ,
  - 3é3Ç3ñĩíáŌ Ń»é3Ń3ñ ÷á÷áĒáoĀÚáoÝÝ»ñÝ áóŌŌáñ1»Éáo áóÝ3ĩ Ō3ĩ3ĩ3ñáo-ĀÚáoÝ,
  - μ3ĩ3ñ3 é»éáoñēÝ»ñ 3é3Ç3ñĩíáŌ ÷á÷áĒáoĀÚáoÝÝ»ñÇ Çñ3ĩ3Ý3óÚ3Ý 3ĩ»ñ3Ú3á3ĩ3ĩ»É3Ý Ý3Ē3Ō»éÝáoĀÚáoÝÝ»ñÇ Ēñ3ÉáoēŪ3Ý Ń3Ú3ñ:

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## A. Simonyan, A. Grigoryan (Yerevan State University)

$$\ddot{U}^3\ddot{E}^3_{\mu}{}^3Y$$

êáoÙÝ ½»IáoÙóáoÙ Ñ³Ù³éá³İÇ Ý»ñ³Ù³ó³İ ğ ĩnaá³İÝ ẽ³Ý¹³ñİÝ»náí áñ³İÇ  
 Ý»ñùÇÝ ³á³ÑárÙ³Ý Ñ³Ù³İñ.»ñÇ Ñ³Ù³ñ ẽ³ÑÙ³Ýİ³ á³³ÝÇßÝ»ñÇÝ °áĐ áñ³İÇ ³á³ÑárÙ³Ý  
 ³éİ³ Ý»ñúáoÑ³İ³Ý Ñ³Ù³İñ.C Ñ³Ù³á³³ẽË³ÝáoÃÙ³Ý Ñ³Ù»Ù³³İ³Ý Ýİ³ñ.ñáoÃÙáoÝÁ£



2.  $\text{In}^3\cdot\tilde{n}\gg\tilde{n}\text{C} \quad \cdot \quad \text{án}^3\tilde{\text{P}}^3\text{íáñáó}\tilde{\text{U}}\tilde{\text{Y}}\gg\tilde{n}\text{C} \quad \tilde{\text{N}}^3\tilde{\text{e}}^3\tilde{\text{U}}^3\tilde{\text{Y}}, \quad \text{í}\gg\tilde{n}^3\tilde{\text{Y}}^3\tilde{\text{U}}^3\tilde{\text{Y}} \quad \cdot \quad \tilde{\text{U}}\text{á}\tilde{\text{Y}}\tilde{\text{C}}\tilde{\text{A}}\tilde{\text{ñ}}\tilde{\text{C}}\tilde{\text{Y}}\cdot\tilde{\text{C}}$   
 $\tilde{\text{U}}\gg\tilde{\text{E}}^3\tilde{\text{Y}}\tilde{\text{C}}^1_2\tilde{\text{U}}\tilde{\text{Y}}\gg\tilde{n}$

°aD-áoU áóēáoUÝ³ÝÝ Ín³.ñ»ñÇ Í³½ÚÚÝÝ ~ N³ēir³ÚÝÝ N³Ú³ñ .ánláóU »Ý Nēir³láñ»Ý ē³NÚÝÝ³Í ÁÝÁ³ó³Íñ.»ñē áóēáoUÝÝ³Ý Ín³.ñÇ Ú³Í³ÚÝÝ N³Ú³ñ NÇÚU ĸ īU³É Ú³ēÝ.ÇíáoÁÚÝÝ ā»³ÍÝÝ ÍñÁ³ÝÝ ā³-ánábCāÁē Đ³Ú³Éē³ñÝáoU Ó³íáníē ~ .ánláóU »Ý ý³-ÍáoÉi»iÝ»ñÇ ~ N³Ú³Éē³ñÝÇ Ú»Áá¹³ÝÝ ÉánNáoñÝ»ñÁ, áñáÝU N³ēir³Í ÁÝÁ³ó³Íñ.»ñái Çñ³ÝÝ³óÝáoU »Ý Ín³.ñ»ñÇ Ú³Í³ÚÝÝ, N³ēir³ÚÝÝ ~ āññ»ñ³ÝÝ í»ñ³Ý³ÚÚÝÝ .ánÍÁÝÁ³óÝ»ñÁē Úán ēi»ÓÍÍÍ Ín³.ñ»ñÁ Ý»ñÍ³Ú³óáoU »Ý ý³ÍáoÉi»iÇ Ú»Áá¹³ÝÝ ÉánNñ¹Ç ùÝÝ³ñÍÚ³ÝÁ ~ N³-íÝáoÁÚÝÝ ³ñÁ³ÝÝÝÉáoó N»íā N³Ú³Éē³ñÝÇ Ú»Áá¹³ÝÝ ÉánNñ¹ÇÝē ,ñ³ÝÝ »½ñ³Íóáo-ÁÚÝÝ ¹»áoáoU ³ÚÝ Ý»ñÍ³Ú³óáoU ĸ °aD .Ç³ÍÝÝ ÉánNñ¹Ç N³ēir³ÚÝÝÁē

İn<sup>3</sup>-n̄-ñÇ ı-ñ<sup>3</sup>Y<sup>3</sup>ÜÜ<sup>3</sup>Y N̄<sup>3</sup>Ü<sup>3</sup>n NÇÜÜ »Y ÇYaaëë y<sup>3</sup>İaöEi»iY»nÇ EänNäon̄iY»nÇ . Ü»ÄäiEänNäon̄iY»nÇ Y<sup>3</sup>E<sup>3</sup>O»eYäoÄÜäoY<sup>3</sup>»nÄ, 3ÜYä»e İE 3BÊ<sup>3</sup>3Baöİ<sup>3</sup>ÜÇ N̄»i N̄»i<sup>3</sup>iñÖ İ<sup>3</sup>aÇ i<sup>3</sup>Ü<sup>3</sup>EY»nÄ, äñäYü e<sup>3</sup>iöİaöÜ »Y 3Üi Yä<sup>3</sup>i<sup>3</sup>İai Çn<sup>3</sup>i<sup>3</sup>Y3ö<sup>3</sup>i<sup>3</sup> N̄<sup>3</sup>nöäoÜY»nÇ . N<sup>3</sup>i<sup>3</sup>2ä- İaöÄÜäoY<sup>3</sup>»nÇ ÜÇÇäöai, ünÇY<sup>3</sup>İ 2007Ä© Çn<sup>3</sup>i<sup>3</sup>Y3ö<sup>3</sup>i<sup>3</sup> §aD-Ç İaÖÜÇ6 i<sup>3</sup>n<sup>3</sup>i İñÄäoÄ- Ü<sup>3</sup>Y N̄<sup>3</sup>Ü<sup>3</sup>ä<sup>3</sup>eE<sup>3</sup>YäoÄÜäoYÄ 3BÊ<sup>3</sup>3Baöİ<sup>3</sup>ÜÇ . N̄3e<sup>3</sup>n<sup>3</sup>İaöÄÜ<sup>3</sup>Y ä<sup>3</sup>N̄<sup>3</sup>YçÇYi: eäöÇaEä-Ç<sup>3</sup>i<sup>3</sup>Y N̄»i<sup>3</sup>i2äiäoÄÜäoYÄ 3ÜEYİ ð3Ü<sup>3</sup>Ö<sup>3</sup>ÜY 3Üi N̄»i<sup>3</sup>i2äiäoÄÜ<sup>3</sup>Y aD-Ç İaÖÜÇ6 Ü3eY<sup>3</sup>.»iY»nÇ ä<sup>3</sup>n̄<sup>3</sup>e<sup>3</sup>i<sup>3</sup>Y<sup>3</sup> 3n̄i<sup>3</sup>ÄoY<sup>3</sup>i<sup>3</sup>İaöÄÜäoYÄ BñçY<sup>3</sup>3n̄iY»nÇ 46%-Ä .Y<sup>3</sup>N̄<sup>3</sup>i»E İ, §»ñ<sup>3</sup>- 1/2Yöi, 37,2%-Ä §E<sup>3</sup>i, 6,8%-Ä §u<sup>3</sup>i<sup>3</sup>n̄<sup>3</sup>i, Çeİ 10%-Ä §<sup>3</sup>Y<sup>3</sup>ı<sup>3</sup>n̄<sup>3</sup>i: 2BÊ<sup>3</sup>3Baöİ<sup>3</sup>ÜäoÜÜ Ü3e- Y<sup>3</sup>.»iY»nÇ ä<sup>3</sup>N̄<sup>3</sup>YçÇn̄i<sup>3</sup>İaöÄÜ<sup>3</sup>Y i<sup>3</sup>n̄<sup>3</sup>ı<sup>3</sup>n̄<sup>3</sup>Ü3 Ü3n̄i-ACY<sup>3</sup>ÜÇY äöeäoÜY<sup>3</sup>eÇn̄äoÄÜäoY- Y»nÄ N̄Y<sup>3</sup>n̄iäñäoÄÜäoY »Y i<sup>3</sup>E İ»ñçÇY 2 i<sup>3</sup>n̄<sup>3</sup>i ÄYÄ3öäoÜ ı<sup>3</sup>6»E 9 Yän Ü3eY<sup>3</sup>.Çİäo- ÄÜäoY<sup>3</sup>»n, äñäYü ä<sup>3</sup>N̄<sup>3</sup>YçÇn̄i »Y İÜÜ»EäoÜ Y<sup>3</sup> ıÇÜän̄iY»nÇ İaÖÜÇ6İ

3. àõë³ÝáÕÝ»ñÇ ·Ý³Ñ³ìÙ³Ý Ññ³à³ñ³İİÍ ã³÷³ÝÇβÝ»ñ " ÁÝÃ³ó³İñ»ñ

àoēYáoY·nÇ·Y3N3r3U3Y Ó»nÁ·İÇn3éiáŌ Û»Áá1Y·nÁ İñn·ān»Y āā ÛÇ3U3Y 13ē·  
 ÁYÁ3óái Y3É3YBpİ İñÁ3Y 3ñ1UáoYŷY·nÇ Ó»èù»náoUÁ ÷3ēi»Éáo, 3UÉ Y3·  
 áoēáoŌU3Y ·áoēáoŌU3YéáoÁŌU3Y ·āñİÁYÁ3óY·nÇ ÛÇÇ·N»r13ñÓ İ3ā ē3N3U3Y»Éáo  
 N3U3ñē ʾāD-Ç 3m3É3ñÇ3iáoU 3U1 Yā3r3İái 1995/96 áoēi3nááo Y·nUáoİi»É ĺ ÁYÁ3óÇİ  
 ŷYÁáoÁŌUáoY·nÇ N3U3İ3ñ·Áē

[illegible]

ἰ»ἢÝÝÚἰ»É ḡ Y³» ḁóēÝáŎÇ ḁóēÚÝÝ ³ēç³¹ÇÚáŎÁÚÝÝ .Ý³Ñ»ṰÚÝÝ ḁ³»ÝÇΒΑ, ÇÝáÁ Ñ³ΒίÇ ḡ ³ēÝáŎÚ ÇÝáá»ē ḁóēÝáŎÇ ἸÇē³ÚŎ³ṰÚÇÝ ḁóēáŎÚÝÝ³ÝÝ ³ΒÈ³Ṱ³ṰÉÁ (Ἰñ»¹ÇṰÝ»ḡÇ ḡÝÝἰÁ), ³ÚÝá»ē ḡÉ Ἰñ»¹ÇṰÝ»ḡáἰ ē³ÑŎÚÝÝ³ἰ ἸñÁ³ÝÝ ³ḡ¹ÚáŎÝúÝ»ḡÇ Úáŏñ³ŎÚÝÝ ḁñ³ἰÁ (ÚÇçÇÝ ḁñ³Ṱ³ÝÝ .Ý³Ñ»³Ṱ³ÝÁ)£ ²Úēá»ē, »Á» ḁóēÝáŎÇ ṡ³ŏñŎÓ³ ³ēç³¹ÇÚáŎÁÚáŎÝÁ ḁ³»-ἰáŎÚ ḡ ÚÇçÇÝ ḁñ³Ṱ³ÝÝ .Ý³Ñ»³Ṱ³ÝÁἰ (ḁñÁ Ἰñ»¹ÇṰÝ»ḡáἰ ἸΒé³ἰ .Ý³.Ñ»³Ṱ³ÝÝ»ḡÇ ÚÇçÇÝÝ ḡ), ³á³ Ṱñṡ»ḡ ḁóēáŎÚÝÝ³Ý ṡ»éÝṰἰáŎÁÚáŎÝ ḁŏÝ»ŏáŎ ḁóēÝáŎÝ»ḡÇ ³Ṱ³¹»ÚÇ³ṰÝ ³ēç³¹ÇÚáŎÁÚáŎÝÝ ³ÚēáŎÑ»ἰ Ñ³Ú»Ú³ἰ»ÉáŎ ḡ ÝñÝÝŎ ṰñṰÝÇ-Β³ÚÇÝ ÚÇ³ἰánÝ»ḡáἰ, ḁñÁ Úáŏñ³ñÝáÚáŏñ Ἰñ»¹ÇṰ Ñ³Úḡñ ēṰ³ŏἰ ÚÇ³ἰánÝ»ḡÇ .áŏÚ³ñÝ

¿É 3 É3Í Ý3É3ñÚÉÝ»ñ ¿ 3i»ÖÍáóÙ Ý3· áóéáóóÙ3Ý ÙÇ Ó·Çó ÙÙáóéÇÝ áóé3ÝáÖÝ»ñÇ ÷áÉ3i»ÖÙ3Ý Ñ3Ù3ñ ÍÇñ3éíáÖ 3é3Ç3ÇÙáóÁÙ3Ý óáóó3ÝÇBÝ»ñÁ Ù»Áá13á»é 3i»ÉÇ ×ÇBí ·· ññÁ3ÝÑ3Ç ÑÇÙù»ñÇ íñ3 Í3éáóó»Éáó ·ánÍáóÙ£

#### 4. 3é3Éáé3Í3Ý Í3½ÙÇ Í3ñáÖáóÁÙáóÝÝ»ñÇ ·Ý3Ñ3iÙ3Ý Ù»É3ÝÇ½ÙÝ»ñ ·· á3÷3-ÝÇBÝ»ñ

3é3Éáé3Í3Ý Í3½ÙÇ Í3ñáÖáóÁÙáóÝÝ»ñÇ Í3ñ»É3·ánÍÙ3Ý, 1ñ3Ýó ·Ý3Ñ3iÙ3Ý Ù»É3ÝÇ½ÙÝ»ñÇ ·· á3÷3ÝÇBÝ»ñÇ áóÖÖáóÁÙ3Ý Ñ3Ù3Éé3ñ3ÝáóÙ 3éÍ3 »Ý 2 3é3ÝÓÇÝ ·ánÍÁÝÁ3óÝ»ñ Ýá3Ç3Í3áóÖÖÍ3 13é3Éáé3Í3Ý Í3½ÙÇ Ý»ñáóÁÇ (Í3ñáÖáóÁÙáóÝÝ»ñÇ) ½3ñ·3óÙ3ÝÁ ·· 1ñ3Ýó Ñ3Ù3á3Ç3é3ÝáóÁÙ3Ý ·Ý3Ñ3iÙ3ÝÁ£

ñ3ÝóÇó 3é3ÇÇÝÝ Çñ3Í3Ý3óíáóÙ ¿ 13é3Éáé3Í3Ý Í3½ÙÇ án3Í3íñÙ3Ý ññÓñ3óÙ3Ý ·· í»ñ3á3ñ3éiÙ3Ý Ñ3Ù3Í3ñ·Ç ÙÇçáóái: 2ÙÝ Çñ3Í3Ý3óíáóÙ ¿ ÇÝáá»é Ù3éÝ3·Ç3Í3Ý í»ñ3án3Í3íñÙ3Ý 13éÁÝÁ3óÝ»ñÇ í»éuái, ánáÝù í3ñáóÙ »Ý ííÙ3É áÉáñiÇ ññÓñ3Í3ñ· Ù3éÝ3·»iÝ»ñÁ, 3ÙÝá»é ¿É 13é3ÉáéÝ»ñÇ Ù3ÝÍ3íñÁ3Í3Ý ÑÙíáóÁÙáóÝÝ»ñÁ ½3ñ·3óÝ»ÉáóÝ áóÖÖÍ3 Ñ3íáóÍ 13é3B3ñ»ñÇ ÙÇçáóái: ñ3Ýù ÑÇÙÝ3Í3ÝáóÙ Ñ3éó»3·ñí3Í »Ý »ñÇ3é3ñ1 13é3ÉáéÝ»ñÇÝ ·· ÁÝ1·ñíáóÙ »Ý Ý3· 13é3ÉáéáóÁÙáóÝÝ»ñ ·· é»ÙÇÝ3ñÝ»ñ ññÓñ3·áóÙÝ ÍñÁáóÁÙ3Ý Í3½Ù3Í3ñáÙ3Ý Á3Ù3Ý3Í3Çó Ùá1»ÉÝ»ñÇ, Íñ»1Ç3½ÙÇÝ Ñ3Ù3Í3ñ·Ç ÑÇÙÝ3Í3Ý Í3éáóóí3Ù3ÙÇÝ ·· ñá3Ý13Í3ÙÇÝ ñÝáóÁ3·ñ»ñÇ ·· án3ÍÇ 3á3ÑáíÙ3Ý ÁÝÁ3ó3Í3ñ»ñÇ í»ñ3· ññÓñ3É: ¶ánÍáóÙ ¿ Ý3· 13é3ÉáóóÙÝ»ñÇ 3ÝÝ13Í3Ý Ñ3Ù3Í3ñ·Á:

3é3Éáé3Í3Ý Í3½ÙÇ Í3ñáÖáóÁÙáóÝÝ»ñÇ ·Ý3Ñ3iÙ3Ý ÑÇÙÝ3Í3Ý Ó·Ý 3é3ÙÁÙ ÙÝáóÙ ¿ 13é3ÝÝ1Ù3Ý án3ÍÇ ·· 3ñ1ÙáóÝ3i»íáóÁÙ3Ý í»ñ3»ñÓñ3É áóé3ÝáÖÍ3Ý 3Ù»Ý3ÙÙ3 Ñ3ñóáóÙÝ»ñÁ (°áÐ ·Ç3Í3Ý ÉánÑñ1Ç 2004Á© Ù3ñiÇ 15-Ç ánábÙ3Ý ÆÝ1áóÝÍ3 Í3ÝáÝ3·Í3ñ·ái), ánáÝù, ùñÇÝ3Í, Ý3Éáñ1 áóéi3ñáóÙ 3Ýó »Ý Í3óí»É ñ3Í3É3íñÇ3Ç ·· Ù3·Çéiñ3áóñ3ÙÇ 18000 áóé3ÝáÖ·Ñ3ñóáóÙÝ»ñÇ ù·ÝáóÁÙ3Ý ·· áóé3ÝáóÝ»ñÇ 74% Ù3éÝ3Í3óáóÁÙ3Ý ÙÇ·ÇÝ óáóó3ÝÇBáí£ 2007/08 áóéi3ñ3 3é3ÇÇÝ ÍÇé3ÙÙ3ÍáóÙ 3ÝóÍ3óí3Í Ñ3ñóáóÙÝ»ñÇ 3ñ1ÙáóÝùáóÙ ÑáóÙ3ÝÇ3ñ ·· ñÝ3·Ç3Í3Ý Ù3éÝ3·ÇíáóÁÙáóÝÝ»ñÇ ·íáí ÙÇÇÇÝ ÙÇ3íáñÁ Í3½Ù»É ¿ Ñ3Ù3á3Ç3é3Ý3ñ 4,26 ·· 4,21£ 2Ùé Áí»ñÁ í3ÙáóÙ »Ý, án áóé3ÝáóÝ»ñÝ ÁÝ1·Ñ3Ýáóñ 3é3Ù3Ý ·áÑ »Ý Ñ3Ù3Éé3ñ3ÝáóÙ 13é3ÝÝ1Ù3Ý Ù3Í3ñ13ÍÇó£

Ð3ñóáóÙÝ»ñÇ 3ÝóÍ3óáóÙÁ ·· 1ñ3Ýó 3ñ1ÙáóÝùÝ»ñÇ ÙB3ÍáóÙÝ áó 3Ù÷á÷áóÙÁ Í3½Ù3Í3ñáíáóÙ »Ý Í»ÝíñáÝ3óí3 Í3ñ·ái áóéáóÙÝ3Ù»Áá13Í3Ý í3ñáóÁÙ3Ý ·· í»Ö»Í3í3Í3Ý í»ÉÝáÉá·Ç3Ý»ñÇ ÍñÁ3Í3Ý ·· Ñ»í3½áí3Í3Ý Í»ÝíñáÝÇ ÍáÖÙÇó· 3ÍáóÉi»iÝ»ñÇ Ñ»i Ñ3Ù3·í»Ö£ Ð3ñóÙ3Ý 3Ù÷á÷ 3ñ1ÙáóÝùÝ»ñÁ íñ3Ù3ñíáóÙ »Ý 3ÍáóÉi»iÝ»ñÇÝ ùÝÝ3ñÍÙ3Ý ·· Ñ3·Ù3á3Ç3é3Ý ÙÇÇáóéáóÙÝ»ñÇ ÙB3ÍÙ3Ý Ýá3Ç3Íáí£ ñ3Ýù Ñ3BíÇ »Ý 3éÝíáóÙ Ý3· 13é3ÉáéÝ»ñÇ 3BíáÝ3íñÙ3Ý ·· 3é3ÇÉ3Ö3óÙ3Ý Ñ3Ù3ñ 3ÝóÍ3óíáó ÙñóáóÙÁÝ»ñáóÙ£

3é3Éáé3Í3Ý Í3½ÙÇ 3ñ1ÙáóÝ3i»i 3BÉ3ÝÝùÇ ÉÁ3ÝÙ3Ý Ýá3Ç3Íáí 2008/09 áóéi3ñ3ÝÇó Ñ3Ù3Éé3ñ3ÝáóÙ Ý»ñ1ñí»É ¿ Ý3· íñ3»ñ3Í3Í3 í3ñÓ3íñáóÁÙ3Ý Ñ3Ù3Í3ñ·Á, ánÁ ÑÇÙÝ3Í ¿ íñ3»ñ ñÝ3·3éÝ»ñáóÙ 13é3ÉáéÇ ·ánÍáóÝ»áóÁÙ3Ý 3ñ1ÙáóÝ3i»íáóÁÙ3Ý ·Ý3Ñ3iÙ3Ý ánáb3ÍÇ óáóó3ÝÇBÝ»ñÇ ·· 1ñ3Ýó Í3íñáÖÍ3ÝÇ íñ3£

#### 5. ÍñÁ·Í3Ý Íñ3·ñ»ñÇ 3áÑ3ÝÇÝ»ñÇÝ Ñ3Ù3ñÁ»ù áóéáóóÙÝ3Í3Ý ·· 3Ç3ÍááÖ é»éáóñéÝ»ñ

2Ùé éi3Ý13ñiÇ ñ3í3ñ3ñÙ3Ý áóÖÖáóÁÙ3Ý Ñ3Ù3Éé3ñ3ÝáóÙ ÙBí3á»é í3ñíáóÙ »Ý Ñ»i·Ù3É 3BÉ3ÝÝùÝ»ñÁ©

- ·ñ3í3ñ3Ý3ÙÇÝ Ñ3Ù3ÉÇñÇ 3ñ1Ç3Í3Ý3óáóÙ,
- Ñ3Ù3Í3ñ·á3ÙÇÝ ñ3½ÙÇ ÁÝ1É3ÙÝáóÙ,
- é»éáóñé Í»ÝíñáÝÝ»ñÇ éi»ÖÍáóÙ,
- áóéáóóÙÝ3Í3Ý ·· ·Ç3Í3Ý É3ñáñ3íáñÇ3Ý»ñÇ 3éiÇ×3Ý3Í3Ý í»ñ3½ÇÝáóÙ,
- áóéáóóÙÝ3Í3Ý ·ánÍÁÝÁ3óÇ Ù»Áá13Í3Ý 3á3ÑáíÙ3Ý ñ3ñ»É3íáóÙ£

#### 6. áóéáóóÙÝ3Í3Ý ·ánÍÁÝÁ3óÇ 3ñ1ÙáóÝ3i»i Í3é3íñÙ3Ý í»Ö»Í3íáóÁÙ3Ý Ñ3í3ùáóÙ ·· ù·í3·ánÍáóÙ

Đ<sup>3</sup>Ù<sup>3</sup>ã<sup>3</sup>ĩ<sup>3</sup>ẽ<sup>3</sup>Ý i»Õ»İ<sup>3</sup>ĩáo<sup>3</sup>Ā<sup>3</sup>úáo<sup>3</sup>ÝÁ N<sup>3</sup>ĩ<sup>3</sup>uíáo<sup>3</sup>Ù ĺ Û<sup>3</sup>Ç<sup>3</sup>Á<sup>3</sup>Ù<sup>3</sup>Ý<sup>3</sup>İ Û<sup>3</sup> ù<sup>3</sup>Ý<sup>3</sup>Ç ×<sup>3</sup>-  
Ý<sup>3</sup>ã<sup>3</sup>ñ<sup>3</sup>Ń<sup>3</sup>Ý»ñái©

- 1995/96 áðẽĩ<sup>3</sup>ñáo<sup>3</sup> Û»İ<sup>3</sup>Ý<sup>3</sup>ñİ<sup>3</sup>İ<sup>3</sup> áðẽáo<sup>3</sup>Ù<sup>3</sup>Ý<sup>3</sup>Ń»ĩ<sup>3</sup>2áĩ<sup>3</sup>İ<sup>3</sup>Ý »Ý<sup>3</sup>Ā<sup>3</sup>İ<sup>3</sup>éáo<sup>3</sup>Ú<sup>3</sup>Ý»ñ<sup>3</sup>Ç (Ý<sup>3</sup>-  
İáo<sup>3</sup>Ēi»i<sup>3</sup>Ý»ñ<sup>3</sup>Ç, <sup>3</sup>Ù<sup>3</sup>Ç<sup>3</sup>áÝ<sup>3</sup>Ý»ñ<sup>3</sup>Ç, Ē<sup>3</sup>μ<sup>3</sup>án<sup>3</sup>ĩ<sup>3</sup>ñ<sup>3</sup>Ç<sup>3</sup>Ý»ñ<sup>3</sup>Ç) İáo<sup>3</sup>Ù<sup>3</sup>Ç<sup>3</sup>ó Ý»ñ<sup>3</sup>İ<sup>3</sup>Ú<sup>3</sup>óíáo<sup>3</sup> Ñ<sup>3</sup>ñ<sup>3</sup>ã<sup>3</sup>-  
ñ<sup>3</sup>İáo<sup>3</sup> Û<sup>3</sup>»Ý<sup>3</sup>Ù<sup>3</sup> Ñ<sup>3</sup>İ<sup>3</sup>ĩáo<sup>3</sup>Ā<sup>3</sup>úáo<sup>3</sup>Ý<sup>3</sup>»ñ<sup>3</sup>Á,
- 2000/01 áðẽĩ<sup>3</sup>ñáo<sup>3</sup> Û»İ<sup>3</sup>Ý<sup>3</sup>ñİ<sup>3</sup>İ<sup>3</sup> ý<sup>3</sup>İáo<sup>3</sup>Ēi»i<sup>3</sup>Ý»ñ<sup>3</sup>Ç áðẽáo<sup>3</sup>Ù<sup>3</sup>Ý<sup>3</sup>Ç<sup>3</sup>İ<sup>3</sup>İ<sup>3</sup>Ý .án<sup>3</sup>İáo<sup>3</sup>Ý»áð-  
Ā<sup>3</sup>úáo<sup>3</sup>Ý<sup>3</sup> áðẽáo<sup>3</sup>Ù<sup>3</sup>Ý<sup>3</sup>ẽ<sup>3</sup>Ç<sup>3</sup>ñáo<sup>3</sup> Ñ<sup>3</sup>Ý<sup>3</sup>Ó<sup>3</sup>Ý<sup>3</sup>Ā<sup>3</sup>óáĩ<sup>3</sup>Ý»ñ<sup>3</sup>Ç <sup>3</sup>Ē<sup>3</sup>Ē<sup>3</sup>İ<sup>3</sup>Ý<sup>3</sup>ù<sup>3</sup>Á, áñá<sup>3</sup>Ý<sup>3</sup> İ<sup>3</sup>ĩ<sup>3</sup>ñ<sup>3</sup>İ<sup>3</sup> áð-  
éáo<sup>3</sup>Ù<sup>3</sup>Ý<sup>3</sup>ẽ<sup>3</sup>Ç<sup>3</sup>ñáo<sup>3</sup>Ā<sup>3</sup>úáo<sup>3</sup>Ý<sup>3</sup>»ñ<sup>3</sup>Ç <sup>3</sup>ñ<sup>3</sup>İ<sup>3</sup>úáo<sup>3</sup>Ý<sup>3</sup>»ñ<sup>3</sup>Á ù<sup>3</sup>Ý<sup>3</sup>Ý<sup>3</sup>ñ<sup>3</sup>İáo<sup>3</sup> Û»Ý<sup>3</sup>Ç<sup>3</sup>Ý<sup>3</sup>ã<sup>3</sup>»ẽ<sup>3</sup> Ñ<sup>3</sup>Ú<sup>3</sup>ã<sup>3</sup>ĩ<sup>3</sup>ẽ-  
Ē<sup>3</sup>Ý ý<sup>3</sup>İáo<sup>3</sup>Ēi»i<sup>3</sup>Ý»ñáo<sup>3</sup>Ù, <sup>3</sup>Ù<sup>3</sup>Ý<sup>3</sup>ã<sup>3</sup>»ẽ<sup>3</sup> ĺĒ Đ<sup>3</sup>Ú<sup>3</sup>Ē<sup>3</sup>ẽ<sup>3</sup>ñ<sup>3</sup>Ý<sup>3</sup>Ç Û»Ā<sup>3</sup>á<sup>3</sup>İ<sup>3</sup>Ý<sup>3</sup> · · Ç<sup>3</sup>İ<sup>3</sup>İ<sup>3</sup>Ý Ēáo<sup>3</sup>-  
Ńáo<sup>3</sup>ñ<sup>3</sup>Ý»ñáo<sup>3</sup>Ù,
- 2008Ā© Û»İ<sup>3</sup>Ý<sup>3</sup>ñİ<sup>3</sup>İ<sup>3</sup>İ<sup>3</sup> °ãĐ-áo<sup>3</sup>Ù Ç<sup>3</sup>ñ»Ý<sup>3</sup>ó ěĩ<sup>3</sup>ó<sup>3</sup>İ Ĩ<sup>3</sup>Āáo<sup>3</sup>Ā<sup>3</sup>úáo<sup>3</sup>Ý<sup>3</sup>Ç<sup>3</sup>ó Ē<sup>3</sup>ñ<sup>3</sup>Ý<sup>3</sup>ĩ<sup>3</sup>ñ<sup>3</sup>Ý»ñ<sup>3</sup>Ç  
μ<sup>3</sup>ĩ<sup>3</sup>ñ<sup>3</sup>ñ<sup>3</sup>İáo<sup>3</sup>Ā<sup>3</sup>ú<sup>3</sup>Ý<sup>3</sup> ·Ý<sup>3</sup>Ń<sup>3</sup>ĩáo<sup>3</sup>Ú<sup>3</sup>Á, áñ<sup>3</sup>Á Ç<sup>3</sup>ñ<sup>3</sup>İ<sup>3</sup>Ý<sup>3</sup>óí»Ē<sup>3</sup> ĺ μ<sup>3</sup>İ<sup>3</sup>Ē<sup>3</sup>ĩ<sup>3</sup>ñ<sup>3</sup>Ç<sup>3</sup>İ<sup>3</sup>Ç · · Û<sup>3</sup>·Ç<sup>3</sup>-  
ĩ<sup>3</sup>ñ<sup>3</sup>ĩáo<sup>3</sup>ñ<sup>3</sup>Ú<sup>3</sup>Ç Ûái 2000 Ē<sup>3</sup>ñ<sup>3</sup>Ç<sup>3</sup>Ý<sup>3</sup>ĩ<sup>3</sup>ñ<sup>3</sup>Ý»ñ<sup>3</sup>Ç Ñ<sup>3</sup>ñ<sup>3</sup>ó<sup>3</sup>Ú<sup>3</sup>Ý Û<sup>3</sup>Ç<sup>3</sup>áoáĩ<sup>3</sup>Đ Đ<sup>3</sup>ñáo<sup>3</sup>Ú<sup>3</sup>Á Ñ<sup>3</sup>Ý<sup>3</sup>-  
ñ<sup>3</sup>ĩáo<sup>3</sup>ñáo<sup>3</sup>Ā<sup>3</sup>úáo<sup>3</sup>Ý<sup>3</sup> ĺ ĩ<sup>3</sup>Ē<sup>3</sup>Ç<sup>3</sup>ẽ<sup>3</sup> ·Ý<sup>3</sup>Ń<sup>3</sup>ĩ<sup>3</sup>»Ēáo<sup>3</sup> áðẽ<sup>3</sup>Ý<sup>3</sup>áo<sup>3</sup>Ý»ñ<sup>3</sup>Ç ĩáo<sup>3</sup>ĩáo<sup>3</sup>Ā<sup>3</sup>úáo<sup>3</sup>Ý<sup>3</sup>Á Ñ<sup>3</sup>Ú<sup>3</sup>Ē<sup>3</sup>ẽ<sup>3</sup>-  
ñ<sup>3</sup>Ý<sup>3</sup>áo<sup>3</sup>Ù ěĩ<sup>3</sup>ó<sup>3</sup>İ Ç<sup>3</sup>ñ»Ý<sup>3</sup>ó Ĩ<sup>3</sup>Āáo<sup>3</sup>Ā<sup>3</sup>úáo<sup>3</sup>Ý<sup>3</sup>Ç<sup>3</sup>ó ĩ<sup>3</sup>ñ<sup>3</sup>Ý<sup>3</sup>Ç<sup>3</sup>ĩ<sup>3</sup>»Ēái<sup>3</sup> <sup>3</sup>Ù<sup>3</sup>Ý<sup>3</sup>ã<sup>3</sup>Ç<sup>3</sup>Ç<sup>3</sup> ĩ<sup>3</sup>ñ<sup>3</sup>·án<sup>3</sup>·áo<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup> ẽ<sup>3</sup>-  
ã<sup>3</sup>»İ<sup>3</sup>Ý»ñ<sup>3</sup>, Ç<sup>3</sup>Ý<sup>3</sup>ã<sup>3</sup>Ç<sup>3</sup>ẽ<sup>3</sup>Ç<sup>3</sup> Û»Ý<sup>3</sup> áðẽáo<sup>3</sup>Ù<sup>3</sup>Ý<sup>3</sup>İ<sup>3</sup>Ý Ĩ<sup>3</sup>ñ<sup>3</sup>·ñ<sup>3</sup>ñ<sup>3</sup>Ç μ<sup>3</sup>ái<sup>3</sup>Ý<sup>3</sup>İáo<sup>3</sup>Ā<sup>3</sup>úáo<sup>3</sup>Ý<sup>3</sup>Á · · Ñ<sup>3</sup>-  
Ú<sup>3</sup>ã<sup>3</sup>ĩ<sup>3</sup>ẽ<sup>3</sup>Ē<sup>3</sup>Ý<sup>3</sup>áo<sup>3</sup>Ā<sup>3</sup>úáo<sup>3</sup>Ý<sup>3</sup>Á <sup>3</sup>Ē<sup>3</sup>Ē<sup>3</sup>İ<sup>3</sup>Ý<sup>3</sup>áo<sup>3</sup>İ<sup>3</sup>Ú<sup>3</sup>Ç ĩ<sup>3</sup>ñ<sup>3</sup>Ç<sup>3</sup>ù<sup>3</sup>Ý»ñ<sup>3</sup>ÇÝ<sup>3</sup> · · ã<sup>3</sup>Ń<sup>3</sup>Ý<sup>3</sup>Çíáo<sup>3</sup> Û<sup>3</sup>ẽ<sup>3</sup>Ý<sup>3</sup>·Ç<sup>3</sup>İ<sup>3</sup>İ<sup>3</sup>Ý<sup>3</sup>  
İ<sup>3</sup>ñáo<sup>3</sup>áo<sup>3</sup>Ā<sup>3</sup>úáo<sup>3</sup>Ý<sup>3</sup>»ñ<sup>3</sup>ÇÝ<sup>3</sup>, áðẽáo<sup>3</sup>Ù<sup>3</sup>Ý<sup>3</sup>Á<sup>3</sup>Ý<sup>3</sup>ñ<sup>3</sup>İ<sup>3</sup> Û»Ā<sup>3</sup>á<sup>3</sup>μ<sup>3</sup>Ý<sup>3</sup>áo<sup>3</sup>Ā<sup>3</sup>ú<sup>3</sup>Ý<sup>3</sup> <sup>3</sup>ñ<sup>3</sup>İ<sup>3</sup>úáo<sup>3</sup>Ý<sup>3</sup>ĩ<sup>3</sup>»-  
İáo<sup>3</sup>Ā<sup>3</sup>úáo<sup>3</sup>Ý<sup>3</sup>Á, áðẽáo<sup>3</sup>Ù<sup>3</sup>Ý<sup>3</sup>İ<sup>3</sup>Ý ·án<sup>3</sup>İ<sup>3</sup>Á<sup>3</sup>Ý<sup>3</sup>Á<sup>3</sup>ó<sup>3</sup> ĩ<sup>3</sup>½<sup>3</sup>Ú<sup>3</sup>İ<sup>3</sup>»ñáo<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup> Û<sup>3</sup>İ<sup>3</sup>ñ<sup>3</sup>İ<sup>3</sup>Á, ù<sup>3</sup>Á<sup>3</sup>Ý<sup>3</sup>İ<sup>3</sup>İ<sup>3</sup> ĩ<sup>3</sup>ẽ<sup>3</sup>-  
Úáo<sup>3</sup>Ā<sup>3</sup>úáo<sup>3</sup>Ý<sup>3</sup>»ñ<sup>3</sup>Ç áñ<sup>3</sup>İ<sup>3</sup>Á, Ñ<sup>3</sup>Ú<sup>3</sup>Ē<sup>3</sup>ẽ<sup>3</sup>ñ<sup>3</sup>Ý<sup>3</sup>Ç Ý»ñ<sup>3</sup>ù<sup>3</sup>ÇÝ<sup>3</sup> Û<sup>3</sup>Ç<sup>3</sup>İ<sup>3</sup>Ú<sup>3</sup>ñáo<sup>3</sup>Ù ĩ<sup>3</sup>Ç<sup>3</sup>ñáo<sup>3</sup> μ<sup>3</sup>ñáo<sup>3</sup>Ú<sup>3</sup>-  
Ńá»μ<sup>3</sup>Ý<sup>3</sup>İ<sup>3</sup>Ý Û<sup>3</sup>Á<sup>3</sup>ý<sup>3</sup>á<sup>3</sup>ñ<sup>3</sup>İ<sup>3</sup>Á · · <sup>3</sup>Ù<sup>3</sup>Ē<sup>3</sup>Ý<sup>3</sup>,
- áðẽ<sup>3</sup>Ý<sup>3</sup>áo<sup>3</sup>Ý»ñ<sup>3</sup>Ç <sup>3</sup>İ<sup>3</sup>İ<sup>3</sup>»Ù<sup>3</sup>Ç<sup>3</sup>İ<sup>3</sup>Ý<sup>3</sup> ĩ<sup>3</sup>Ù<sup>3</sup>Ē<sup>3</sup>Ý<sup>3</sup>»ñ<sup>3</sup>Ç (ù<sup>3</sup>Ý<sup>3</sup>Ý<sup>3</sup>İ<sup>3</sup>Ý<sup>3</sup> <sup>3</sup>Ù<sup>3</sup>÷<sup>3</sup>á÷<sup>3</sup>·ñ<sup>3</sup>»ñ<sup>3</sup>Ç) Úáo<sup>3</sup>ĩ<sup>3</sup>ñ<sup>3</sup>·ñ<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup>,  
Ù<sup>3</sup>Ē<sup>3</sup>İ<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup> · · <sup>3</sup>Ù<sup>3</sup>÷<sup>3</sup>á÷<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup> Ý»ñ<sup>3</sup>İ<sup>3</sup>ñ<sup>3</sup>İ<sup>3</sup> Ñ<sup>3</sup>Ú<sup>3</sup>İ<sup>3</sup>ñ<sup>3</sup>·ã<sup>3</sup>Ú<sup>3</sup>ÇÝ<sup>3</sup> Ñ<sup>3</sup>Ú<sup>3</sup>İ<sup>3</sup>ñ<sup>3</sup>·Á,
- 2007Ā© <sup>3</sup>Ē<sup>3</sup>Ý<sup>3</sup>Ý<sup>3</sup>Á Đ<sup>3</sup>Ú<sup>3</sup>Ē<sup>3</sup>ẽ<sup>3</sup>ñ<sup>3</sup>Ý<sup>3</sup>áo<sup>3</sup>Ù ěİ<sup>3</sup>Ç<sup>3</sup>½<sup>3</sup>μ<sup>3</sup> <sup>3</sup>é<sup>3</sup>İ<sup>3</sup> <sup>3</sup>é<sup>3</sup>½<sup>3</sup>Ú<sup>3</sup>İ<sup>3</sup>ñ<sup>3</sup>İ<sup>3</sup>Ý<sup>3</sup> á<sup>3</sup>É<sup>3</sup>Ý<sup>3</sup>íáo<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup> ·án<sup>3</sup>-  
Á<sup>3</sup>Ý<sup>3</sup>Á<sup>3</sup>ó<sup>3</sup>Á Ýáo<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup>ã<sup>3</sup>»ẽ<sup>3</sup> Ý<sup>3</sup>Ē<sup>3</sup>ĩ<sup>3</sup>»éáo<sup>3</sup>Ù ĺ μáo<sup>3</sup>Ń<sup>3</sup>Ç Ç<sup>3</sup>Ý<sup>3</sup>ù<sup>3</sup>Ý<sup>3</sup>·Ý<sup>3</sup>Ń<sup>3</sup>ĩ<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup> · · Ç<sup>3</sup>Ý<sup>3</sup>ù<sup>3</sup>Ý<sup>3</sup>ĩ<sup>3</sup>»ñ<sup>3</sup>Éáo<sup>3</sup>-  
İáo<sup>3</sup>Ā<sup>3</sup>ú<sup>3</sup>Ý<sup>3</sup> ĩ<sup>3</sup>ñ<sup>3</sup>·án<sup>3</sup>·áo<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup> Û<sup>3</sup>ẽ<sup>3</sup>Á ĩ<sup>3</sup>½<sup>3</sup>Úáo<sup>3</sup> ·án<sup>3</sup>İáo<sup>3</sup>Ý»áo<sup>3</sup>Ā<sup>3</sup>ú<sup>3</sup>Ý<sup>3</sup> <sup>3</sup>ñ<sup>3</sup>İ<sup>3</sup>úáo<sup>3</sup>Ý<sup>3</sup>ĩ<sup>3</sup>»İáo<sup>3</sup>Ā<sup>3</sup>ú<sup>3</sup>Ý<sup>3</sup>  
·Ý<sup>3</sup>Ń<sup>3</sup>İ<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup> óáo<sup>3</sup>ó<sup>3</sup>Ý<sup>3</sup>Ç<sup>3</sup>Ē<sup>3</sup>Ý<sup>3</sup>»ñ<sup>3</sup>Ç (ŋ<sup>3</sup>ð<sup>3</sup>) Ē<sup>3</sup>ñ<sup>3</sup>İ<sup>3</sup>½<sup>3</sup>Ú<sup>3</sup>Ç <sup>3</sup>é<sup>3</sup>İ<sup>3</sup>Úáo<sup>3</sup>Ā<sup>3</sup>úáo<sup>3</sup>Ý<sup>3</sup>Ē<sup>3</sup> Û<sup>3</sup>İ<sup>3</sup> Ē<sup>3</sup>ñ<sup>3</sup>İ<sup>3</sup>½<sup>3</sup>Ú<sup>3</sup>Á  
μ<sup>3</sup>Ō<sup>3</sup>İ<sup>3</sup>ó<sup>3</sup>İ 130 óáo<sup>3</sup>ó<sup>3</sup>Ý<sup>3</sup>Ç<sup>3</sup>Ē<sup>3</sup>Ý<sup>3</sup>»ñ<sup>3</sup>Çó, áñá<sup>3</sup>Ý<sup>3</sup>ù<sup>3</sup> Á<sup>3</sup>Ý<sup>3</sup>·ñ<sup>3</sup>İáo<sup>3</sup>Ù »Ý<sup>3</sup> Đ<sup>3</sup>Ú<sup>3</sup>Ē<sup>3</sup>ẽ<sup>3</sup>ñ<sup>3</sup>Ý<sup>3</sup>Ç ·án<sup>3</sup>İáo<sup>3</sup>-  
Ý»áo<sup>3</sup>Ā<sup>3</sup>ú<sup>3</sup>Ý<sup>3</sup> 7 Ń<sup>3</sup>Ç<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup>İ<sup>3</sup>Ý<sup>3</sup> á<sup>3</sup>É<sup>3</sup>ñ<sup>3</sup>İ<sup>3</sup>Ý»ñ<sup>3</sup>Á<sup>3</sup> Á<sup>3</sup>Ý<sup>3</sup>áo<sup>3</sup>Ý»Éáo<sup>3</sup>Ā<sup>3</sup>úáo<sup>3</sup>Ý<sup>3</sup> · · Ñ<sup>3</sup>Ú<sup>3</sup>İ<sup>3</sup>½<sup>3</sup>Ú<sup>3</sup>,  
áðẽáo<sup>3</sup>Ù<sup>3</sup>Ý<sup>3</sup>İ<sup>3</sup>Ý ·án<sup>3</sup>İ<sup>3</sup>Á<sup>3</sup>Ý<sup>3</sup>Á<sup>3</sup>ó<sup>3</sup>, é<sup>3</sup>»éáo<sup>3</sup>ñ<sup>3</sup>ẽ<sup>3</sup>Ý»ñ<sup>3</sup> · · ĩ<sup>3</sup>ẽ<sup>3</sup>ĩ<sup>3</sup>ñáo<sup>3</sup>Ù, Ç<sup>3</sup>Ý<sup>3</sup>ñ<sup>3</sup>İ<sup>3</sup>éáo<sup>3</sup>ó<sup>3</sup>İ<sup>3</sup>ù, ·Ç<sup>3</sup>İáo<sup>3</sup>Ā<sup>3</sup>-  
úáo<sup>3</sup>Ý · · Ý<sup>3</sup>ñ<sup>3</sup>Úáo<sup>3</sup>İáo<sup>3</sup>Ā<sup>3</sup>úáo<sup>3</sup>Ý<sup>3</sup>, i»Õ»İ<sup>3</sup>ĩáo<sup>3</sup>Ā<sup>3</sup>úáo<sup>3</sup>Ý<sup>3</sup> i»Ē<sup>3</sup>Ý<sup>3</sup>á<sup>3</sup>É<sup>3</sup>·Ç<sup>3</sup>Ý<sup>3</sup>»ñ<sup>3</sup>, <sup>3</sup>ñ<sup>3</sup>ĩ<sup>3</sup>ù<sup>3</sup>ÇÝ<sup>3</sup> ĩ<sup>3</sup>ã<sup>3</sup>»ñ<sup>3</sup> · ·  
Ù<sup>3</sup>Ç<sup>3</sup>Ç<sup>3</sup>½<sup>3</sup>·Ú<sup>3</sup>ÇÝ<sup>3</sup> Ñ<sup>3</sup>Ú<sup>3</sup>·án<sup>3</sup>İ<sup>3</sup>İáo<sup>3</sup>Ā<sup>3</sup>úáo<sup>3</sup>Ý<sup>3</sup>Ē<sup>3</sup> ĩ<sup>3</sup>Ý<sup>3</sup>ó<sup>3</sup> <sup>3</sup>ñ<sup>3</sup>Á<sup>3</sup>»ù<sup>3</sup>Ý<sup>3</sup>»ñ<sup>3</sup>Á áñáo<sup>3</sup>İáo<sup>3</sup>Ù »Ý<sup>3</sup> i»ñ<sup>3</sup>Ç<sup>3</sup>Ý<sup>3</sup> 5  
ĩ<sup>3</sup>ñ<sup>3</sup>ÇÝ<sup>3</sup>»ñ<sup>3</sup>Ç Ñ<sup>3</sup>Ú<sup>3</sup>ñ<sup>3</sup>Ē<sup>3</sup>

#### 7. Ĩ<sup>3</sup>Ā<sup>3</sup>İ<sup>3</sup>Ý Ĩ<sup>3</sup>ñ<sup>3</sup>·ñ<sup>3</sup>ñ<sup>3</sup>Ç ĩ<sup>3</sup>ñ<sup>3</sup>μ<sup>3</sup>»ñ<sup>3</sup>Ú<sup>3</sup>É ù<sup>3</sup>μ<sup>3</sup>Ú<sup>3</sup>»İ<sup>3</sup>Ç<sup>3</sup>İ i»Õ»İ<sup>3</sup>ĩáo<sup>3</sup>Ā<sup>3</sup>ú<sup>3</sup>Ý<sup>3</sup> Ñ<sup>3</sup>ñ<sup>3</sup>ã<sup>3</sup>ñ<sup>3</sup>İáo<sup>3</sup>Ù

İ<sup>3</sup>ñ<sup>3</sup>Á<sup>3</sup>İ<sup>3</sup>Ý Ĩ<sup>3</sup>ñ<sup>3</sup>·ñ<sup>3</sup>ñ<sup>3</sup>Ç · · Ē<sup>3</sup>Ý<sup>3</sup>áñ<sup>3</sup>İáo<sup>3</sup> áñ<sup>3</sup>İ<sup>3</sup>ĩáo<sup>3</sup>ñáo<sup>3</sup>Ù<sup>3</sup>Ý»ñ<sup>3</sup>Ç ĩ<sup>3</sup>ñ<sup>3</sup>μ<sup>3</sup>»ñ<sup>3</sup>Ú<sup>3</sup>É Ñ<sup>3</sup>Ý<sup>3</sup>ñáo<sup>3</sup>Ā<sup>3</sup>ú<sup>3</sup>Ý<sup>3</sup>Á ĩ<sup>3</sup>ñ<sup>3</sup>-  
Ù<sup>3</sup>ñ<sup>3</sup>İáo<sup>3</sup> i»Õ»İ<sup>3</sup>ĩáo<sup>3</sup>Ā<sup>3</sup>úáo<sup>3</sup>Ý<sup>3</sup>Á (ã<sup>3</sup>ñ<sup>3</sup>μ<sup>3</sup>»ñ<sup>3</sup>μ<sup>3</sup>ñ<sup>3</sup>) Ñ<sup>3</sup>ñ<sup>3</sup>ã<sup>3</sup>ñ<sup>3</sup>İáo<sup>3</sup>Ù ĺ Û<sup>3</sup>Ç<sup>3</sup> Ò<sup>3</sup>ñ<sup>3</sup> Û<sup>3</sup>Ç<sup>3</sup>áo<sup>3</sup>Ý<sup>3</sup>»ñái©

- °ãĐ ĩ<sup>3</sup>Ç<sup>3</sup>Ú<sup>3</sup>áñ<sup>3</sup>Ç áð<sup>3</sup>Ó<sup>3</sup>óáo<sup>3</sup>Ú<sup>3</sup>ó<sup>3</sup>Á (ĩáo<sup>3</sup>·ñ<sup>3</sup>İ<sup>3</sup>İ<sup>3</sup> · · ĺĒ»İ<sup>3</sup>ñáo<sup>3</sup>Ý<sup>3</sup>Ú<sup>3</sup>ÇÝ<sup>3</sup> ěİ<sup>3</sup>İ<sup>3</sup>ẽ<sup>3</sup>İ<sup>3</sup>Ç Ó<sup>3</sup>·ái), áñ<sup>3</sup>Á  
Ý»ñ<sup>3</sup>éáo<sup>3</sup>Ù ĺ <sup>3</sup>Ù<sup>3</sup>÷<sup>3</sup>á÷<sup>3</sup> i»Õ»İ<sup>3</sup>ĩáo<sup>3</sup>Ā<sup>3</sup>úáo<sup>3</sup>Ý<sup>3</sup> Á<sup>3</sup>Ý<sup>3</sup>áo<sup>3</sup>Ý»Éáo<sup>3</sup>Ā<sup>3</sup>ú<sup>3</sup>Ý<sup>3</sup> <sup>3</sup>ã<sup>3</sup>Ú<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup>Ý<sup>3</sup>»ñ<sup>3</sup>Ç áð ĩ<sup>3</sup>-  
Ý<sup>3</sup>áÝ<sup>3</sup>Ý»ñ<sup>3</sup>Ç, <sup>3</sup>é<sup>3</sup>Ç<sup>3</sup>ñ<sup>3</sup>İáo<sup>3</sup> Û<sup>3</sup>ẽ<sup>3</sup>Ý<sup>3</sup>·Ç<sup>3</sup>İáo<sup>3</sup>Ā<sup>3</sup>úáo<sup>3</sup>Ý<sup>3</sup>»ñ<sup>3</sup>Ç, Á<sup>3</sup>ẽ<sup>3</sup> áðẽáo<sup>3</sup>ó<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup> Ó<sup>3</sup>·»ñ<sup>3</sup>Ç Á<sup>3</sup>Ý<sup>3</sup>áo<sup>3</sup>-  
Ý»Éáo<sup>3</sup>Ā<sup>3</sup>ú<sup>3</sup>Ý<sup>3</sup> <sup>3</sup>ã<sup>3</sup>÷<sup>3</sup>·<sup>3</sup>ù<sup>3</sup>Ý<sup>3</sup>İ<sup>3</sup>Ý<sup>3</sup>»ñ<sup>3</sup>Ç áð Û<sup>3</sup>ñáo<sup>3</sup>Ā<sup>3</sup>Ú<sup>3</sup>ÇÝ<sup>3</sup> <sup>3</sup>Ý<sup>3</sup>óáo<sup>3</sup>Ō<sup>3</sup>İ<sup>3</sup> óáo<sup>3</sup>ó<sup>3</sup>Ý<sup>3</sup>Ç<sup>3</sup>Ē<sup>3</sup>Ý<sup>3</sup>»ñ<sup>3</sup>Ç, Ç<sup>3</sup>Ý<sup>3</sup>ã<sup>3</sup>-  
ã<sup>3</sup>»ẽ<sup>3</sup> Ý<sup>3</sup>· · áðẽáo<sup>3</sup>óáo<sup>3</sup>Ú<sup>3</sup>Á ĩ<sup>3</sup>½<sup>3</sup>Ú<sup>3</sup>İ<sup>3</sup>»ñáo<sup>3</sup> ý<sup>3</sup>İáo<sup>3</sup>Ēi»i<sup>3</sup>Ý»ñ<sup>3</sup>Ç ĩ<sup>3</sup>ñ<sup>3</sup>μ<sup>3</sup>»ñ<sup>3</sup>Ú<sup>3</sup>É,
- <sup>3</sup>é<sup>3</sup>Ç<sup>3</sup>ÇÝ<sup>3</sup> İáo<sup>3</sup>ñ<sup>3</sup>ẽ<sup>3</sup>»ó<sup>3</sup>ÇÝ<sup>3</sup>»ñ<sup>3</sup>Ç i»Õ»İ<sup>3</sup>ĩ<sup>3</sup>İ<sup>3</sup>İ<sup>3</sup>Ý<sup>3</sup> ÷<sup>3</sup>Ā<sup>3</sup>»Ā<sup>3</sup>Á, áñ<sup>3</sup>Á <sup>3</sup>ã<sup>3</sup>ñáo<sup>3</sup>Ý<sup>3</sup>İáo<sup>3</sup>Ù ĺ <sup>3</sup>é<sup>3</sup>Ç<sup>3</sup>ÇÝ<sup>3</sup>  
İáo<sup>3</sup>ñ<sup>3</sup>ẽ<sup>3</sup>»óáo<sup>3</sup> áð<sup>3</sup>Ó<sup>3</sup>óáo<sup>3</sup>Ú<sup>3</sup>ó<sup>3</sup>Á, áðẽ<sup>3</sup>Ý<sup>3</sup>áo<sup>3</sup>Ç Ç<sup>3</sup>ñ<sup>3</sup>İáo<sup>3</sup>Ý<sup>3</sup>ù<sup>3</sup>Ý<sup>3</sup>»ñ<sup>3</sup>Ý áð <sup>3</sup>ã<sup>3</sup>ñ<sup>3</sup>İ<sup>3</sup>İ<sup>3</sup>Ý<sup>3</sup>áo<sup>3</sup>Ā<sup>3</sup>úáo<sup>3</sup>Ý<sup>3</sup>-  
Ý»ñ<sup>3</sup>Á, °ãĐ-Ç áðẽáo<sup>3</sup>Ù<sup>3</sup>Ý<sup>3</sup>İ<sup>3</sup>Ý<sup>3</sup> áð ĩ<sup>3</sup>ñáo<sup>3</sup>İ<sup>3</sup>Ý<sup>3</sup> ĩ<sup>3</sup>éáo<sup>3</sup>Ú<sup>3</sup>ó<sup>3</sup>Ý<sup>3</sup>»ñ<sup>3</sup>Ç Ý<sup>3</sup>İ<sup>3</sup>ñ<sup>3</sup>·ñáo<sup>3</sup>Ā<sup>3</sup>úáo<sup>3</sup>Ý<sup>3</sup>Á,  
Ú<sup>3</sup>ẽ<sup>3</sup>Ý<sup>3</sup>Ē<sup>3</sup>Ý<sup>3</sup>ù<sup>3</sup>»ñ<sup>3</sup>Ç ù<sup>3</sup>ñ<sup>3</sup>İ<sup>3</sup>»½<sup>3</sup>Á, Ē<sup>3</sup>ñ<sup>3</sup>Ç<sup>3</sup>Ý<sup>3</sup>İ<sup>3</sup>ñ<sup>3</sup>İ<sup>3</sup>Ý<sup>3</sup>»ñ<sup>3</sup>Ç · · ĩ<sup>3</sup>ñ<sup>3</sup>Ç»ñ<sup>3</sup>Ú<sup>3</sup>Ç ĩ<sup>3</sup>Ý<sup>3</sup>ñáo<sup>3</sup>Ý<sup>3</sup>Ç i»Õ»İ<sup>3</sup>·ñ<sup>3</sup>ñ<sup>3</sup>Á  
· · <sup>3</sup>Ù<sup>3</sup>Ē<sup>3</sup> Á»Ú<sup>3</sup>İ<sup>3</sup>Ç<sup>3</sup>İ<sup>3</sup> μáo<sup>3</sup>İ<sup>3</sup>Ē<sup>3</sup>»i<sup>3</sup>Ý<sup>3</sup>»ñ<sup>3</sup>,
- Ĩ<sup>3</sup>ñ<sup>3</sup>¹<sup>3</sup>Ç<sup>3</sup>İ<sup>3</sup>Ú<sup>3</sup>ÇÝ<sup>3</sup> Ñ<sup>3</sup>Ú<sup>3</sup>İ<sup>3</sup>ñ<sup>3</sup>·ái áðẽáo<sup>3</sup>Ù<sup>3</sup>Ý<sup>3</sup>éáo<sup>3</sup>Ā<sup>3</sup>ú<sup>3</sup>Ý<sup>3</sup> áð<sup>3</sup>Ó<sup>3</sup>óáo<sup>3</sup>Ú<sup>3</sup>ó<sup>3</sup>Ý<sup>3</sup>»ñ<sup>3</sup>Á · · ĩ<sup>3</sup>é<sup>3</sup>Á<sup>3</sup>Ý<sup>3</sup>Á<sup>3</sup>ó<sup>3</sup>Ý<sup>3</sup>»ñ<sup>3</sup>Ç  
i»Õ»İ<sup>3</sup>·ñ<sup>3</sup>ñ<sup>3</sup>ñ<sup>3</sup>Á μ<sup>3</sup>İ<sup>3</sup>İ<sup>3</sup>É<sup>3</sup>İ<sup>3</sup>ñ<sup>3</sup>Ç · · Û<sup>3</sup>·Ç<sup>3</sup>ẽ<sup>3</sup>İ<sup>3</sup>ñáo<sup>3</sup>Ç Ĩ<sup>3</sup>ñ<sup>3</sup>İ<sup>3</sup>Ý<sup>3</sup> Ĩ<sup>3</sup>ñ<sup>3</sup>·ñ<sup>3</sup>ái éái<sup>3</sup>ñáo<sup>3</sup> áðẽ<sup>3</sup>Ý<sup>3</sup>áo<sup>3</sup>Ý<sup>3</sup>»ñ<sup>3</sup>Ç  
Ñ<sup>3</sup>Ú<sup>3</sup>ñ<sup>3</sup>, áñáo<sup>3</sup>Ý<sup>3</sup>ù<sup>3</sup> <sup>3</sup>ã<sup>3</sup>ñáo<sup>3</sup>Ý<sup>3</sup>İáo<sup>3</sup>Ù »Ý<sup>3</sup> áðẽ<sup>3</sup>Ý<sup>3</sup>áo<sup>3</sup>Ý<sup>3</sup>»ñ<sup>3</sup>Ç áðẽáo<sup>3</sup>Ù<sup>3</sup>Ý<sup>3</sup>éáo<sup>3</sup>Ā<sup>3</sup>ú<sup>3</sup>Ý<sup>3</sup> Ñ<sup>3</sup>Ú<sup>3</sup>ñ<sup>3</sup>  
<sup>3</sup>Ý<sup>3</sup>Ń<sup>3</sup>ñ<sup>3</sup>Á<sup>3</sup>Ē<sup>3</sup>İ<sup>3</sup> i»Õ»İ<sup>3</sup>ĩáo<sup>3</sup>Ā<sup>3</sup>úáo<sup>3</sup>Ý<sup>3</sup>Á<sup>3</sup> Û<sup>3</sup>ẽ<sup>3</sup>Ý<sup>3</sup>íáo<sup>3</sup>ñ<sup>3</sup>ã<sup>3</sup>»ẽ<sup>3</sup> Ĩ<sup>3</sup>ñ<sup>3</sup>¹<sup>3</sup>Ç<sup>3</sup>İ<sup>3</sup>Ú<sup>3</sup>ÇÝ<sup>3</sup> Ñ<sup>3</sup>Ú<sup>3</sup>İ<sup>3</sup>ñ<sup>3</sup>·Ç

NÇÙÝ³ñáôÛÁÝ»ñÇ, áôëáôÙÝ³Ý ·.ánÍÁÝÃ³Ç İ³½Ù³İ»ñáÙ³Ý ..  
 ·Çİ»ÉÇùÝ»ñÇ ëiáô·Ù³Ý áô ·Ý³Ñ³Ù³Ý İñ·Ç, ³ë³ç³ñÍáÔ İñÃ³İ³Ý İñ³·ñ»ñÇ İ³-  
 éáôóóİùÇ, μáİ³Ý¹ÍáôÃÙ³Ý .. ³È³³İ³ÉÝ»ñÇ, Íñ³·ñÇ μ³Ôİ³óáôóÇã  
 ¹ëÁÝÃ³Ý»ñÇ .. ¹ñ³Ýóáí Ý³È³Ýİİ İñÃ³İ³Ý ³ñ¹ÙáôÝùÝ»ñÇ, μáİ³Ý¹ÍáôÃÙ³Ý  
 áô ³È³³Ã³Ù³ÝİÇ (İñ»¹ÇİÝ»ñÇ) í»ñ³μ»ñÙ³É,  
 - é»İiánÇ İ³ñ»İ³Ý Ññ³³ñ³İ³Í Ñ³İí»İiáôÃÙáôÝÁ, áñÁ Ý»ñ³éáôÙ ĸ ÇÝää»ë  
 Ñ³Ù³È³ñ³ÝÇ İ³ñ»İ³Ý ·.ánÍáôÝ»áôÃÙ³Ý í»ñ³μ»ñÙ³É Û³Ýñ³Ù³ëÝ İ»Ô»İ³-  
 İiáôÃÙáôÝÁ, ³ÙÝá»ë ĸÉ Ñ³Ù³È³ñ³ÝÇ ıÇÝ³Ýë³İ³Ý Ñ³İí»İiáôÃÙáôÝÁ

#### ¼ñ³İ³óáôÃÙáôÝÝ»ñ

²İÝÑ³Ùİ ĸ, áñ áÝ³ÙİÍ áñ³İÇ ³â³ÑáíÙ³Ý Ý»ñμáôÑ³İ³Ý Ñ³Ù³İ³ñ·Ç í»ñÁ ÝİİÍ ÛÇ  
 ß³ñù İ³éáôó³Ù³ë»ñÇ, ·.ánÍ³éÝáôÃÙáôÝÝ»ñÇ .. ÁÝÃ³ó³İ³ñ»ñÇ ³éİ³ÙáôÃÙ³ÝÁª áñ³İÇ ³â³-  
 ÑáíÙ³ÝÝ áôÔÔİÍ ÛÇÇáôÝ»ñÁ ·.ánÍáôÝ, İ³İ³Ý .. ÷áÈİ³â³İóİÍ Ñ³Ù³İ³ñ· ¹»ë»ë á»Ý İ³½-  
 ÛáôÙë ²Ù¹áÇëÇ Ñ³Ù³İ³ñ·Ç Ó³İánáôÙÁ Ñ³Ù³İ³ñ·İÍ ·.ánÍÁÝÃ³Ç .. áñ³İÇ Ý»ñùÇÝ Ûß³-  
 İáôÛÁÇ ³éİ³ÙáôÃÙáôÝ ĸ á³Ñ³ÝÇáôÙ .. áÇ İ³ñáÔ Ñ»Ýí»É ÛÇ³ÙÝ í»ñÁ Ýİİİ³·İİÍ İ³ññ»ñÇ  
 Û»È³ÝÇİİ³Ý Ñ³Ù³İóÙ³Ý İñ³ë Û»ñİ³ÙáôÙë ºáÐ-áôÙ (ÇÝää»ë Ý³· Ñ³Ýñ³â»İiáôÃÙ³Ý  
 ÛÙáôë μáôÑ»ñáôÙ) ÝÙ³Ý Ñ³Ù³İ³ñ·Ç ÉÇ³ñÃ»ù Ó³İánÙ³ÝÁ ÈááÁÝ¹áíáôÙ »Ý ÛÇ ß³ñù  
 ·.ánÍÁÝÝ»ñ, áñÁÝóÇó ³ë³çÝ³Ñ»ñÃ İ³ñ·áí İ³ñ»ÉÇ ĸ Ýß»É Ñ»İ³Ù³ÉÝ»ñÁ©

- áã μ³İ³ñ³ñ ÇÝëİÇİáôóÇáÝ³É (ýÇÝ³Ýë³İ³Ý, Û³ñ¹İ³ÙÇÝ .. ÝÙáôÃ³İ³Ý) İ³ñáÔáôÃÙáôÝÝ»ñ,
- áôë³ÝáÔÝ»ñÇ, ¹ë³ÈáëÝ»ñÇ .. ùÁ³Ý¹³İ áô İ³ñ³İ³Ý İ³½ÙÇ ßñÇ³ÝáôÙ áñ³İÇ Ý»ñùÇÝ Ûß³İáôÛÁÇ ¹»ë»ë áÔ³İánİÍ ¹ñë»·.ánáôÙÝ»ñ,
- áñ³İ³İánáôÙÝ»ñÇ ³½·³ÙÇÝ Ñ»ÝùÇ μ³ó³İ³ÙáôÃÙ³Ùμ á³Ù³Ý³İánİÍ İñ³·ñ³ÙÇÝ á³÷.ánáßÇáÝ»ñÇ ³Ýİ³İñáôÃÙáôÝ,
- áñ³İÇ ³â³ÑáíÙ³Ý ³ñİ³ùÇÝ Ñ³Ù³İ³ñ·Ç μ³ó³İ³ÙáôÃÙáôÝë

áñ³İÇ ³â³ÑáíÙ³Ý ³éİ³ Çñ³İÇ×³İÁ ÐäÖÐ-áôÙ ENQA ëİ³Ý¹³ñİÝ»ñÇ  
 İ»ë³ÝİİÙáôÝÇó

à© Ø³ñáôÈÙ³Ý, è© ²Ô·ßÙ³Ý (ÐäÖÐ)



V. Marukhyan, R. Aghgashyan (State Engineering University of Armenia)

*The concluding third part of the report includes the presentation of the connection between Inter and Outer Quality Assurance systems and the results of SEUA present situation.*

2<sup>6</sup>ḫCÝÝ Û3ḫáòÙ Ý»ñĭ3Ù3óááòÙ »Ý ʾÁÉÁÝC3ÙÇ .áñĭÁÝǺ3óÇ 10 ÑÇÙÝ3ÈÝ1ÇñÝ»-  
ñÁ, áñáÝó ß3ñùáòÙ ĭ Ý»ñ3ḫḫ1 áñ3ĭÇ 3á3NáŮ3ÝÝ ÈÝ1ÇñÁ 82ç1óááòÁÙáóÝ ʾmáá3ḫ3Ý  
Ñ3Ù3.áñĭ1óááòÁÙÝÁ áñ3ĭÇ .Ý3Ñ3Ů3ÝÝ 3ḫáñ»1/2áòÙ! Ó3ĭ»ñááòÙáĭ, ÇÝáá»è Ý3» áñ3ĭÇ  
Ý»ñùÇÝ 3á3NáŮ3ÝÝ (áÙ2) Ñ3Ù3ĭñ-Ç ENQA ḫḫ3Ý13ñŮÝ»ñÇ »É3ĭ1»ĭ3ÙÇÝ ḫĭ1/2áóÝùÝ»ñÁ£  
ñĭñáñ1 Û3ḫáòÙ ß3ñ3ñíáòÙ ĭ 1/2»íáòòÙ3Ý máóÝ ĭáóÁÙáóÝÁ 131/2áó ÿÙáóÁÁ,  
áñáĭ » á3ÙÙ3Ý3íáñĭĭ ĭ 1/2»íáòòÙ3Ý 1»ñÝ3.ÇñÁ£ ÛÙáóÁÇ Ý»ñĭ3Ù3óááòÙÝ Çñ3ĭÝ3óááòÙ ĭ  
Áḫĭ ENQA ḫḫ3Ý13ñŮÝ»ñÇ 7 ÑÇÙÝ3ĭÝ »É3ĭ1»ĭ3ÙÇÝ 13ḫáóó3Ù3ḫ»ñÇ Ýñ3ÝóÇó Ûáòñ3ùÝá-  
ÙáòñÇ Ñ3Ù3ñ á3Ná3Ý»Éáĭ Ñ»Ů1Ù3È 13ḫáóóĭñ3ÙÇÝ èÈ»Ù3Ý 13ḫáóó3Ù3ḫ ḫḫ3Ý13ñĭÇ  
Ý»ñĭ3Ù3óááòÙ, ĭŮÙ3È áóÒÒáóÁÙ3Ù (»ÝÁ3ÁÉáñĭ) ÐáÒÐ-áòÙ 3ḫĭ3 3ḫ3ÝÓÇÝ  
Ù»È3ÝÇ1/2ÙÝ»ñÇ ˆ ÛÇçáó3ḫáòÙÝ»ñÇ ÁĭñÁáòÙ, áñÇÝ Ñ»ĭáòÙ ĭ »ÝÁ3ÁÉáñĭÇ Ñ»ñ3.3  
μñ3»É3ĭ1ÙÝÝ áóÒÒĭĭ Ýáñ Û»È3ÝÇ1/2ÙÝ»ñÇ 1Ù »Ó3ĭÝ»ñÇ È3áñĭÙ3Ý 1ùÙÈ»ñÇ Áĭñ-  
íáòÙÈ3 éáòÙÝ Û3ḫáòÙ μ»ñíáòÙ »Ý Ý3» 3ḫ3çñíáòÁÙáóÝñ»ñ áÙ2-Ç 31ÙÇÇ3ḫñ3Çĭ-  
131/2Ù3ĭ1»ñáá3ḫ3Ý ÑÝ3ñ3íáñ 13ḫáóóĭñ3ÙÝ»ñÇ ˆ Ñ3Ù3á33ḫÈ3Ý ĭ»Ò13ĭ3ĭ3Ý ˆ 13ḫ3ññÙ3Ý  
Ñáèù»ñÇ ÷áÈ3Ý3ĭÙ3Ý èÈ»Ù3Ý»ñÇ 1»ñ3μ»ñÙ3È£

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¼»İáóòÙ³Ý »½ñ³÷İÇā` »ññáñ¹ μ³ÁÇÝÁ Ý»ñ³éáòÙ ĺ áñ³İÇ Ý»ñùÇÝ ·ñ³ùÇÝ ·Ý³Ñ³İ³Ý Ñ³Ù³İ³ñ»ñÇ ÛÇç` ÷áĒ³ñÓ ĬáÇ Ý»ñİ³Ù³óáòÙÁ · ĐäÖĐ ³éİ³ Çñ³İÇ×³İÇ ³Ù÷á÷Ù³Ý ³ñ¹ÙáòÝùÝ»ñÁĒ

## 2. 'áÉáÝÇ³ÙÇ ÑÇÙÝ³ĒÝ¹ÇñÝ»ñÁ · áñ³İÇ ³á³ÑáíÙ³Ý Ē³Ý¹³ñİÝ»ñÁ

'áÉáÝÇ³ÙÇ Ñéá³İ³·ÇñÁ · Ýñ³Ý Ñ³çáñ¹İ ·áñÍÁÝÁ³óÁ, áñái á³ÙÙ³Ý³íáíáòÙ »Ý °íñáá³ÙáòÙ í»ñçÇÝ Ĭ³ēÝ³ÙÙ³İáòÙ Çñ³İ³Ý³óíáÖ μ³ñÓñ³·áòÙÝ ĬñÁ³İ³Ý é»ýánÙÝ»ñÁ` Ýá³İ³İáòÖÖİ³İ °İ-Ç Ó³íáñÙ³ÝÁ, á³ñáóÝ³İáòÙ »Ý Ñ»İ³Ù³É Ĭ³ēÁ ÑÇÙÝ³ĒÝ¹ÇñÝ»ñÁ.

1. »ÚáòñÁÝÁ»éÝ»ĒÇ · Ñ³Ù»Ù³İ»ĒÇ áñ³İ³íáñáòÙÝ»ñÇ Ñ³Ù³İ³ñ·Ç ÁÝ¹áóÝáòÙ:
2. ²ÝóáòÙ μ³ñÓñ³·áòÙÝ ĬñÁáòĀÙ³Ý »ñİ³ēİÇ×³Ý Ñ³Ù³İ³ñ·Ç:
3. Ĭñ»¹ÇİÝ»ñÇ ÁÝ¹Ñ³Ýáòñ Ñ³Ù³İ³ñ·Ç ÑÇÙÝáòÙ (ECTS):
4. ØÇç³½·³ÙÇÝ Ñ³ñÁáòÝ³İáòĀÙ³ÝÁ Ýá³ēíáòÙ:
5. ²ç³İóáòĀÙáòÝ »íñáá³İ³Ý Ñ³Ù³·áñİ³İóáòĀÙ³ÝÁ áñ³İÇ ·Ý³Ñ³İ³Ù³Ý ³ēá³ñ»½áòÙ:
6. ²ç³İóáòĀÙáòÝ »íñáá³İ³Ý á³÷³ÙÝáòĀÙ³Ý Ý»ñ¹ñÙ³ÝÁ μ³ñÓñ³·áòÙÝ ĬñÁáòĀÙ³Ý ³ēá³ñ»½áòÙ, Ñ³Ù³İ³»Ö Ĭñ³·ñ»ñÇ Ý»ñÙáòİáòÙ:
7. Đñ³İ³` áòēáòÙÝ³éáòĀÙáòÝ (Life Long Learning):
8. 'áòÑ-áòē³ÝáÖ ÷áĒ³½¹»óáòĀÙáòÝ:
9. Ûá³ēíáòÙ °İ ·ñ³íáòĀÙ³ÝÁ:
10. áİíáñ³İ³Ý Ĭñ³·ÇñÁ (³ēáÇñ³Ýíáòñ³Ý) áñá»ē 'áÉáÝÇ³ÙÇ 3-ñ¹ ³ēİÇ×³Ý, °İ · °Đİ Ý»ñ¹³İ³ÝİáòÙ:

ĐÇÝ»ñáñ¹ Ĭ»íái Ñéá³İ³İ áñ³İÇ ·Ý³Ñ³İ³Ù³Ý ³ēá³ñ»½áòÙ »íñáá³İ³Ý Ñ³·Ù³·áñİ³İóáòĀÙ³ÝÝ ²ç³İóÙ³Ý á³ñ³íáñáòĀÙáòÝÝ Çñ ·áñİÝ³İ³Ý ³ñ³Ñ³ÙíáòĀÙáòÝÁ ·İ³ 2005Ā© 'ñ»·ÝáòÙ 'áÉáÝÇ³ÙÇ ·áñÍÁÝÁ³óÇÝ Û³ēÝ³İÇó »ñİñÝ»ñÇ ·ÇíáòĀÙ³Ý · ĬñÁáòĀÙ³Ý Ý³Ē³ñ³ñÝ»ñÇ ĬáÖÙÇó ÁÝ¹áòÝİ³İ ÷³ēİ³ĀÖÁí, áñáòÙ ĬñİÇÝ Ĭ³ñ·áñİ»ó μ³ñÓñ³·áòÙÝ áòēáòÙÝ³İ³Ý Ñ³ēİ³íáòĀÙáòÝÝ»ñáòÙ ĬñÁáòĀÙ³Ý áñ³İÇ Ñ»İ³·³ μ³ñÓñ³·óáòÙÁ, ÇÝáá»ē Ý³· »íñáá³İ³Ý Ē³Ý¹³ñİÝ»ñÇÝ Ñ³Ù³á³İ³ēĒ³Ý áñ³İÇ ³ñ³ùÇÝ ·Ý³Ñ³İ³Ù³Ý ³á³ÑáíáòÙÁ, · ÁÝ¹áòÝİ»ó áñ³İÇ ·Ý³Ñ³İ³Ù³Ý · ³á³ÑáíÙ³Ý Ñ³Ù³İ³ñ·Ç μáÉáñ »ñ»ù Û³İ³ñ¹İ³Ý»ñÇ Ē³Ý¹³ñİÝ»ñÁ Ýİ³ñ³·ñáÖ áòÖ»óáòÙó¹Ē ēáòÙÝ áòÖ»óáòÙóÇ Ñ³Ù³Ó³ÙÝ, **ENQA Ē³Ý¹³ñİÝ»ñÇ »Ē³İ»İ³ÙÇÝ ēİ³½μáòÝùÝ»ñÝ »Ý©**

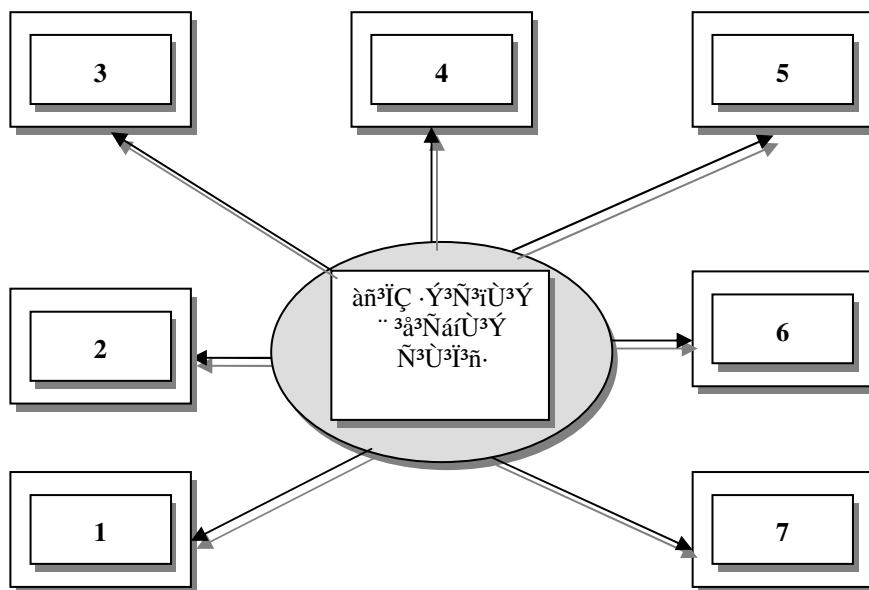
- μáòÑ»ñÝ »Ý ĬñáòÙ ³ēçÝ³ÙÇÝ á³İ³ēĒ³ÝíáòĀÙáòÝ μ³ñÓñ³·áòÙÝ ĬñÁáòĀ·Ù³Ý Çñ³İ³Ý³óÙ³Ý · áñ³İÇ Ñ³Ù³ñ,
- μáòÑ»ñÁ Ñ³İí»íáò »Ý Çñ»Ýó áòē³ÝáÖÝ»ñÇ, ·áñİ³íáòÝ»ñÇ · ýÇÝ³Ýē³íáñáÖ·Ý»ñÇ (İ³ēİ³ñáòĀÙáòÝ, ÑÇÙÝ³¹ÇñÝ»ñ, ÑÇÙÝ³¹ñ³ÙÝ»ñ · ³ÜĒÝ) ³éç· Çñ³·İ³Ý³óíáÖ ĬñÁáòĀÙ³Ý áñ³İÇ ³á³ÑáíÙ³Ý Ñ³Ù³ñ,
- μáòÑ»ñÁ á»íù ĺ Ĭ³ñáÖ³ÝÝ Ñ³İ³ēİ»É Çñ»Ýó ĬñÁáòĀÙ³Ý áñ³İÁ »ñİñáòÙ · ÛÇç³½·³ÙÝáñ»Ý,
- ĬñÁ³İ³Ý Ĭñ³·ñ»ñÇ áñ³İÁ °İ-áòÙ á»íù ĺ μ³ñ»É³İÇ · μ³ñÓñ³Ý³· áòē³ÝáÖÝ»ñÇ · μ³ñÓñ³·áòÙÝ ĬñÁáòĀÙ³Ý ÛÙáòē Ñ³ñ»İÇóÝ»ñÇ ēá³ē»ĒÇùÝ»ñÇÝ Ñ³Ù³ÑáóÝáĒ

## 3. áñ³İÇ ³á³ÑáíÙ³Ý Ý»ñÑ³Ù³Ēē³ñ³Ý³İ³Ý Ñ³Ù³İ³ñ·Ç Ĭññ»ñÁ

ēíáñ` μ»ñíáòÙ ĺ áñ³İÇ ³á³ÑáíÙ³Ý Ý»ñμáòÑ³İ³Ý Ñ³Ù³İ³ñ·Ç ÁÝ¹Ñ³Ýáòñ ēĒ»Ù³Ý ÑÇÙÝİ³İ ENQA Ē³Ý¹³ñíái Ý³Ē³»ēİ³İ §¹³ē³İ³Ý¹ Ĭñμ»ñ³İÇ Ĭñ³ Çñ Ñ³ÙİÝÇ ÛáĀ μ³Ö³ñÇā Ĭ³éáòó³Ù³ē»ñáİĒ »ñİ³İ ēĒÙ³Ý ³ñÁ·áñíáòÙ ĺ, ĐäÖĐ-Ç ÷áñÓÇ Ĭ»ē³ÝİÙáòÝÇó· ÝĬ»Éái

<sup>1</sup> Standards and Guidelines for Quality Assurance in the European Higher Education Area. ENQA, Helsinki, 2007. 38p (2<sup>nd</sup> edition).

$\mu^3\tilde{O}^3\tilde{n}\tilde{C}\tilde{a}\tilde{Y}\gg\tilde{n}\tilde{C}\tilde{C}\tilde{n}^3\tilde{I}^3\tilde{Y}^3\tilde{O}^3\tilde{U}^3\tilde{Y}^3$  áðÖÖíí  $\tilde{n}^1\gg\tilde{Y}^3\tilde{e}\tilde{I}^3\tilde{\cdot}\tilde{\cdot}\tilde{Y}^3\tilde{E}^3\tilde{i}\gg\tilde{e}\tilde{i}\tilde{a}\tilde{O}\tilde{\cdot}\tilde{Y}\tilde{a}\tilde{n}\tilde{\cdot}\tilde{I}^3\tilde{U}^3\tilde{I}^3\tilde{n}\gg\tilde{E}^3\tilde{a}\tilde{n}\tilde{I}^3\tilde{U}^3\tilde{Y}^3$   
 $\gg\tilde{Y}\tilde{A}^3\tilde{I}^3\tilde{\cdot}\tilde{U}^3\tilde{C}\tilde{a}\tilde{o}^3\tilde{e}\tilde{a}\tilde{o}\tilde{U}^3\tilde{\cdot}\tilde{a}\tilde{n}\tilde{I}^3\tilde{e}\tilde{a}\tilde{o}\tilde{U}^3\tilde{A}^3\tilde{Y}\gg\tilde{n}\tilde{A}\tilde{E}$



1. àñ³İÇ ³ā³ÑáfÜ³Ý é³½Ü³İ³ñáðÃÜáðÝ/ù³Ö³ù³İ³ÝáðÃÜáðÝ · ¹ñ³ Ñ³İ İ³áfİ ÁÝÃ³ó³İ³ñ·»ñ áð ã³÷ánáðÇäÝ»ñ:
2. İñ³·ñ»ñÇ · áñ³İ³íáñáðÜÝ»ñÇ Ñ³ë³İÜ³Ý, ā³ñμ»ñ³İ³Ý í»ñ³Ý³ÜÜ³Ý · ÜáÝÇÃñÇÝ·Ç Ñ³ë³İ³İ Ü»Ë³ÝÇ½ÜÝ»ñ:
3. àðë³ÝáðÝ»ñÇ ·Ý³Ñ³İÜ³Ý Ñ³İ·áð³İÝáñ»Ý İÇñ³éíáð · Ññ³ā³ñ³İ³İ ã³÷³ÝÇßÝ»ñ, İ³ÝáÝ³İ³ñ·»ñ · ÁÝÃ³ó³İ³ñ·»ñ:
4. ³ë³ËáëÝ»ñÇ İñ³áðáðÃÜáðÝ»ñÇ ·Ý³Ñ³İÜ³Ý Ã³÷³ÝóÇİ Ü»Ë³ÝÇ½ÜÝ»ñ · ã³÷³ÝÇßÝ»ñ:
5. İñÃ³İ³Ý İñ³·ñ»ñÇ ā³Ñ³ÝÇÝ»ñÇÝ Ñ³Ü³ñÃ»ù áðëáðÜÝ³İ³Ý · ³ÜË ³Çİóáð é»ëáðñëÝ»ñ:
6. àðëáðÜÝ³İ³Ý ·ánÍÁÝÃ³óÇ ³ñ¹ÜáðÝ³İ»İ İ³ë³İ³ñÜ³Ý Ñ³Ü³ñ ā³İß× İ»Ö»İ³íáðÃÜ³Ý Ñ³İ³úáðÜ, í»ñÉáðÍáðÜ · ù·İ·ánÍáðÜ:
7. İñ³·ñ»ñÇ · ßÝánÑíáð áñ³İ³íáñáðÜÝ»ñÇ í»ñ³μ»ñÜ³Ë Üßİ³ā»ë Ýán³óíáð, ³Ý³ā³é · ùμÜ»İÇİ í»Ö»İ³íáðÃÜ³Ý ā³ñμ»ñ³İ³Ý Ññ³ā³ñ³ÍáðÜ:

### 3.1. àñ³İÇ ³ā³ÑáfÜ³Ý ù³Ö³ù³İ³ÝáðÃÜáðÝ · ÁÝÃ³ó³İ³ñ·»ñ

ë³Ý¹³ññ àðëáðÜÝ³İ³Ý Ñ³ë³İáðÃÜáðÝ»ñÁ á»ù ÿ áðÝ»Ý³Ý àñ³İÇ ³ā³ÑáfÜ³Ý ù³Ö³ù³İ³ÝáðÃÜáðÝ · Ñ³Ü³ā³İ³ë³Ý ÁÝÃ³ó³İ³ñ·»ñ · Çñ»Ýó İñ³·ñ»ñÇ áð Ñ³İ³ë³·ñ»ñÇ ë³Ý¹³ññİ»ñÉ Æñ»Ýó ßË³ÝÝáððÜ Ýñ³Ýù á»ù ÿ ÉÇáíÇÝ ÝíÇñİ»Ý àñ³İÇ İñ³·ánáðÃÜ³Ý · àñ³İÇ ³ā³ÑáfÜ³Ý ×³Ý³áÜ³Ý Üß³ÍáðÜÃÇ ½³ñ·³óÜ³ÝÁÉ ñ³Ý Ñ³ëÝ»Éáð Ñ³Ü³ñ áðëáðÜÝ³İ³Ý Ñ³ë³İáðÃÜáðÝ»ñÁ á»ù ÿ Üß³İ»Ý · İÇñ³é»Ý àñ³İÇ Üßİ³İ³Ý μ³ñ»É³İÜ³Ý é³½Ü³İ³ñáðÃÜáðÝÉ é³½Ü³İ³ñáðÃÜáðÝÁ, ù³Ö³ù³İ³ÝáðÃÜáðÝÁ · ÁÝÃ³ó³İ³ñ·»ñÁ á»ù ÿ áðÝ»Ý³Ý ā³İáÝ³İ³Ý İñ³·İÇ×³İ · ÉÇÝ»Ý Ñ³ë³Ý»ÉÇÉ Üñ³Ýù á»ù ÿ ¹ñ Ñ³İ³óÝ»Ý áðë³ÝáðÝ»ñÇÝ · ³ÜË ß³Ñ³·ñ·Ç é ÍáðÜ»ñÇÝÉ

#### ²éİ³»Ý

- ÐäÖÐ ëİñ³İ»·Ç³İ³Ý áÉ³ÝÇó μËáð àñ³İÇ ³ā³ÑáfÜ³Ý é³½Ü³İ³ñ³İ³Ý Ñ³Ü»ó³İ³ñ·,
- İñÃáðÃÜ³Ý àñ³İÇ ³ā³ÑáfáðÜ áðëáðóÜ³Ý ·ánÍÁÝÃ³óÇ ³ë³ÝÓÇÝ μ³Ö³¹ñÇä-

Ý»ñÇ·Ý³Ñ³Ù³Ùµ,

- ³³ñ³Ý³Ý ³È³³Ý³Ý»ñÇ ³ñ³ùÇÝ ÷ñÓ³ùÝÝáôÃÙáôÝ · ãñ³Ý³íáñáôÙÝ»ñÇ ßÝáñÑáôÙ ³ñ³ùÇÝ ÷ñÓ³.»Ý»ñÇ Ù³ëÝ³ÍóáôÃÙ³Ùµ£

#### Û³È³»ëíáôÙ »Ý

- áñ³Ý³íáñáôÙÝ ë³Ý¹³ñ³Ç ³á³ÑáíáôÙ ì»ñÇÝ³Ý³Ý ³ñ¹ÙáôÝùÇ·Ý³Ñ³Ù³Ùµ,
- áñ³Ý³íáñáôÙÝ»ñÇ ßÝáñÑáôÙ ³ñ³ùÇÝ ÷ñÓ³.»Ý»ñÇ áñáßÇ Ù³ëÝ³ÍóáôÃÙ³Ùµ,
- Í»ÝíáÝ³ó³Í Í³ë³³ñáôÙ, ³á³Í»ÝíáÝ³ó³Í Çñ³Ý³óáôÙª áñ³ÍÇ ³ÝÍÙ³Ý ÉáÍÉ éÇëÍ»ñÇÝ Ñ³Ù»Ù³Ý³Ý ÙÇÇ³ÙíáôÃÙ³Ùµ,
- áôë³ÝáÔÝ»ñÇ · ·áñÍ³íáôÝ»ñÇ µ³³ñ³ñ³ÍáôÃÙ³Ý Ù³³Ý³Ý ÙáÝÇÃáñÇÝ·£

### 3.2. Íñ³³Ý Íñ³·ñ»ñÇ · ·áñ³Ý³íáñáôÙÝ»ñÇ Ñ³ë³íáôÙ, ÙáÝÇÃáñÇÝ· · ·á³ñµ»ñ³Ý³Ý ëíáô·áôÙÝ»ñ

ë³Ý¹³ñ. Íñ³³Ý Ñ³ë³íáôÃÙáôÝÝ»ñÁ á»ì ÿ áôÝ»Ý³Ý Çñ»Ýó Íñ³·ñ»ñÇ · · Ñ³³ë³·ñ»ñÇ Ñ³ë³íáôÙÝ, á³ñµ»ñ³Ý³Ý ëíáô·áôÙÝ»ñÇ · · ÙáÝÇÃáñÇÝ·Ç á³ßíáÝ³Ý Ù»È³ÝÇ½ÙÝ»ñ£

#### ²ë³ »Ý

- á»³³Ý³Ý Íñ³³Ý á³÷áñáßÇÝ»ñÇÝ Ñ³Ù³ÑáôÝá áôëáôÙÝ³Ý³Ý áÉ³ÝÝ»ñÇ Í³½ÙáôÙ,
- Ý»ñùÇÝ Ý³ÈÝ³Ý³Ý ÙáÝÇÃáñÇÝ·Ç Í³½Ù³Í»ñááôÙ,
- áôëáôÙÝ³Ý³Ý áÉ³ÝÝ»ñÇ ³ñ³ùÇÝ ÷ñÓ³ùÝÝáôÃÙ³Ý Í³½Ù³Í»ñááôÙ,
- ³ñ³ùÇÝ ÷ñÓ³ùÝÝáôÃÙ³Ý ³ñ¹ÙáôÝùÝ»ñÇ ³Ù÷á÷áôÙ · · áÉ³ÝÝ»ñÇ ×ß·ñíáôÙ,
- áôëáôÙÝ³Ý³Ý áÉ³ÝÝ»ñÇ Ñ³ë³íáôÙ ÐáÖÐ·Ç³³Ý ÉáñÑñ¹Ç ÉáÖá³Íáí,
- ³ë³ñÍ³Ù³Ý Íñ³·ñ»ñÇ Í³½ÙáôÙ · · Ñ³ë³íáôÙ ¹»á³ñ³Ù»Ý³Ý»ñÇ · · Ñ³Ù³ñ·áÔ áñáé»ÍíáñÝ»ñÇ ÍáÖÙÇó£

#### Û³È³»ëíáôÙ »Ý

- Ñ³Ù³Éë³ñ³Ý³Ý ÙÇÇ³ëÝ³Ý³Ý ë³Ý¹³ñ³Ç Ý»ñÙáôÍáôÙ §Ù³ëÝ³·ÇíáôÃÙ³Ý ÃÖÃ·á³Ý³Í·Ç Ó·³íáñÙ³Ý ÙÇÇáóáí,
- áôëáôÙÝ³Ý³Ý Íñ³·ñ»ñÇ ³ñ³ùÇÝ ÷ñÓ³ùÝÝáôÃÙ³Ý áôÃ»Ö³áôÙ · · ¹ñ³ó Ñ»³³ á³ñµ»ñ³Ý³Ý ÙáÝÇÃáñÇÝ·,
- áôë³ÝáÔÝ»ñÇ µ³³ñ³ñ³ÍáôÃÙ³Ý ·Ý³Ñ³íáôÙ Ù³íáôóíáÔ ÍñÃáôÃÙ³Ý ÁÝÃ³óúáí · · ³ñ¹ÙáôÝùÝ»ñáí,
- ·Ç³Ñ»³³á³³Ý³Ý ³È³³Ý³Ý»ñáôÙ Ó»èù µ»ñ³Í ³ñ¹ÙáôÝùÝ»ñÇ ÁÝ¹·ñíáôÙ áôëáôÙÝ³Ý³Ý Íñ³·ñ»ñáôÙ,
- Ù³ëÝ³·ÇíáôÃÙáôÝÝ»ñÇ ó³ÝÍÇ Éáßáñ³óáôÙ áôÝÇÝÇÍ³ó³Í · · á³Ñ³ÝÇ³ñÍ³Í áôëáôÙÝ³Ý³Ý Íñ³·ñ»ñÇ Ñ»ÝùÇ íñ³,
- áôëáôÙÝ³Ý³Ý áÉ³ÝÝ»ñÇ · · Íñ³·ñ»ñÇ Í³éáôóÙ³Ý Ùá¹áôÉ³ÙÇÝ ëÍ½µáôÝùÇ ÍÇ·ñ³éáôÙ£

### 3.3. áôë³ÝáÔÝ»ñÇ·Ç³»ÉÇùÝ»ñÇ·Ý³Ñ³íáôÙ

ë³Ý¹³ñ. áôë³ÝáÔÝ»ñÁ á»ì ÿ ·Ý³Ñ³í»Ý Ññ³á³ñ³Í³Í · · ÷á÷Ñ³Ù³Ó³ÙÝ»ó³Í ÍÇñ³éíáÔ á³÷ÝÇßÝ»ñÇ, Í³ÝáÝ³ñ·»ñÇ · · ÁÝÃ³ó³ñ·»ñÇ ÙÇÇáóáí£

#### ²ë³ »Ý

- ³ë³³¹Ç ÙáôÃÙ³Ý ·Ý³Ñ³íáôÙ ÙÇÇ³ëÝ³Ý³Ý é»Ù³ÇÝ·³ÙÇÝ Ñ³Ù³Íñ· µáÉáñ Íñ³³Ý Íñ³·ñ»ñÇ Ñ³Ù³ñ,
- ÁÝÃ³óÇÍ ÙáÝÇÃáñÇÝ· ÙÇÇ³ÝÍÙ³É ³»ë³íáñáôÙÝ»ñÇ · · ÁÝÃ³óÇÍ ùÝÝáôÃÙáôÝÝ»ñÇ ÙÇÇáóáí,



### Ü³Ê³»ëíáòÙ »Ý

- áðëáòÙÝ³Í³Ý Íñ³·ñ»ñÇ ³ÝÑñ³Á»ßí ë»ëáðñë³ÙÇÝ ³á³Ñáí³íáòÃÙ³Ý ë³ÑÙ³Ý³Í á³Ñ³ÝÇÝ»ñ,
- ¿É»íñáÝ³ÙÇÝ í»ËÝáÉá·Ç³Í³Ý ÑÝ³íáñáòÃÙáòÝÝ»ñáí ùÁí³Í Éë³ñ³ÝÝ»ñÇ Ñ³Ù³ÉÇñ ó³Ýó,
- íÇñíáò³É É³µáñ³íáñÇ³Ý»ñÇ Ùß³ÍÙ³Ý · Ý»ñ¹ñÙ³Ý ³×áÕ Ù³ëÝ³µ³ÁÇÝ,
- áðë³ÝáÕÝ»ñÇ áðëáòÙÝ³Í³Ý ÉáñÑñ¹³íáòÝ»ñÇ Ó³íáñ³Í ÇÝëíÇíáòíÇ ³ëí-ÙáòÃÙáòÝ,
- ³ëí³ ¿É»íñáÝ³ÙÇÝ áðëáòÙÝ³Ù»Ãá¹³Í³Ý ÝÙáòÃ»ñÇ µ³ñÓñ Ñ³ë³Ý»ÉÇáòÃÙ³Ý ³á³ÑáíáòÙ ÐäÕÐ Ì³ÙñÇ ÙÇÇáóáíí

### **3.6. Ü»ñùÇÝ áðëáòÙÝ³í»ñÉáòí³Ý í»Õ»í³íáòÃÙ³Ý ³á³ÑáíáòÙ**

ë³Ý¹³ñí. áðëáòÙÝ³Í³Ý Ñ³ëí³íáòÃÙáòÝÝ»ñÁ á»íù ¿ »ñ³ßÉ³íáñ»Ý áðëáòÙÝ³Í³Ý Íñ³·ñ»ñÇ ¿Ý»íÇí Ì³ë³íñÙ³Ý · ³ÙÉ ·áñíáòÝ»áòÃÙ³Ý Ñ³Ù³ñ ³ÝÑñ³Á»ßí í»Õ»í³íáòÃÙ³Ý Ñ³í³ùÁ, í»ñÉáòíáòÙÁ · ù·í³·áñíáòÙÁí

#### ²ëí³ »Ý

- áðë³ÝáÕÝ»ñÇ ÁÝÁ³óÇí · ÍÇë³ÙÙ³Í³ÙÇÝ ³ë³Ç³¹ÇÙáòÃÙ³Ý í»ñ³µ»ñÙ³É í»Õ»-í³íáòÃÙ³Ý á³ñµ»ñ³Í³Ý Ñ³í³ùáòÙ · Ùß³íáòÙ,
- ·Ç³Í³Ý ÉáñÑñ¹Ç, ë»íñáñ³Ç · ¹»á³ñ³Ù»ÝíÝ»ñÇ Ù³í³ñ¹³ÍÝ»ñáí ÙÇÇ³ÝíÙ³É, ùÝÝ³ßñÇ³Ý³ÙÇÝ · ³³ñ³í³Ý ³ñ¹ÙáòÝùÝ»ñÇ Ù³Ýñ³íñíÇ í»ñÉáòíáòÃÙáòÝÝ»ñ,
- áðë³ÝáÕÝ³Í³Ý Ñ³Ù³í³¹²ÙÇ · Ýñ³ ß³ñÁÇ í»ñ³µ»ñÙ³É ííÙ³ÉÝ»ñÇ á³ñµ»ñ³Í³Ý Ñ³í³ù³·ñáòÙ · í»ñÉáòíáòÃÙáòÝ:
- Ù³ëÝ³íÇáñ»Ý ÍÇñ³éíáÕ í»Õ»í³í³Í³Ý ¿É»íñáÝ³ÙÇÝ §áðë³ÝáÕ!, §íñ³ÝóáòÙ ¹³ëÁÝÁ³óÝ»ñÇÝ! · §²ë³Ç³¹ÇÙáòÃÙ³Ý Ñ³í³ëáòÙ! Ñ³Ù³í³·»ñí

### Ü³Ê³»ëíáòÙ »Ý

- áðëáòÙÝ³Í³Ý ·áñíÁÝÁ³óÇ Í³ë³íñÙ³Ý ÙÇ³ëÝ³Í³Ý í»Õ»í³í³Í³Ý í»ËÝáÉá·Ç³Í³Ý Ñ»Ýù,
- í»Õ»í³í³Í³Ý-í»ñÉáòí³Í³Ý ¿É»íñáÝ³ÙÇÝ Ñ³Ù³í³ñ· Ñ³Ù³Éë³ñ³ÝÇ ·áñíáò-Ý»áòÃÙ³Ý í³ñµ»ñ µÝ³·³ëÝ»ñÇ í»ñ³µ»ñÙ³É µ³¹²Ù³Ý³íáñ³ÙÇÝ Ñ³í³¹²á-íáòÃÙ³Ý · »ñ³ßÉ³íáñáòÃÙáòÝÝ»ñÇ Ó³íáñ³Ý Ñ³Ù³ñí

### **3.7. Ð³ë³í³ÍÙÝáòÃÙ³ÝÝ áðÕÕí³í ³ñ³ùÇÝ í»Õ»í³íáòÃÙáòÝ**

ë³Ý¹³ñí. áðëáòÙÝ³Í³Ý Ñ³ëí³íáòÃÙáòÝÝ»ñÁ á»íù ¿ á³ñµ»ñ³µñ Ññ³á³ñ³í»Ý Á³ñÙ, ³ÝíáòÙÝ³Í³É · ùµÙ»íÇí í»Õ»í³íáòÃÙáòÝ (ù³Ý³í³Í³Ý · áñ³í³Í³Ý) Çñ»Ýó íáòÙÇó ³ë³Ç³ñíáò Íñ³·ñ»ñÇ · áñ³í³íáòÙÝ»ñÇ í»ñ³µ»ñÙ³Éí

#### ²ëí³ »Ý

- Ù³ëÝ³·ÇíáòÃÙáòÝÝ»ñÇ, ÁÝ¹áòÝ»ÉáòÃÙ³Ý ³ë³ÝÓÝ³óí³í á³÷³ù³Ý³ÍÝ»ñÇ · á³ÙÙ³ÝÝ»ñÇ ³Ù»Ý³ÙÙ³ Ññ³á³ñ³íáòÙÝ»ñ,
- áá µ³í³ñ³ñ á³ñµ»ñ³Í³ÝáòÃÙ³Ùµ Ññ³í³ñííáÕ í³íÉá·Ý»ñ · ³ÙÉ ·áí³¹²¹ÙÇÝ-í»Õ»í³í³Í³Ý ÝÙáòÃ»ñ· ÐäÕÐ-Ç · Ýñ³ ³ë³ÝÓÇÝ ¹»á³ñ³Ù»ÝíÝ»ñÇ í»ñ³µ»ñÙ³É,
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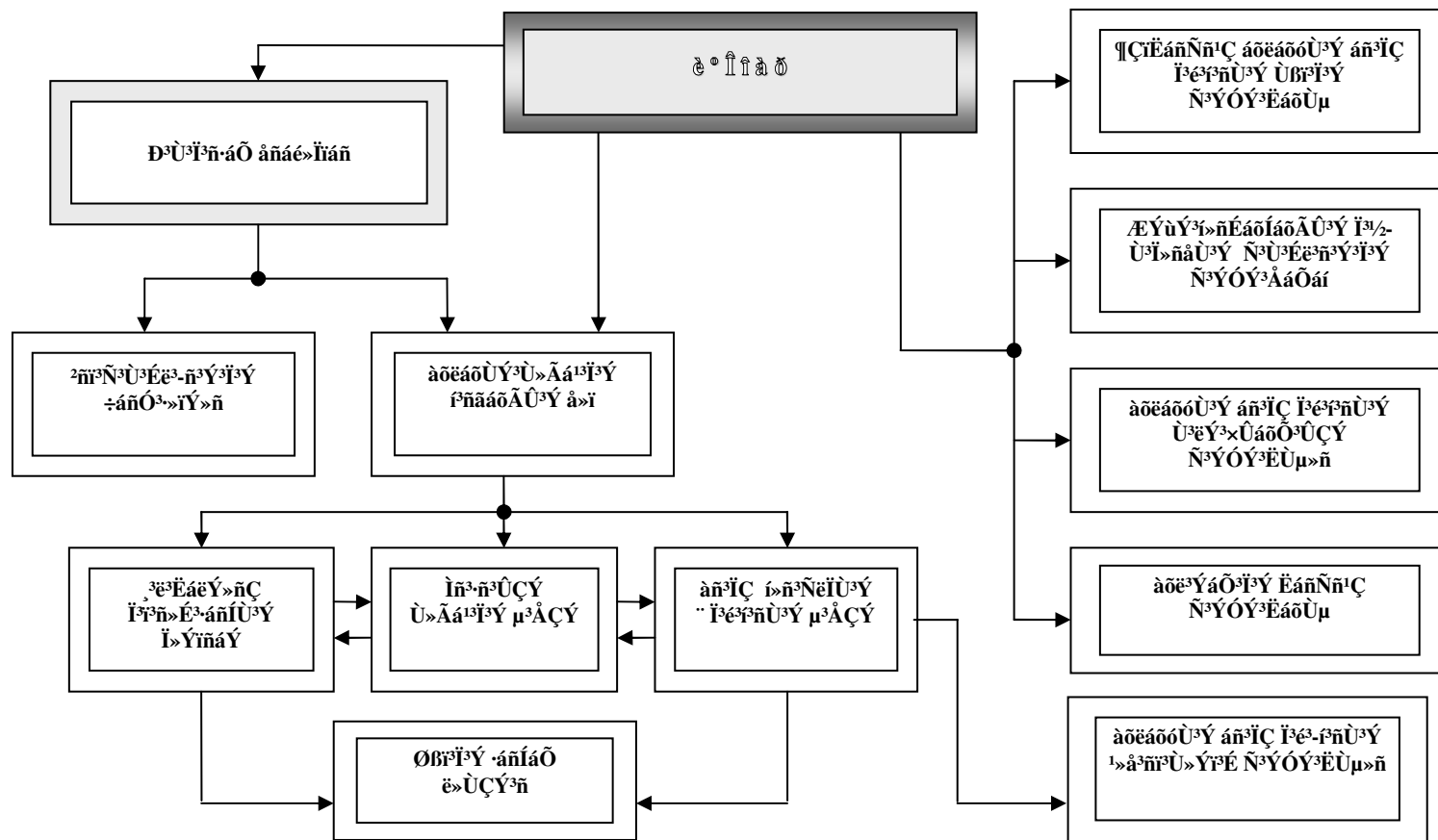
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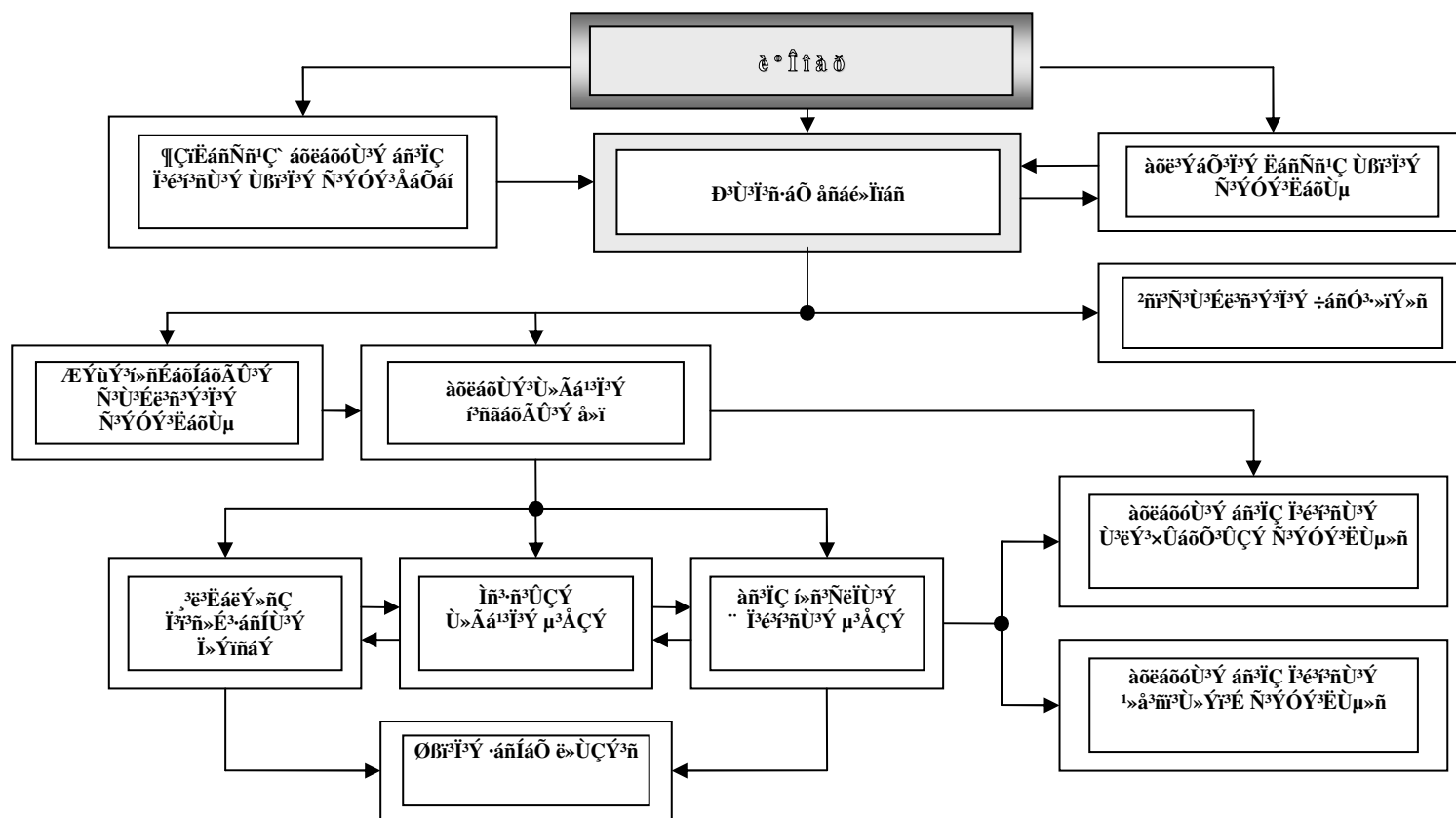


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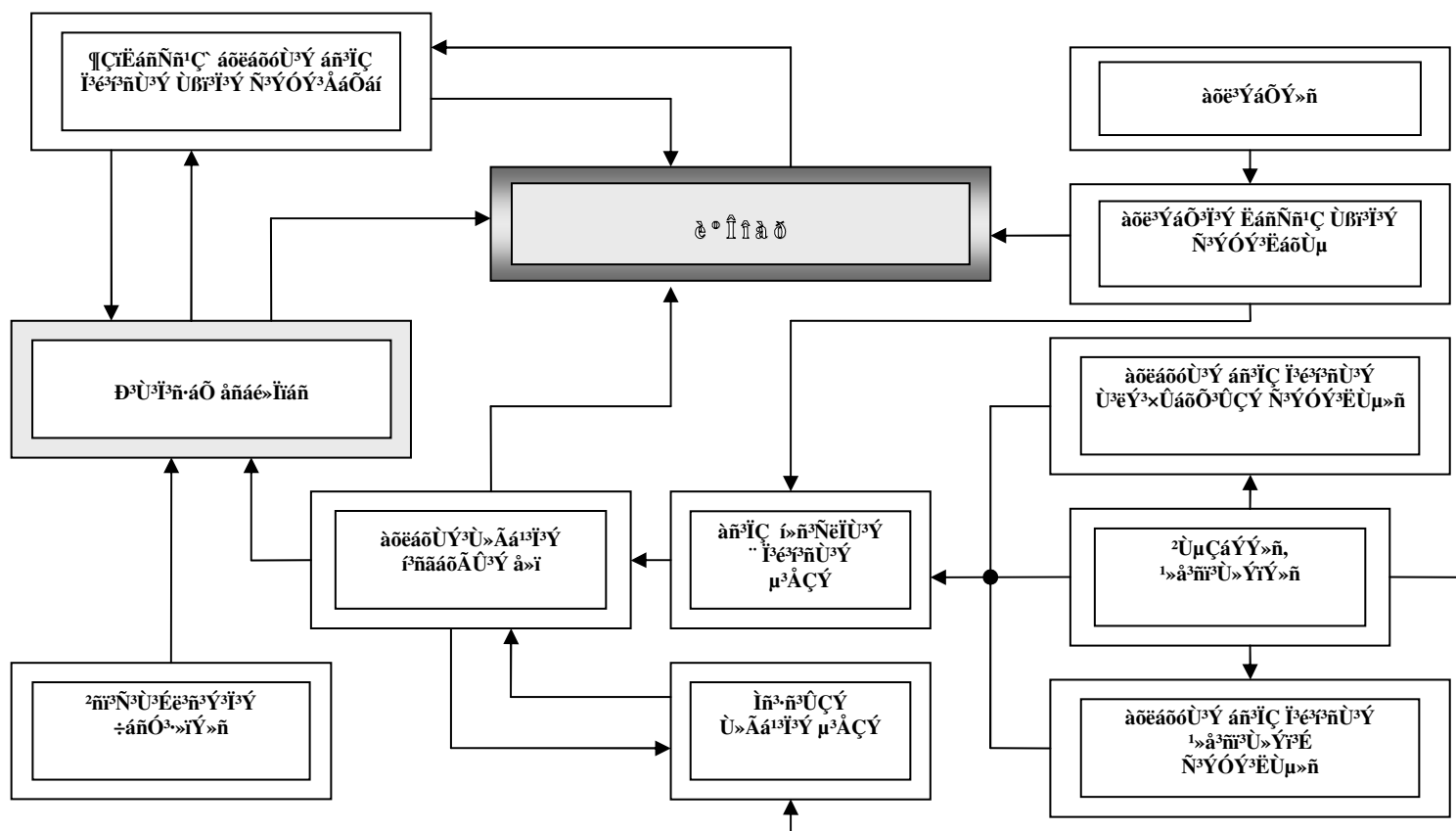
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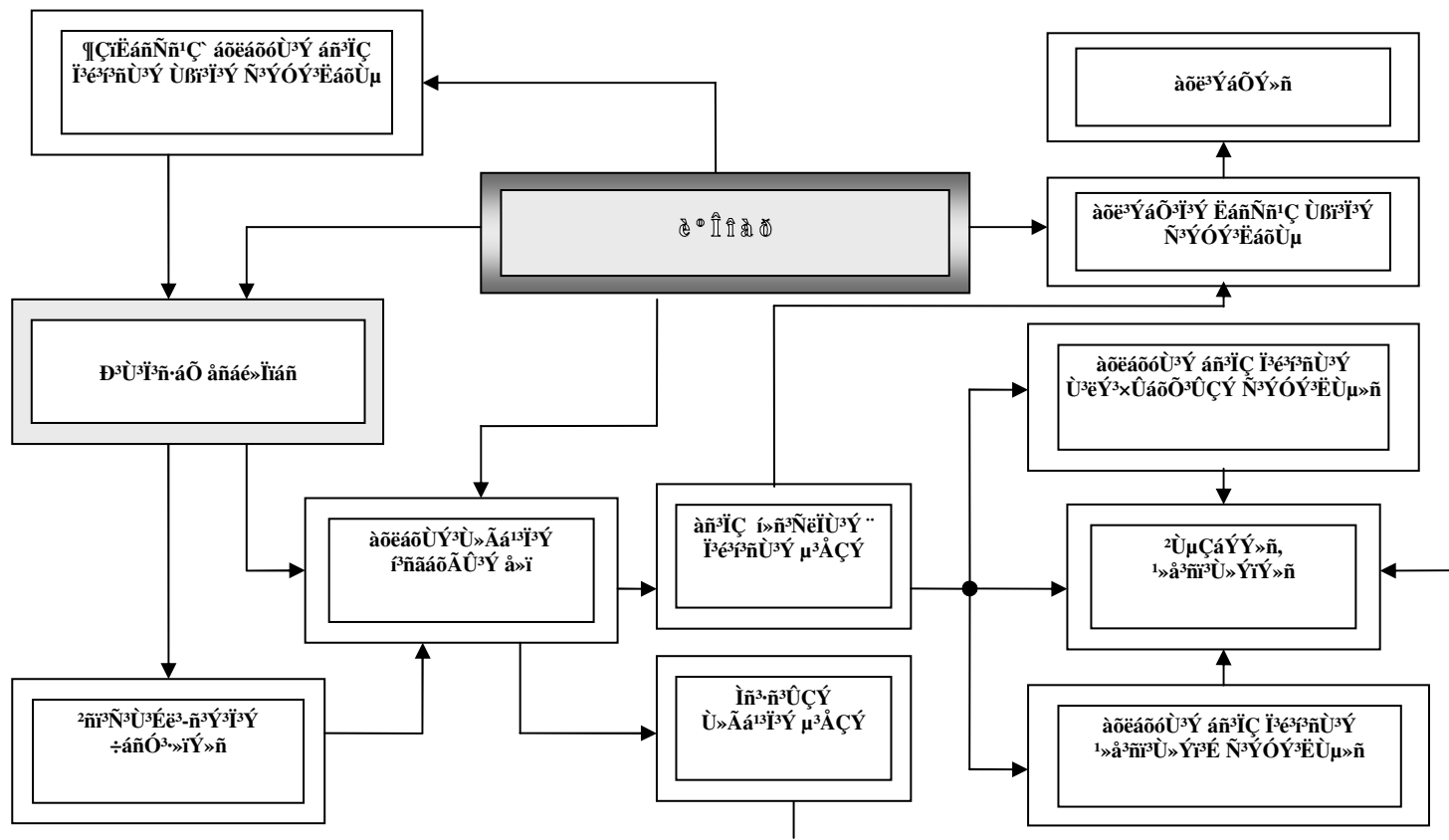
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# **Objectives, Principles and Techniques of Quality Assurance and Institutional Quality Assurance: a Case Study**

O. Gemikonakli, Ch. Kindberg and M. Dikerdem  
(Middlesex University)

*In this paper the principles and techniques of quality assurance are discussed. In the light of these, a case study is presented looking at various aspects of quality assurance in programme development and delivery at Middlesex University.*

## **Introduction**

Globalisation has accelerated the internationalisation of higher education (HE). For worldwide acceptability and competitiveness, national higher education institutions need to ensure that the quality and standards of their academic programmes and procedures are comparable with competitors standards set by international Quality Assurance bodies. While individual countries have increased activities in quality assurance and enhancement, developing procedures and monitoring higher education institutions, such efforts have become internationalised and quality assurance has recently become a global concept rather than simply the sum of individual national initiatives. This has led to an increase in European as well as international cooperation on the development of agreed guidelines and standards to support quality assurance: the *International Network for Quality Assurance Agencies in Higher Education (INQAAHE) Good Practice Guidelines*; the *OECD Guidelines for Quality Provision in Cross Border Higher Education*; and, the *European Association for Quality Assurance in Higher Education (ENQA), Standards and Guidelines for Quality Assurance in the European Higher Education Area*, which were developed as part of the Bologna Process are examples of recent European initiatives [1].

National and European legislation, standards and codes of practice recommends and sometimes requires compliance with procedures and functions for various sectors including HE. Failure to comply with these may lead to loss of competitive advantage or even inviting investigation by Government Bodies with the potential consequence of prosecution with significant penalty. Higher Education Institutions are becoming increasingly influenced by National frameworks and legislation; recent initiatives are likely to impact on the institutions at management level. Alongside various other areas Quality management systems (ISO 9000) is one such area Higher Education Institutions can no longer ignore.

National Quality Assurance Agencies (e.g. the UK's QAA) are the main bodies managing quality assurance in HE at national levels. Such agencies increasingly follow European initiatives and recommendations as well as adapting international trends in QA. This is essential in ensuring that national HE sector remains competitive and meets the demands of the international community. In this process, HE standards in individual countries are mapped onto and compared with International standards. Other than leading relevant legislation and the development of appropriate

procedures, such agencies become a driving force for the implementation of QA practices through accreditation, review (of academic subject area) and/or auditing (at Institutional level). In addition to QAAs, various Professional Bodies contribute to QA through accreditation combined with programme level assessment and auditing. In UK, The Institution of Engineering and Technology, and The British Computer Society are examples of such professional bodies.

Under the guidance of national QAAs, Institutional Quality Assurance is implemented at Institutional level; in UK, this is enforced by UK's QAA as well as the Higher Education Funding Council for England (HEFCE), the Scottish Funding Council (SFC), the Higher Education Funding Council for Wales (HEFCW), and the Department for Employment and Learning, Northern Ireland (DEL). For example, in England, HEFCE is legally responsible for ensuring that the quality of education is assessed in the universities and colleges they fund. The HEFCE Quality Assessment, Learning and Teaching Committee advises the Board on the quality of education provided in institutions they fund.

The QAA for higher education provides an integrated quality assurance service for higher education institutions in the UK. HEFCE has a contract with the QAA to conduct subject assessments on their behalf.

Following a review of the quality assurance framework, higher education institutions themselves are now asked to produce a set of teaching quality information (TQI). Another initiative, the National Student Survey also developed from outcomes of the review. Furthermore, The Research Assessment Exercise (RAE) is conducted jointly by the HEFCE, SFC, HEFCW, and DEL.

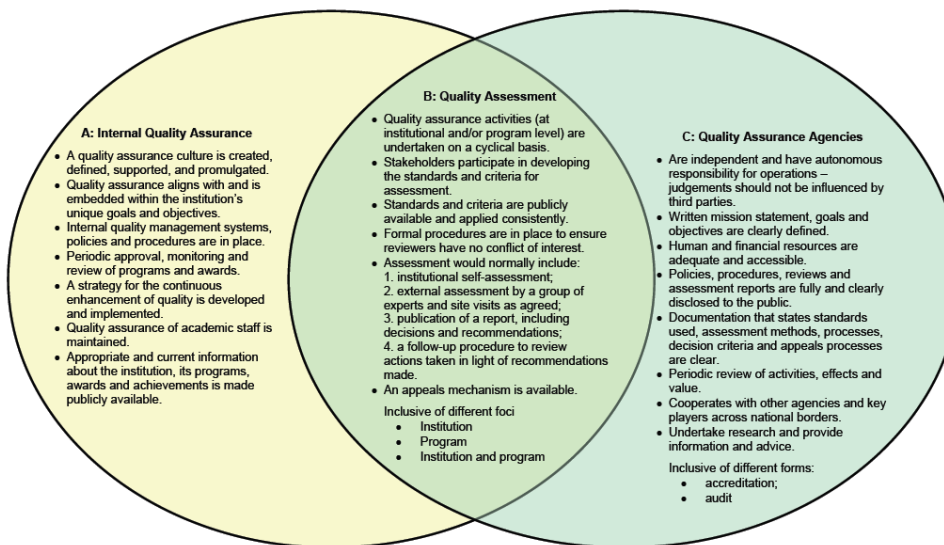
This paper summarises the principles of QA and presents a case study to further clarify these principles and their practical context. The case study presented concentrates on the implementation of Work Based Learning (WBL) programmes at Middlesex University.

## **Principles of Quality Assurance**

### **Chiba Principles**

In Higher Education Quality Assurance Principles for the Asia Pacific Region are expressed [1]. This may look like a regional initiative; however, considering that the Asia Pacific region is one of the most economically dynamic parts of the world and they are in the process of becoming exporters of higher education services, it is clear that they are working towards developing world-class higher education systems. To further this aspiration, it is essential to encourage international collaboration in higher education quality assurance. "Through adoption of an agreed set of quality assurance principles for the region, Asia Pacific countries would be able to demonstrate a firm commitment to development of higher education systems that meet World's best practice" [1]. This leads to a set of principles to be adopted by many other countries. The importance of the "Chiba Principles" is its generic approach and applicability to higher education practices in different countries. The principles are generic rather than been prescriptive and can be further refined to meet needs at national levels without sacrificing the generality of the agreed principles. Chiba Principles state that the participants are to:

- contribute to the establishment of regional alignment in quality assurance issues and practices;
- provide an agreed reference point for consistency and benchmarking in quality assurance;
- facilitate regional student and academic mobility and exchange;
- encourage mutual trust, confidence and understanding of higher education systems in the broader Asia Pacific;
- improve transparency and accountability of higher education institutions and practices; and
- align the region with international developments in quality assurance.



**Figure 1:** A framework for higher education quality assurance principles in the Asia-Pacific region [1]

*The purpose of these principles is to*

- safeguard and promote public confidence in the quality of higher education in the region;
- assist institutions in enhancing the quality of their provision;
- improve the quality of academic programs for students and other beneficiaries of higher education across the region;
- ensure that there is clarity and transparency in quality assurance processes and outcomes;
- encourage a culture of quality improvement;
- provide a measure of accountability, including accountability for the investment of public and private funding;
- generate reliable public information and reports about the higher education institution, its programs and awards and quality assurance



processes that are helpful to potential students, employers, parents, governments, higher education institutions and professional bodies, both nationally and internationally;

- inform and assist the work of quality assurance agencies; and
- support and enhance the cooperation of quality assurance agencies and other key players across national borders.

### **QA and Middlesex University**

In practice, any QA programme works when those individuals in management, those performing the work and those assessing the work all contribute to quality in a concerted and cost effective manner. QA is used by people throughout an organisation, from the top executives to workers [3].

To demonstrate the implementation of QA principles in UK, this section presents Middlesex University's QA practice as a case study. In doing so, the Chiba Principles are taken as reference points (Figure 1).

QA has been well integrated into the work practice of British HE Institutions. This is the essence of maintaining high quality provision and standards throughout the sector in the country. The standards set generic descriptors for each level of HE and to complement this, benchmark statements are developed. Middlesex University is well known with its QA procedures and practices. Here quality assurance has become a culture, well support by the University. In addition to following international trends, national legislation and QAA procedures, and the institution has its own goals and objectives which are implemented through internal quality management systems, policies and procedures. Programmes developed and awards are subject to well defined criteria of approval, as well as periodic monitoring and review procedures. The institutional QA team is responsible for the University's QA strategy for the continuous enhancement of quality. Quality assurance of academic staff and their work is maintained through appraisals, internal and external moderations, student feedback, various team activities, meetings and assessment boards. Cases of good academic practice are disseminated across the Institution and its collaborating institutions while support is provided for staff whenever necessary (team work, time allowance and budget for staff development etc.). Finally, appropriate and current information about the institution, its programs, awards and achievements are made available to the public.

Middlesex University has established the new Centre for Learning and Quality Enhancement; this centre is responsible for the assurance of academic standards; and the enhancement of academic quality (with particular emphasis on the enhancement of learning, teaching, and assessment practices). The Centre's mission is to

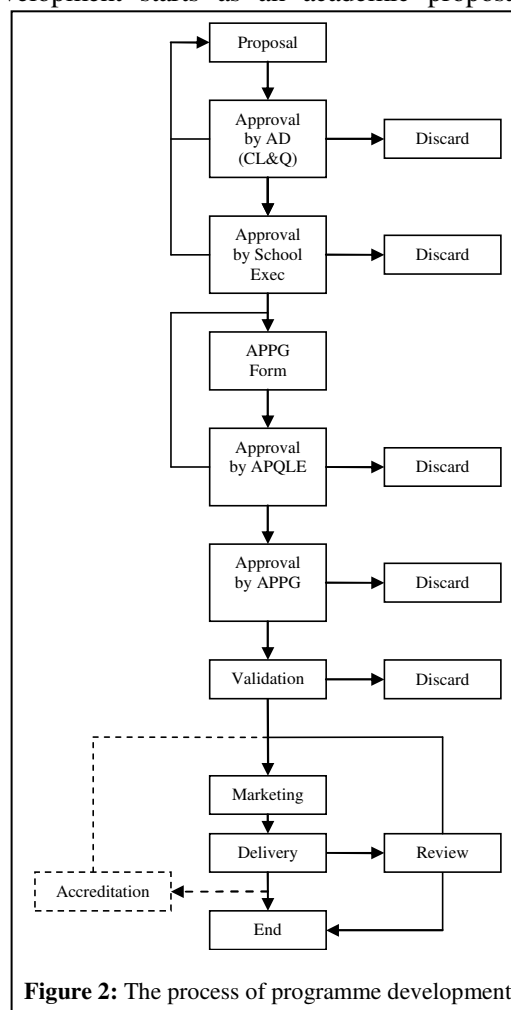
- lead the development, implementation and evaluation of strategies, policies and procedures related to academic standards, quality and learning development;
- enhance University practices with respect to quality assurance; and to teaching, learning and assessment methods (including the use of learning technologies);

- ensure the University responds to external academic quality and learning development agendas;
- support academic managers and staff in implementing innovation and good practice in academic quality, and teaching, learning and assessment practices;
- provide guidance and training related to academic quality and learning development;
- support academic managers and staff in the use of the University's e-learning platform;
- support schools and partners in their preparations for external reviews, inspections, audits, and accreditations; and
- prepare the University and partners for QAA audit and similar exercises [9].

Figure 2 shows the process of the development of academic programmes at Middlesex University. Programme development starts as an academic proposal originating from an academic team within an academic department or as a joint work involving two or more departments. However, no programme can be developed just on the basis that it is academically sought. The starting point is the University's policies and strategy on future development which are revised periodically.

Schools' strategy plans are in general concrete implementations or interpretations of such institutional – level strategy and strictly followed in new programme development. The development of Science, Technology, Engineering and Mathematics (STEM) is one such new initiative encouraging the development of new programmes.

The Institute of Work Based Learning established within Middlesex University is the UK's foremost provider of higher education programmes tailored to professional and personal interests. The University's academic strength and policies for the development of WBL has led to programme development at departmental levels. Departments have their own Programme Directors (DoP) for UG



as well as PG provisions. Each DoP leads an academic team responsible for development, quality and delivery of the Department's programmes. Informed decisions based on academic resources as well as /marketing intelligence lead to the proposal of new programmes. A rationale is written. Following team level approval, market research is carried out. The proposal is then presented to the Associate Dean (AD) for Curriculum, Learning and Quality (CL&Q) who recommends the programme to the School Executive Committee or returns to the proposer with comments. The least likely case is that the programme is discarded. Upon receiving the proposal, the School Executive discusses this and makes decision to take it forward, reject or ask for revisions. If approved, an APPG form is completed for the attention of the School's Academic Planning, Quality and Learning Enhancement (APQLE) committee, which discusses all proposals. The APPG form presents a case for the proposed programme giving its structure and addressing issues from its rationale, market research to resources and staffing. If the proposal is approved by the APQLE, University's APPG committee considers the proposal. Through all these discussions, the proposal sees further improvement.

Up to this point, a rationale and programme structure is developed, and concerns such as resourcing (classroom, laboratory provision, staffing, library services, IT resources, administration etc.) are addressed. Once approved by the University's APPG Committee, the Programme Team completes paperwork for validation. These include a complete Programme Specification as well as Learning Unit Narratives for each module included in the programme structure. Paperwork is given to the Validation Panel three weeks in advance. The Validation Panel is chaired by an experienced, senior academic from the University and involves academic experts including two members from outside the university. Each validation event takes about half a day. The outcome of a validation process can be approval, conditional approval or rejection. The previous stages of the process help to avoid a reject decision.

Validated programmes are reviewed at certain intervals set by a Validation/Review Panel; i.e. 5-6 years. If major changes are introduced either review or re-validation may be necessary. Minor changes can be done by the Programme Team while certain changes require APQLE's approval. Furthermore, accreditation can be sought from professional bodies such as the British Computer Society or The Institution of Engineering and Technology which enables the students to go on to be Chartered Engineers or Chartered Scientists.

### **Case Study: The Development of MSc Professional Network Engineering**

This section presents the development of an MSc Professional Network Engineering Programme following the procedures outlined above as a case study. This proposed programme will be owned by the School of Engineering and Information Sciences and will be delivered in Work Based Learning mode in collaboration with the University's Institute of Work Based Learning (IWBL). The Programme Team involved academics from both the Institute and the Department of Computer Communications. The rationale has been approved by first the relevant AD and then the School's Executive Committee. APQLE first returned the

proposal with recommendations and approved when the APPG form was re-submitted. The remaining steps were pursued, after the APPG Committee's expected approval. The formal validation event is planned for mid-October. Delivery is expected to start from January 2009.

### *Challenges*

Work Based Learning is a relatively new development within Higher Education. Although Middlesex University has many years of accumulated experience and success in this field, the School of Engineering and Information Systems has until recently little experience in the practical delivery or development of WBL programmes.

The contribution of the IWBL has been invaluable; their expertise and vast experience in WBL has enabled the programme team to efficiently incorporate the principles of WBL into the programme. One initial challenge was whilst the mode of delivery: WBL is based on accreditation of prior learning and delivery of modules through online study and short workshops, CCM PG modules are delivered in traditional mode and practical, laboratory-based sessions are part of all modules. Conventionally, an entry requirement for WBL programmes is a minimum five years experience is an entry requirement, and students are expected to have relevant practical skills. The challenge was met by, the development of a special new module to meet the requirements of WBL. The presence of on-line teaching and learning facilities (e.g. Oasis Plus) has been an advantage in the development of the needed on-line teaching and learning resources for the module.

Assessment strategies will differ too, and will include the assessment of a portfolio of student work, and a Development Plan. These elements differ from traditional modes of assessment. Both IWBL and CCM are experienced in this. Another concern was the Research Methods module. The relevant module offered by the IWBL is currently biased toward social sciences, and inappropriate for the technical computer communications discipline. The IWBL undertook to revise the module appropriately for Engineering and Information Systems students. Another challenge is the existing culture; employees usually resist significant academic change. This will be overcome through workshops for CCM personnel. Staffs are already happy to get involved with industrialists required by the new WBL opportunities; this brings in challenges as well as opportunities.

### *Compliance with QA procedures*

A The British QAA and Middlesex University's procedures ensure that quality of development and delivery is closely observed for all academic programmes. In the development of MSc Professional Network Engineering programme, all of the principles of QA are closely observed. This can be summarised as follows:

*A quality assurance culture is created, supported and promulgated:* This is part of the Middlesex culture for academic development.

*Quality assurance aligns with and is embedded within the institution's unique goals and objectives:* The University is committed to widen participation to HE. WBL is an effective way of achieving this. Quality is assured and enhanced through stringent entry requirements, continuous assessment, auditing, monitoring,

and reviews.

*Internal quality management systems, policies and procedures are in place:* Such procedures and policies are frequently reviewed by the University and strictly followed in the development and delivery of all programmes. Programme review, module review, student feedback (through Board of Studies meetings, questionnaires etc.), internal and external moderation of assessment papers as well as assessed work are examples of these.

*Approval, monitoring and review of programs and awards occur periodically:* This is built into programme development and first Validation Panel, later Review Panels set target dates for formal reviews.

*A strategy for the continuous enhancement of quality is developed and implemented:* This is inherent to Middlesex University Academic Planning, Quality and Learning Enhancement Policies.

*Quality assurance of academic staff is maintained:* All staff is appraised annually with interim reviews of objectives and targets set, staff development is promoted and supported, peer teaching observations are carried out on regular basis. Various Teaching and Learning conferences as well as specific workshops take place and staff's attendance is encouraged.

*Appropriate and current information about the institution, its programs, awards and achievements is made available to the public:* All catalogues and prospectuses are revised on yearly basis, the University's web pages are frequently updated, yearly programme handbooks are printed, regional offices, marketing department and education fairs are effectively used for this purpose.

### **Conclusion**

This paper discusses the principles of QA and their application in a Middlesex University context. As well as following various principles, the quality system is to be simple, robust and non-bureaucratic. It is obvious that various QA functions (approval at various levels, auditing, monitoring, reviews etc.) contribute to a level of bureaucracy. However, in a globalised world, in order to stay competitive, QA procedures must be strictly followed. UK HEIs, attract a significant number of overseas students and so this becomes of vital importance. Standards are being developed for QA in the international arena. Regional and national QAAs are obliged to follow such standards as well as developing their own enhancements to quality. These are followed by the adoption of the principles of QA at Institutional levels. HEIs in UK need to show awareness of international QA activities. QAA is well established here and this is an advantage.

In this paper, a case study is presented to show how quality assurance and enhancement works at our institution. Quality assurance and enhancement is cyclic. These cycles do not only involve enhancements to academic programmes, but also improvements to QA procedures and practices. This is essential to maintain high standards in HE.

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# **A Framework for Quality Assurance in Curriculum Development**

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*This paper describes a framework for quality assurance in Higher Education curriculum development derived from the interpretation, extension and application of current quality assurance guidelines at Middlesex University. The lifecycle phases as well as the committee structures and their roles are described. Also feedback mechanisms which ensure the quality of both the process and the resulting programme provision are outlined. An example illustrates the concepts of programme level Learning Outcomes as well as the teaching and learning strategies for this programme. In the context of the Tempus Tacis JEP no 27178-2006 "ARMQA" project the proposed framework can be adapted to the case of Armenian Universities as part of the intended overall Internal Quality Assurance framework.*

## **Keywords**

Curriculum Design, Curriculum Development, Academic Quality Assurance, Programme Development, Programme Validation, Learning Outcomes, Curriculum Lifecycle.

## **1. Introduction**

The quality of academic provision in the UK Higher Education, and in Middlesex University in particular, is overseen by the Centre for Learning and Quality Enhancement (CLQE). The procedures, academic regulations, academic policies and plans as well as the functions associated with ongoing quality assurance, curriculum and academic (i.e. portfolio development) are defined by CLQE and form the roadmap and QA framework within which all curriculum developments take place.

In the academic year 2006/07 Middlesex University undertook total re-development of its academic provision. This provided a challenge and an opportunity to reflect on current practices and to instigate new ways to interpret and apply current quality guidelines. The following sections are the work undertaken for the development of a framework which helped academic and administrative staff to understand the procedures and the curriculum development lifecycle for curriculum development and particularly for the validation of new programmes and the revalidation (review) of existing programmes. The framework was based on experiential knowledge of the authors, who have successfully designed and implemented in excess of thirty undergraduate and postgraduate programmes between them.

## **2. Curriculum Development Life-Cycle**

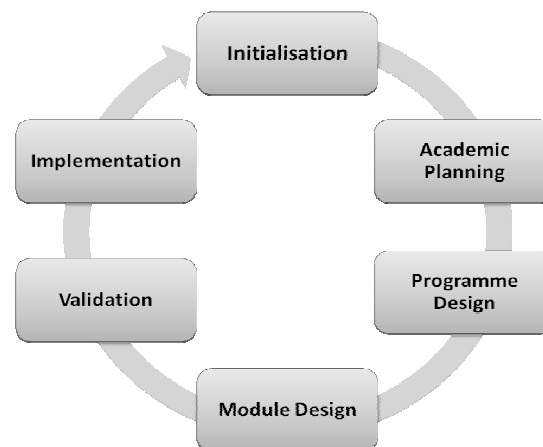
The complex and lengthy curriculum development process needs to be understood, managed, monitored and controlled in order to ensure that the University's guidelines and regulations as well as the requirements of the Quality Assurance Agency and the domain specific Professional bodies inform the

development. The assumption is that a quality process is highly likely to produce quality outcomes –in this case academic programmes of high quality.

Figure 1 illustrates the overall process for preparing for the development, validation (or revalidation/review) and implementation of programmes. Below we present a brief description of each stage:

1. **Initialization** – provides the impetus for new development or major review.
2. **Academic Planning** – provides the rationale and outline of the proposed development and includes a light-validation of programme development.
3. **Programme Design** – provides the rationale behind the academic provision of the programme. Programme design also considers the detail of the provision.
4. **Module Design** – Looks at the modules composing the programme and concentrates on the module design.
5. **Validation** – combines the previous 4 stages and combines paperwork to enable a validation event.
6. **Implementation** – after considering recommendations and conditions of the validation event continues to consider the marketing and preparation for students.

At each stage there are formal quality assurance mechanisms for review, feedback and iteration.



*Figure 1. A Curriculum Development Life-Cycle.*

### 2.1. Terminology.

All Universities refer to their own terminology. Middlesex University is not unusual in having such a list of terms. To disambiguate terms a list of in-house definitions are provided:

- Programme – an undergraduate or postgraduate course made up of components (modules)
- Modules – the components that make up a programme
- Credit – the number of units assigned to each module (each Middlesex credit corresponds to 0.5 credits on the ECTS scale).



- **School** – Most Universities have a hierarchical structure with a University composed of Schools/Faculties. Faculties composed of Departments. Academic provision is the responsibility of Departments and ultimately the School/Faculty.
- **School Executive** – The School Executive is made up of the Dean, various Associate Deans and the Heads of Departments.

The following sections explain each of the stages in the Curriculum Development Life-cycle.

### 3. Stage 1: Initialisation

The initial impetus for a new programme can come from many directions. The most usual route is through the initiative of academic members of staff. The main facts that should be prepared for such a stage are as follows:

- **Academic Discussion** – ensure that relevant inter-departmental staffs are aware of the ideas being proposed.
- **Marketing Intelligence** – Contact your Marketing team and give them the titles and brief programme aims. The Marketing Intelligence report should include, but not exclusive to: Competition, Employment Opportunities, Recruitment predictions and statistics to validate some of the above.
- **School Executive** – A meeting with the School Executive to explain the programme's aims and various options. It is important to inform the School Executive and gain their approval before moving onto the next stage.
- **Curriculum Development Team (CDT)** – The team consists of a number of staff from the relevant departments. This work cannot be completed by one individual.
- **School Vision and Strategy** – The proposal needs to be informed by and contribute towards the School's Vision and Strategy as well as the University's Mission.

Whilst there is no particular order for these events to take place, ideally the meeting with the School Executive should come last since there would be a vast amount of information collated. After the School Executive meet and approve the programme proposal the deliverables for this stage are:

- **Programme Aims** – programme aims should become more distinctive and therefore differentiate the proposed programmes.
- **School Executive Approval** – Gain approval for the proposed programmes from School Executive.

Once this stage has been approved by the School Executive the next stage can begin.

### 4. Stage 2: Academic Planning

Many Universities have different names for Academic Planning Committees. These are usually scheduled meetings chaired by a member of the School Executive. The main tasks and activities for this stage are:

- Curriculum Development Team (CDT) – These meetings should be held frequently (depending on the time allowed for development) and be productive i.e. they should produce some of the documentation for the Academic Planning Committee.
- Director of Programmes (DoP) – should take responsibility for ensuring that relevant paperwork is prepared on time and in the correct format. The DoP also provides leadership and helps rationalise and prioritise the multiplicity of proposals that may come from different academics
- Programme Leaders (PL) – should be identified and be a key member of the CDT.
- Module Leaders (ML) – need to be identified at an early stage in order to give preparation time.
- Heads of Departments (HoD) – need informing should any specialist resources be required and therefore they will have to budget the purchase of such resources (human, equipment, software, space).

This stage has a clear and identifiable deliverable. This is to complete a form that outlines the following:

- Programme Title
- Programme Study Modes
- Validation Dates
- Recruitment Targets
- Market Intelligence Reports
- Exemptions
- Programme Structure
- Programme Aims
- Programme Diagram (showing the sequence of the delivery of modules, compulsory, optional and prerequisite modules).

This stage is discussed at the School's Academic Planning Committee. If the School approves the programme then the application is presented to the University's Executive Academic Planning Committee.

### **5. Stage 3: Programme Design**

Once the Programme is approved work can begin on the development of the curriculum. The next two stages are iterative. The deliverable of this stage forms part of the documentation for the validation event in stage 5.

- CDT meets to agree on Programme Aims and Programme Learning Outcomes (PLOs).

PLOs are informed by staff expertise and research activity, QAA Benchmarks [4] and ACM Benchmarks [1]. Subject benchmark statements provide a means for the academic community to describe the nature and characteristics of programmes in a specific subject. They also represent general expectations about the standards for the award of qualifications at a given level and articulate the attributes and capabilities that those possessing such qualifications should be able to demonstrate.

- The PLO's are distinctly broken into four domains:  
*Subject Related Cognitive Abilities (A1-6)*  
*Subject Related Practical Abilities (B1-6)*  
*Transferable Skills (C1-6)*  
*IT Related Skills (D1-6)*

The six learning outcomes for each domain is only a guideline. IT related Abilities is optional and in Computing Curriculum Design can be overlooked (see Fig. 2).

Fig. 2 is a blank extract from the template provided by the University's CLQE. An example of both a curriculum map and a programme diagram can be seen in the Appendix

Module Title	Module Code by Level	Programme outcomes																							
		A1	A2	A3	A4	A5	A6	B1	B2	B3	B4	B5	B6	C1	C2	C3	C4	C5	C6	D1	D2	D3	D4	D5	D6
	CS1000																								
	CS2000																								

**Figure 2.** Curriculum Map. Maps PLO's to Modules.

- If the programme requires Professional, Statutory or Regulatory accreditation then the appropriate documentation should be consulted, e.g. [1, 2], and incorporated in the programme learning outcomes.
- Designing new programmes should not rely on previous Programme design, however, if there are programmes being designed sharing common modules then there can be some collaboration.
- Programme Diagram – stage 4 should include a programme diagram and should be finalised at this level.
- Module titles can be modified appropriately at this level. Curriculum Map – PLO's should be mapped to Module via a Curriculum Map – see Figure 2 (and example in the Appendix).
- Admission Criteria – defining your recruitment base.

The documentation produced should form the basis of a Programme Specification and should be circulated to the CDT for further refinement. The Programme Specification is part A of the Validation Documentation.

## 6. Stage 4: Module Design

The completion of the Programme Specification and the Curriculum Map should be distributed. This will give Module Leaders a clear indication of the knowledge, skills and any other areas that they are required to cover. The Module Specifications are to include:

- Administrative Codes of the Modules – assigned centrally.
- Module Title.
- Module Aims – Overall objectives of the module.

- Module Restrictions – pre-requisites, barred-combinations and any other restrictions on the module should be included.
- Syllabus – itemising the content/topics.
- Module Learning Outcomes (MLO) – the MLO’s should be categorised:
  - Knowledge
  - Skills
- Learning, Teaching and Assessment Strategy – How the module is to be delivered. How the assessment is to be conducted. What assessment instruments will be used?
- Assessment Weighting – the division between coursework and exam.
- Learning Materials – recommended reading etc...
- Module Run – Information on the dates the module is intended start and finish.
- Timetabling information – information required for both decentralised and centralised timetable administrators.

Stages 3 and 4 often require several iterations, since initially a *top-down* approach is instigated. Such an approach allows no feedback to higher levels in the process of design. By introducing *bottom-up* Stage 3 receives feedback from stage 4 and the overall process complements a better design of the curriculum by involving all team members in the design. The overall responsibility of the design is with the Director of Programmes. After a few iterations Stages 3 and 4 should produce:

- Programme Specification–forming part of Part A of the Validation Documentation.
- Module Specifications –forming Part B of the Validation Documentation.

On completion of this stage Administration should receive all the documentation to bind and prepare for the Validation Event.

## **7. Stage 5: Validation**

Validation is “the process by which the School and the University ensures that any new Programme, or any significant change to an existing Programme, is academically sound i.e. the academic standards are appropriate, the curriculum can deliver the standards, assessment measures achievement of standards. In addition, the Validation ensures adequate Programme-specific resources are available to support the proposal” [3].

Part A and B of the validation are complete. Part C is also to be completed that should include:

- Learning Resources–information on resource availability e.g. library opening hours.
- Accreditation–any Professional, Statutory or Regulatory Body accreditation.
- Other information about the School and University.

- The above information should be made centrally and rely on central administration. Once the validation documentation is complete it should be distributed at least 2 weeks before the validation event to:
- Externals –professional experts in their field.
- Internals –to oversee that the University rules and regulations are obeyed.
- Dean, Associate Deans, HoD's, DoP's, PL's, ML's and any other Panel members.

### **The Validation Panel**

A Panel is appointed on behalf of the University's CLQE (3). The purpose, authority and circumstances of the particular event are outlined in an Officer paper. Panel members should understand as much as possible of the proposal's history, ethos and context as well as the detail for the Student Handbook, and are invited to contact the Validation Officer if they need further information or clarification in advance of the meeting.

All internal Panel members should be familiar with the University Regulations as set out in the current University Regulations. External Assessors are sent a copy of the Regulations as part of the paperwork.

University staffs who act as Chairs or University Representatives are usually senior experienced staffs who have attended the training by CLQE:

- Associate Deans of School
- The Registrar/Head of CLQE
- Other senior and experienced staff as appropriate.

School representatives are usually nominated by the appropriate Associate Dean and will usually have had experience of Validation and Review as part of a Programme team.

Student panel members are provided by Middlesex University Students Union (MUSU or the equivalent body at a partner institution where available). Student panel members are only required for Reviews.

The Panel normally consists of:

- a Chair
- two External Assessors (subject perspective)
- a University representative
- a MUSU (or equivalent) representative
- Officer

and may also involve:

- Professional, Statutory and/or Regulatory Body (PSRB) Representative (if appropriate, perhaps as Co-Chair)
- a subject independent member of partner institution staff for collaborative provision (if appropriate).

Some PSRBs may wish to send an observer who may provide useful feedback but would not constitute a member of the Panel.

The MUSU Representative:

- assesses the arrangements, from a student's point of view, for academic delivery of the curriculum, and for student support and guidance
- comments on the adequacy and 'understandability' of the paperwork
- asks questions on any issue which seems to be unclear.

The External Assessors:

- as subject experts, examine the proposal's aims, outcomes, content and assessment in the context of the QAA Subject benchmarks, QAA Foundation Degree qualification benchmark or PSRB national standards and the Framework for Higher Education Qualifications to ensure that proposal has taken account of these and focuses on academic standards
- should be able to bring a national perspective to the proposal and judge the quality of provision
- should have a knowledge of the market and/or comparable Programmes in other institutions
- should assess both the academic content and the relevance of the Programme to subsequent employment
- should judge the adequacy of the equipment and specialist facilities and the qualifications and expertise of the staff team
- should scrutinise each module's outcomes, syllabus and reading list in detail. (New modules need to be approved (with or without conditions); current modules should be confirmed as relevant, or otherwise.) review the paperwork in advance
- attend the Validation or Review Event
- review the unconfirmed Report
- scrutinise and comment upon the response to condition and recommendations as agreed at the event.

The University (CLQE) provides training workshops for academic staff so that they can become members of a validation panel. Staff can also shadow validation events and initially participate in non-complex events. Experienced panel members undergo further training to update themselves on changes and external reference points.

### **The role of the Validation Panel**

The Panel is to provide scrutiny of the proposal so as to ensure required standards at national, University and School level. Internal and external Panel members have different roles within the overall task but, in practice, the concerns of all Panel members overlap and their roles are not rigidly fixed.

Following the validation event a written report is submitted by the validation panel but usually verbal feedback is given on the day. The report will include Terms, Conditions and Recommendations and approval of the Programme proposed. The DoP is expected to respond to the report and show that the programme development team has satisfactorily met all the conditions and responded appropriately to the recommendations. With the approval of the Panel the Programme is validated and work can now begin on implementation.

## 8. Stage 6: Implementation

Upon Validation of the Programme the programme will require:

- Timetabling
- Recruitment
- Marketing
- Enrolment
- Programme Handbooks
- Induction
- Administration.

For the programme to be a success the validation should take at least 3-6 months before the inaugural run of the programme. The recruitment and enrolment of students can occur and finally the delivery of the programme can begin.

It must be emphasised that the development and validation of programmes involves a large number of people and tasks. It generates an enormous amount of documentation. Quality standards need to be adhered to and the quality of the documentation (content as well as format) must be assured.

**Table 1.** Provides a summary of the actions and quality assurance mechanisms that are applied at each stage.

**Table 1 – Phases QA mechanisms and Feedback**

Phase	QA Mechanism	Feedback/critique provided by
1. Initialisation	Check viability of Existing provision (internal/external) Alignment to University's mission	PL, DoP CDT School Executive
2. Academic Planning	Check coherence Estimate resources requirements	CDT, Industrial Advisory Panel HoD
3. Programme Design	Ensure consistency, currency and relevance Adherence to quality requirements QAA, ENQA, Bologna	Self & peer Review by ML, PL, DoP
4. Module Design	Ensure currency, correctness and adherence to quality requirements QAA, ENQA, Bologna	Self & peer Review by ML, PL, DoP
5. Validation	Ensure correctness, consistency, completeness and adherence to standards (as above)	CDT, Panel, External scrutiny
6. Implementation	Respond to conditions and recommendations Make corrections Publicise	CDT, PL, DoP liaise with Panel Chair marketing admissions

## 9. Conclusion

The framework presented here provides a roadmap for the validation of programmes. Following the events allows a strategic approach to curriculum

design. With the exception of the Implementation (stage 6) the timescale has not been mentioned. As a guideline the list below illustrates the time scale for each stage.

- Stage 1: Initialisation: 2-4 weeks
- Stage 2: Academic Planning: 6-8 weeks
- Stage 3: Programme Design: 10-12 weeks
- Stage 4: Module Design: 8-10 weeks
- Stage 5: Validation: 2-3 weeks
- Stage 6: Implementation.

As seen from the above the time to develop a new programme takes 28-37 weeks. Depending on timetabling and induction issues this must take place at least 3 months before the Implementation stage. Therefore the overall timescale for developing new programmes is 40-49 weeks; this would mean that if a University wishes to deliver a programme in October then ideally stage 1 should be instigated in November of the previous year (some 11 months prior to the start of the programme). This timescale is based on the experience of the authors who have between them developed in excess of thirty programmes. For example the quickest this process has been completed in the School of Computing Science is 7 months; the longest is 12 months.

The paper has described the stages involved in the development of new programmes or review of existing curricula. Additionally, it has identified the personnel involved, their respective roles and the quality assurance mechanisms and activities used at each stage.

### **Acknowledgements**

The authors would like to thank all colleagues who participated in the comprehensive validation and revalidation exercise using the lifecycle described in this paper.

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## **APPENDIX**

### **Extract from the MSc Business Information Technology Programme Handbook, 2007.**

<b>11. Programme outcomes - the programme offers opportunities for students to achieve and demonstrate the following learning outcomes.</b>	
<b>A. Computing-related cognitive abilities</b> On completion of this programme the successful student will be able to: <ol style="list-style-type: none"><li>1. Critically evaluate IT needs in complex organisational contexts, making effective use of relevant systems theory according to the context</li><li>2. Identify the major management challenges to building and using Information Systems</li><li>3. Demonstrate an understanding of the commercial possibilities of the Internet and the Web and their social implications</li><li>4. Demonstrate understanding of Computer networks and the Internet as enabling technologies, including the theoretical underpinnings of computer networks and their topologies</li><li>5. Demonstrate an understanding of the theory underlying object-oriented development and implementation, such as the theory of abstraction</li><li>6. Differentiate between the major types of AI applications in management decision making</li><li>7. Demonstrate knowledge and understanding of the fundamentals of managing industrial data.</li></ol>	<b>Teaching/learning methods</b> Students learn knowledge, gain understanding and develop cognitive skills and abilities through self directed, resource based learning, small group discussions, small group and individual exercises, lab sessions, demonstration software, on-line examples and the research project. Weekly seminar sessions supported by the Local Study Centre Tutor(s) provide the opportunity to address questions, queries and problems. Throughout their studies students are encouraged to undertake independent study both to supplement and consolidate what is being learnt and to broaden their individual knowledge and understanding of the subject. Critical evaluation and selection of methods, tools and solutions engage the students in relating theory to practice.  <b>Assessment</b> Group and individual coursework, presentations and the unseen examination and the project thesis assess students' knowledge and understanding. Outcomes 1, 2 and 3 are assessed by group courseworks and unseen examination. Outcomes 4, 5, 6 and 7 are assessed by a mixture of individual and group coursework, as well as unseen examinations.

<p><b>B. Computing-related practical abilities</b></p> <p>On completion of this programme the successful student will be able to:</p> <ol style="list-style-type: none"> <li>1. Apply IT techniques and solutions in an area pertinent to the student's own working and/or organisational background and interests</li> <li>2. Draw up a system requirements specification and model a problem situation using industry standard methods and techniques</li> <li>3. Design and develop both static and interactive Web pages and critically evaluate web sites</li> <li>4. Implement a specified information system using toolkits for user-centred methods and contemporary technologies</li> <li>5. Develop and configure systems harnessing the hardware to ensure secure usage of computer networks and the Internet</li> </ol>	<p><b>Teaching/learning methods</b></p> <p>Students develop practical abilities through the teaching and learning programme outlined above. These abilities are also nurtured through small group discussions, small group and individual exercises, laboratory sessions, demonstration software, on-line problem-solving examples and the research project.</p> <p><b>Assessment</b></p> <p>Students' practical abilities are principally assessed through coursework reports and the thesis report, with examination questions addressing aspects of practical abilities as appropriate to the subject material.</p> <p>Outcomes 1, 2 and 4 are assessed through group coursework based on a case study and through the practical part of the project.</p> <p>Outcomes 3, 4 and 5 are assessed through individual coursework assignment and the research project.</p>
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<p><b>C. Additional Transferable Skills</b></p> <p>On completion of this programme the successful student will be able to:</p> <ol style="list-style-type: none"> <li>1. Select and use a variety of modes of discourse for effective communication, including mathematical, graphical, written and oral, according to the needs of the intended audience</li> <li>2. Perform effectively as a member of a team in complex and diverse working environments such as arise where members of a team are brought together from diverse backgrounds in the pursuit of European or global integration</li> <li>3. Transfer advanced techniques and solutions from one specialised field of computing to another and from one complex problem situation to another</li> <li>4. Demonstrate a critical understanding of, and the ability to deploy effectively, a wide range of learning methods resources and technologies, including, but not limited to, Information and Communication Technologies</li> </ol>	<p><b>Teaching/learning methods</b></p> <p>Students learn transferable skills through the teaching and learning programme outlined above. Although not all the skills are explicitly taught, they are nurtured and developed throughout the programme, which is structured and delivered in such a way as to promote this process.</p> <p><b>Assessment</b></p> <p>Students' transferable skills are assessed as follows:</p> <p>Outcome 1 is assessed through coursework, reports, examinations, presentations and the project report.</p> <p>Outcome 2 is assessed through group coursework and reports.</p> <p>Outcome 3 is assessed primarily through examinations.</p> <p>Outcome 4 is assessed through coursework</p> <p>Outcomes 5 and 6 are assessed primarily through the research project report.</p>
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5. Manage their own learning and development autonomously, demonstrating time management and organisational skills at a professional level 6. Demonstrate self-direction and originality in learning and problem-solving in familiar and unfamiliar situations 7. Appreciate the need for continuing professional development in recognition of the need for lifelong learning	Outcomes 6 and 7 are assessed through individual coursework involving critical analysis and presentation of relevant current research issues.
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## **12. Programme structures and requirements, levels, modules, credits and qualifications**

### **12. 1. Overall structure of the programme**

The programme is available full-time and part-time mode in the UK and is also offered at franchised partners overseas.

The programme is split into four compulsory 30 credit taught modules and the final postgraduate computing project module (worth 60 credits). The University academic year is split into three terms (Autumn, Winter, Spring) of 12 teaching weeks followed by a summer period. Full time students study two modules (60 credits) in each of their first two terms and undertake the project module (60 credits) over the remainder of a calendar year. Part time students study one 30 credit module per term and then undertake their project module over two terms.

Details of each module can be found in the Computing Science Postgraduate Subject Student Handbook.

### **12. 2. Levels and modules**

All modules on this programme (4 taught modules and a project) are at Level 4. BIS4992 Postgraduate Computing Project is worth 60 credits, and all other modules are 30 credits each.

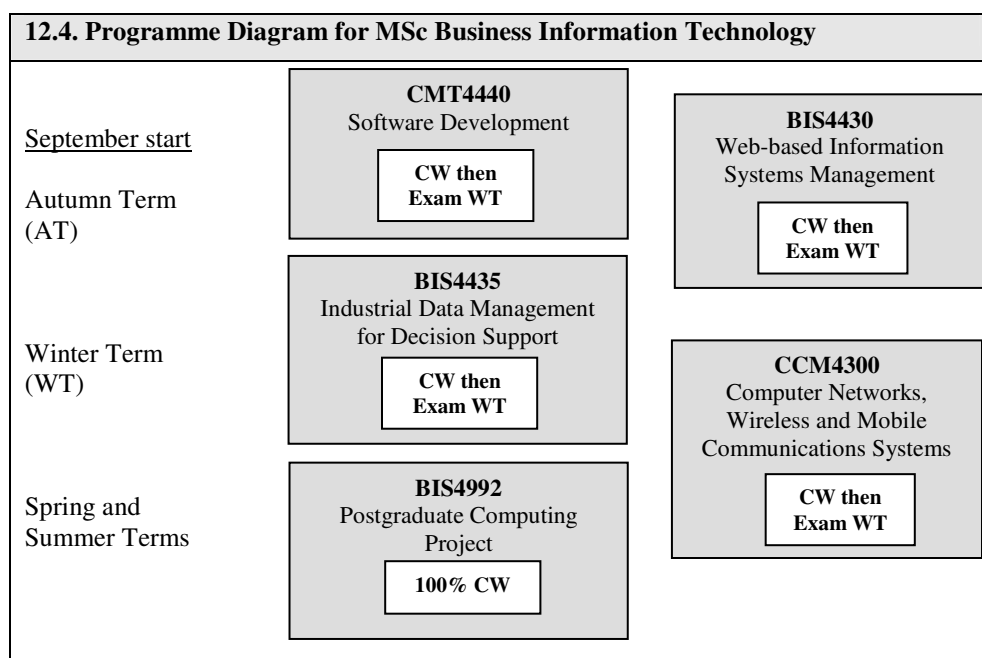
Compulsory (students must take all of the following):

- CMT4440 - Software Development
- BIS4430 - Web based Information Systems Management
- BIS4435 - Industrial Data Management for Decision Support
- CCM4300 - Computer Networks, Wireless and Mobile Communication Systems
- BIS4992 - Postgraduate Computing Project\*

Students must pass all taught modules before they can progress onto the project.

### **12.3. Non-compensatable modules.** Modules may additionally be designated non-compensatable.

No modules excluded from consideration for compensation. University regulations on compensation will apply.



This map shows the learning outcomes of the programme and the modules in which they are assessed:

Year	Module	Code	A1	A2	A3	A4	A5	A6	A7	B1	B2	B3	B4	B5	C1	C2	C3	C4	C5	C6	C7
4	Computer Networks, Wireless and Mobile Communication Systems	CCM4300		√		√							√	√	√	√	√		√		√
	Software Development	CMT4440	√	√			√			√	√		√	√	√	√				√	
	Web based Information Systems Management	BIS4430	√	√	√					√			√		√		√	√		√	
	Industrial Data Management for Decision Support	BIS4435	√					√	√	√			√		√		√			√	
	Postgraduate Computing Project*	BIS4992	√	√						√	√				√		√	√	√	√	

\*Other learning outcomes assessed will depend on the nature of the individual project, typically including one or more of A3 – A7 and one or more of B3 – B5.

**Internal Quality Assurance:  
Experience, Problems and Trends**  
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*Following the recent tendency toward measurement of how well universities are serving their students, the American University of Armenia (AUA), in an effort to obtain and maintain a U.S. accreditation by the Western Association of Schools and Colleges (WASC), was being called upon to demonstrate on a regular basis that students are acquiring the skills and knowledge stated in the objectives and outcomes of degree programs, and that the institution is meeting its mission goals. The paper discusses the importance of quality assurance at AUA and outlines major assessment activities that are carried at the University. Assessment of educational effectiveness became a critical part of the University culture. Activities occur regularly at different University levels, involve all constituencies, and can range in complexity from simple conversations with students to compiling elaborate evidence of student achievement. Quality assurance processes enable the University to regularly check the quality of offered academic programs and maintain the high standards set forth by WASC accreditation.*

The tendency toward measurement of how well universities are serving their students is being felt in every area of higher education. Each institution is being called upon to demonstrate on a regular basis that students are acquiring the skills and knowledge stated in the objectives and expected outcomes of degree programs and that the institution is meeting its mission goals.

The assessment process is usually set in motion by some initiating event. For institutions getting started on the development of assessment processes it is generally an accreditation visit or other external accountability review that gets the process moving. This was the case for AUA, which in order to demonstrate commitment to excellence in its educational programs, and in its operations in general, initiated the process of achieving accreditation through Western Association of Schools and Colleges (WASC), one of the six regional accrediting bodies in U.S., in 1999. The University passed through intense review of institutional capacity and educational effectiveness and, in March 2007, was granted U.S. accreditation for a maximum of seven years.

For institutions with mature assessment processes the "initiating" events are less pronounced as assessment is a part of the institutional culture.

At present, assessment has become a critical part of the University culture in its efforts of quality assurance. It has opened an opportunity for AUA to engage in a reflective learning process for the purpose of improving institutional effectiveness and to demonstrate the desire to provide quality programs and services. Assessment activities are guided by the University's mission and seek to improve the educational experiences of all AUA students. Assessment activities regarding AUA's educational effectiveness occur at several levels (student, course, faculty, program, institution), involve all constituencies (students, faculty, administration, trustees, employers), and are based on various types of data, e.g., surveys, focus groups, reports, analysis of student work. Assessment activities can range in complexity from simple conversations with our students to compiling elaborate evidence of student achievement.

The University has a working Assessment and Evaluation Plan, which incorporates assessment at University and Program levels. We continuously review and evaluate university and programs' mission and objectives, learning assessment systems, departmental and university-wide criteria for admission and admission process itself, work performance of academic administrators, faculty, and staff. The assessment processes take place as a part of routine and systematic events with assessment results used to inform decision makers and improve student learning and curriculum planning.

With the purpose of continual improvement, the AUA Curriculum Committee mandates that all existing academic programs be reviewed every 4 years. The primary goal of the review is to continually work toward enhancement of the academic programs offered at AUA and move the University forward into a future with more focused resources.

The review process begins with the self-study and is followed by an audit team visit. The purpose of the departmental self-study is to allow faculty, students, alumni, program and University administration, the review team of the Curriculum Committee, and external reviewers to evaluate program's accomplishments and challenges, to engage in program's strategic planning, and to use data/information and analyses to make changes that improve the program and student learning. The self-study provides the basis for the audit team to consider the appropriateness of the program's objectives and its overall quality.

*The program Self Study reflects usually the following components:*

**1. Program Description and Evolution**

Academic Program Mission

Program Goals and Educational Objectives

**2. Program's Profile and Processes**

Governance

Students

Faculty

Research

Resources and support services

**3. Educational Assessment**

Curriculum

Academic assessment

**4. Enrollment**

**5. Self-evaluation.**

One of the major parts of Self Study is a departmental report on educational assessment. Educational assessment is a collaborative process that must include faculty, students, alumni and other stakeholders (employers, legislators, representatives of other universities for ex), which provides them with opportunities to investigate and reflect on important questions about student learning.

Each academic program has a set of educational objectives that support university mission. The program develops student learning outcomes and performance criteria and maintains a four-year assessment plan that ensures that all outcomes have been assessed in a given timeframe. Deans report on assessment results to the Provost and Vice President and Office of Institutional Research on an annual basis.

*Steps in the process include:*

1. **Creation of the departmental assessment plan**
  - a. identification of outcomes being tested
  - b. setting a timeline
  - c. choosing methods of assessment – direct and indirect
2. **Collection of data**
3. **Analysis and interpretation of the evidence**
4. **Report submission**
5. **“Closing the loop”**
  - a. Identification of strengths and areas for improvement
  - b. Implementation of changes for improvement.

*The evaluation process should answer the following questions:*

1. Are the linkages between student learning and curriculum present? Do students get an opportunity to learn and develop in ways that will enable them to demonstrate the anticipated outcomes at the appropriate level?
2. Are the processes efficient? Are the data collected in a systematic fashion? If you have large numbers of students, sound sampling techniques can provide you with adequate data to assess the program's effectiveness.
3. Is the timeline appropriate? Are data being collected in such a way that the assessment question can be answered without trying to assess every outcome every semester/quarter for every student?

Educational assessment results are used by the University to support curricular, planning, and budgeting decision making processes.

In addition to self studies, Office of Institutional Research and Assessment at AUA conducts periodic exit surveys of graduating students, student satisfaction surveys of administrative services, alumni surveys, employer surveys for the purpose of improvement of academic programs and university services.

The MIS working group developed a design for data reporting through the Management Information System and oversaw production of the first annual data report, the AUA Fact book, which contains data related to students, faculty, alumni, research centers, libraries, staff, and the extension program. The Fact book places a great deal of previously scattered information on one readily accessible site. It has become a resource for documentation in writing grant proposals, reporting on departmental achievements and course planning, and the data is used as benchmarks to measure the attainment of the University's strategic goals.

The University has achieved and continues to maintain the higher educational standards set forth by the U.S. Accrediting Commission. It acts as a regular American University only outside of territorial U.S. However, it operates in Armenia and must act in accordance with Armenian and European higher educational standards. The European movement in educational reform has brought quality assurance into the focus of higher educational institutions in Armenia. Introduction of the quality assurance system to the Armenian higher education system has been firmly on the Government's agenda. AUA's expertise with Western standards and education quality will contribute significantly to the success of the establishment of external quality assurance framework in Armenia.

# **Towards a Workable Framework for Internal Quality Assurance in Higher Education**

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*In this paper we discuss strategic issues relating to the development of Internal Quality Assurance processes, mechanisms and instruments for facilitating and enabling the comprehensive reforms and adaptations of institutional strategies to the European educational policy. The ARMQA project (Tempus...) aims to develop a framework for Internal Quality Assurance for two Armenian Universities (Yerevan State University and State Engineering University of Armenia). This paper draws on experiences from the UK and Greece as well as from published literature to propose a set of practical guidelines for facilitating the development and adoption of a quality culture and an internal quality assurance system.*

## **Keywords**

Quality Assurance, European Integration, Bologna Process, Change Management, Process Re-engineering, Higher Education

## **Introduction: Objectives of the Bologna Process**

The challenges posed by the European Union decision to achieve harmonisation and integration primarily through the Bologna process have been exacerbated by the recent expansion of the EU to a much larger and diverse entity. The increased diversity and complexity pose challenges to Higher Education (HE) institutions that need to be addressed both at European and local levels. Quality Assurance agencies operating in many member states aim to safeguard the public interest in sound standards of HE qualifications and to inform and encourage continuous improvement in the quality of HE. These improvements are implemented through self-assessment and internal quality reviews and through conducting external reviews (including audit) in universities and colleges, describing clear academic standards in the Academic Infrastructure and advising government on applications for degree awarding powers. ENQA (the European Association for Quality Assurance in Higher Education) and national agencies such as the UK QAA (Quality Assurance Agency) and the Hellenic Quality Assurance Agency for Higher Education (HQAA) have been disseminating information and experiences and have been sharing best practices in the field of quality assurance (QA) in HE.

The Bologna Process aims to move Higher Education in Europe towards a more transparent and mutually recognised system and furthermore to place the diversified national systems into a common frame. One of the objectives of the Bologna Process is the establishment of quality assurance systems enabling the evaluation of programmes and institutions in the form of internal assessment together with external reviews. It is aimed that all stakeholders (member states, institutions, staff, students, industry) participate in the process and that results are transparent so that good practice and lessons learned can be shared. It is thus



anticipated that an integrated European Higher Education will result in increased competitiveness of Europeans in the international labour market and the attractiveness of European Higher Education in the world.

The Bologna Declaration is the foundation for establishing a coherent and cohesive European Higher Education Area by 2010, and for promoting the European system of Higher Education worldwide (Bologna, 2008). The European ministers in charge of Higher Education agreed on joined objectives for implementing the European educational policy at national and institutional levels. They stressed the need to develop mutually shared criteria and methodologies and agreed that by May 2005, national quality assurance systems should include:

- A definition of the responsibilities of the bodies and institutions involved.
- Evaluation of programmes or institutions, including internal assessment, external review, participation of students and the publication of results.
- A system of accreditation, certification or comparable procedures, international participation, co-operation and networking.

### **Achieving the 2010 objectives**

In principle everybody can appreciate the expected benefits of an eventual integration but the ‘dream’ of 2010 is proving difficult to be realised. However, achieving harmonisation may be hindered by all those diverse contents, symbols and systems that have been developed throughout history. Progress has been slower than anticipated particularly with the accession of several new member states with diverse quality awareness, culture and practices.

The Trends IV Report (Reichert and Tauch, 2005) turns focus from the fact that in Quality Assurance (QA) the differences among individual European countries are enormous” to “a clear trend towards more institutional approaches to exploit synergies, economies of scale and spread models of good practice particularly within institutions which enjoy a high degree of autonomy.” The essential aim of the Bologna reforms, namely to create a European Higher Education Area, which is predicated on quality and, therefore, it is attractive to its members as well as the outside world, can only be achieved if the concern for quality is not reduced to the establishment or optimisation of external quality assurance processes alone, but considers all processes of institutional development” (Reichert and Tauch, 2005). The Bologna process advocates the convergence between European universities regarding technologies and the related pedagogical and organisational approaches themselves, it is important to note that this convergence does not aim to change the mission and strategies of the institutions, but to support them (Siakas, 2007).

In Trend V (Crosier et. al, 2007) it was reported that various national QA systems, which are “costly and offer no evidence of overall quality improvement” are holding back the Bologna implementation and the demands of the European Knowledge Society. In addition, feedback and monitoring mechanisms are weak and inconsistent across institutions, and the institutional and governmental resources to provide incentives for implementing change are often missing. These problems are exacerbated by the shortage or lack of experts that can carry out

evaluations and monitoring. Also, the lack of effective central management and administrative systems make it difficult or impossible to collect and analyse University-wide data.

Detailed theoretical principles have been provided by the architects of the Bologna process and by subsequent reports of the attempts to implement it, the progress achieved and the many obstacles in this complex and diverse process. As the target year of 2010 is approaching practical guidelines arising from experience seem necessary in order to avoid pitfalls and facilitate further the implementation process.

For successful development of a Quality Assurance framework and subsequent implementation of any harmonisation (e.g. Bologna process) it is necessary to gain thorough understanding of the European mission and strategic vision and the ways in which education must be re-shaped at local, national, European and international levels. Additionally a deep understanding of the current situation in each country and in each institution will identify current QA practices which need to inform the re-engineering/reshaping of structures, mechanisms and processes (Ahmad et. al, 2007). It is important to identify what needs to remain as-is and what needs to change; what is involved, who are the people involved and what are their respective roles, which and how many resources are required, the timescales and risks posed by the immense complexity and diversity.

### **Changing the Quality Culture**

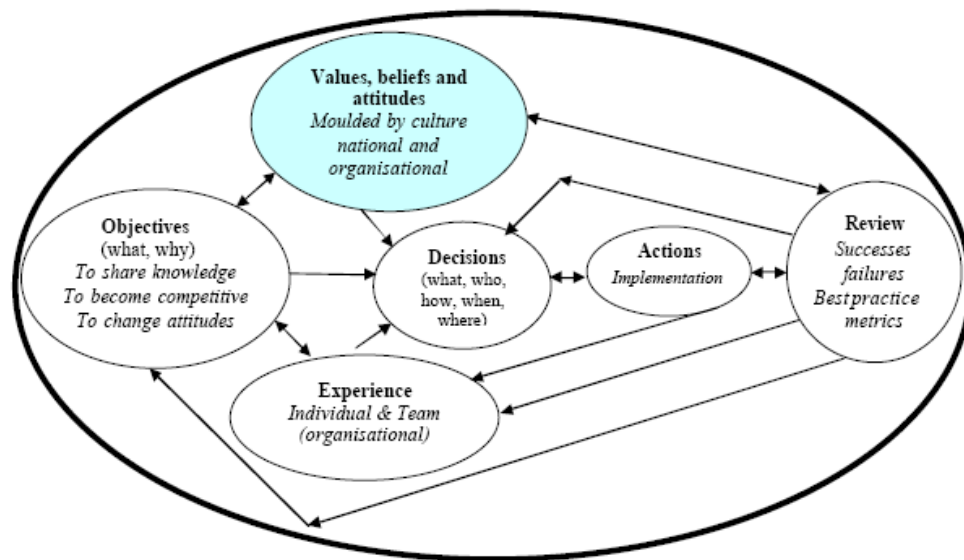
We assume that there is an acceptance at least at high level (eager or reluctant) to work towards European and (ultimately) global integration and harmonisation. Commitment to Quality from Senior Management is imperative if procedures, tools, and databases are to be developed, supported and financed. For successful implementation, the right team, work-group and task force must be appointed and supported. People in the Quality groups (process improvement team, process review team, knowledge improvement team, knowledge transfer team, quality assurance team (also undertaking audits)) are required to be highly mature and capable in terms of understanding Quality so that they can champion quality, plan and execute the plan successfully. The roles and responsibilities of each team and of the individuals in each team must be unambiguous. It is these teams that will raise the motivation, basic knowledge, understanding, and maturity for each and every member of the organisation. For this purpose, organisation-wide training should be arranged. The experienced trainer should impart training in order to minimise resistance and to motivate staff to embrace quality initiatives. This will ensure that, people in the organisation are on the same wavelength when they are dealing with Quality. Training, group discussions, sharing of knowledge are essential to bring the change. Also motivation, exchange of ideas, and quality awareness are the cornerstones of a quality culture and critical to 'institutionalise' the change.

Automated tools, management information systems and decision support systems can help ease the burden of implementing quality processes and standards. Culture change requires Knowledge Management (KM) and knowledge sharing.

The main advantage of using a QA system is that all activities are brought together around the objective of continuous quality improvement. The development and adoption of a new QA system will inevitably bring changes to the organisational structure and changes to the processes. Knowledge Management has its origin in a number of related business improvement areas, such as Total Quality Management (TQM) and Human Resource Management (HRM) (Metaxiotis et al., 2005). TQM is a management philosophy and a methodology that enables an organisation to focus on employee participation through empowerment, teamwork, leadership and recognition of each employee's contribution for achieving the goal of the organisation and maximising customer satisfaction (Deming, 1986).

According to Siakas and Georgiadou (2008) "the new knowledge-based global economy places great importance on creation, use and distribution of information and knowledge. Organisations are focusing on maintaining and enhancing their knowledge capital in order to be innovative and competitive. The ability of the organisations to learn, adapt and change becomes a core competency for their survival and successful organisations are those that create new knowledge, disseminate it throughout the organisation and swiftly embody it into new products and services". The European Higher Education mission embodied by initiatives such that of Bologna translates into the primary objectives of KM through the identification and leveraging of the collective knowledge not only in individual HE institutions but also throughout the European Union and further afield.

Figure 1 below (Georgiadou, 2001) encapsulates the interactions and influences of values, beliefs and experience on decisions and actions. TQM relies on employee empowerment and on continuous review and feedback for improvement.



**Figure 1:** Continuous Improvement through TQM

Every individual, team or organisation sets objectives which lead to decisions and actions for the achievement of the set objectives. The journey from objectives to actions is influenced by experience, beliefs, values, attitudes. Indeed it is influenced by the environment and the culture. It is invariably necessary to review the results of the actions in order to improve the process and its outcomes. TQM empowers all stakeholders to express their opinions throughout the journey/project, and particularly at the review stage. Cultural attitudes at organisational and national levels affect the degree to which management and workforce interact. Cultural sensitivity to criticism may be misconstrued as rudeness. Openness to criticism and empowerment to participate in the decision and review processes result in effective improvements.

### **Guidelines for the successful introduction and implementation of a QA system**

The main advantage of using a quality assurance system is that all activities are brought together around the objective of continuous quality improvement. A quality assurance system needs to incorporate technical, organisational and human issues and presupposes management commitment either through own/internal initiative or through obligation (legal, governmental, European). Openness, consultation and involvement of the workforce in an organisation encourage trust and knowledge sharing (Georgiadou et al., 2006). For example trust in quality is the fundamental prerequisite of mobility and of systems of credit transfer and accumulation. ECTS, the Diploma Supplement, national and since 2005 the overarching European qualifications framework have provided the building blocks towards such mutual trust, but there is still much to do to ensure that academics, administrators, employers and governments fully understand these instruments and will encourage their rapid adoption in practice.

### **Steps towards the development and implementation of a QA system**

The development and implementation of a QA system is a complex and time-consuming process. Good planning and management are required. There is substantial and useful knowledge and practice from a variety of disciplines including Management (of Change, Human Resources, Educational, Cross-Cultural), Information Systems, Software Engineering, Statistics, Sociology and Political Sciences. The principles and the main methods and techniques used by these disciplines will inform, guide, control and evaluate the development and improvement of the QA processes. It is necessary to identify the different components and the local context within which a QA system can be implemented. Actions and practical steps must be planned and executed and therefore groups and individuals need to be identified and suitably trained either in-house or through external expertise.

Table 1 summarises the main components involved in changing the quality culture and in implementing a QA system. It also indicates the principles and the main methods and techniques that can facilitate the processes and implement the actions for reliable QA.

**Table 1: Guidelines for the successful introduction and implementation of a QA system**

<b>Component</b>	<b>Actions</b>	<b>Methods, Techniques and Principles</b>
Quality Culture	Assess maturity Identify existing quality practices, best practice and issues Raise awareness among stakeholders	Self Assessment Methods informed by models such as CMM and TQM for Empowerment Distribution of information Training Consultation Meetings Brainstorming
Expertise	Establish existing in-house expertise Buy-in external expertise Train trainers	Appointing a task force –Quality teams Seeking expert opinion Training of In-house representatives who will train the workforce
Quality Policy	Develop Quality policy based on successes/best practice by other countries/organisations, by taking into account current social and political needs and specific requirements of internal, national, European and international labour market Set up goals & objectives of the QA policy	Discussion Consultation TQM ISO-9001:2000
Central management systems	Define Quality Assurance Structures Define and assign the roles and the responsibilities of the bodies, institutions, committees involved Ensure that QA processes and procedures are understood Identify what data to collect (KPIs) Decide where to find information Design of targets for comparison (what is the meaning of measures) Select research instrument (how to collect data)	TQM (Deming, 1986) & Capability Maturity Models (CMM) BPR (Ahmad et. al, 2007) Process Improvement ISO-9001:2000
Administrative systems	Define and assign the roles and the responsibilities of teams and individuals involved Set operational targets Set up time-table and milestones (integration of tasks)	BPR (Ahmad et. al, 2007) Balanced Score Card (BSC) (Siakas et. al. 2005h)
University-wide data	Set up – develop Management Information Systems/Databases	Statistical Methods (e.g. SPSS)
Information Knowledge	Analyse and interpret data Share knowledge	Data Analysis Data Mining
Resources	Estimate need Allocate funding	Metrics (GQM) (Basili, 1992)

## Conclusion and Future Challenges

The complex process of European harmonisation and particularly the ongoing Bologna process of reforms and harmonisation of Higher Education have gained momentum the results of which will bring unprecedented changes. The societal impact of these changes is currently perceived as desirable despite the implementation difficulties. Collecting, analysing and disseminating the volume and extent of the data and information generated by this process pose many challenges in many contexts (political, technical, economic, socio-cultural and legal). The involvement of industry and other stakeholders (such as parents of students) needs to be planned and monitored so that structural and curricular reforms can be achieved for the greater benefit of society.

As the degree of autonomy in Universities affects their agility and ability to manage change we must guard against autocratic, costly and unworkable systems. Converting aspiration to reality is still a long way away but HE institutions have started developing their strategies working in collaboration with governments, other institutions (national, European and international).

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A. Simonyan, A. Grigoryan, Zh. Aghasyan  
(Yerevan State University)

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2. ²ēçñĬ»Ē »ñ³ĒĒÇŭÝ»ñ,ăăăÝŭ ÁÝ¹ăôÝ»ĒÇ ĬĒÇÝ»Ý ³½.³ŪÇÝ Ū³ĩñ¹Ĭăí:
- 3.ăñĩÇ ³ă³ĩăĩŪ³Ý Ñ³Ū³ĩñ.Ă Ñ³Ū³ă³ĩēĒ³Ý»ôÝ»Ē »ĩăăăĩ³Ýăă÷ăăăĒÇăÝ»ñÇăăÑ³ÝÇÝ»ñÇÝ:

ăñĩÇ »ĩăăăĩ³Ý ŪßĬăôŪĂÇ ŪÇ ßñŭ ĩññ»ñ ĩŌăôô .ăñĬăôŪ »Ý Ñ³Ū³Ēēñ³ÝăôŪ:ăôŪÝ ½»ĬăôŪ³Ý Ū»çăñĩÇ Ý»ñŭÇÝ ³ă³ĩăĩŪ³Ý ēĩÝ¹ñĩÝ»ñÇô ³Ý¹ñ¹ñŌ ĭăñăôŪ ĬēĒăăēĩ³Ý Ĭ³½ŪÇăñĩÇÝ, Ñ³ĩĩă»ē Ýñ³ ÁÝĂ³ôĩñ.»ñÇô Ū»ĬÇÝ ĬēĒăăēÝ»ñÇ Ĭ³ĩñ»Ē³.ăñĬŪ³Ý Ý»ñμăôÑ³ĩÝ Ñ³Ū³ĩñ.ÇÝ, ŭ³Ý½Ç ³ñĩ»Ý ÝĒĩ»ô,ăñ °ăĐ-Ç Ūñô³Ĭô³ŪÇÝ.ĒĒĩăñăăēĩ»ĒăôĀŪăôÝĂ Ū³ñĩŪ³ÇÝ Ý»ñăôĂÝ ĭ, ÇēĬ Ýñ³ Ĭ³ĩñ»Ē³.ăñĬŪ³Ý Ñ³Ū³Ēēñ³Ý³ĩÝ ĬăôăôŪôĂ 40-³ŪŪ³ă³ĩŪăôĀŪăôÝăôÝÇ:

1968 Āĩĩ³ÝÇô Ñ³Ū³Ēēñ³ÝăôŪ .ăñĬ»Ē ĭ ĬēĒăăēÝ»ñÇăñĩĩăñŪ³Ý μ³ñŌñ³ôŪ³Ý ý³ĬăôĒĩ»ĩ,ăăĂ ŪÇăôĀ»Ý³ĩÝ ÝßÝ³ĬăôĀŪ³Ý Ĭ»ÝĩăÝ ĭ »Ō»Ē:ĒăñÑñ¹³ŪÇÝ ĩñÇÝ»ñÇÝ ³ñ¹ŪăôÝ³ĩ»ĩ .ăñĬēĩ Ñ³Ū³ĩñ.Ă Ñ³Ū³Ēēñ³ÝÇ ½³ñ.³ôŪ³Ý 2002 Ā. Ĭñ³.ăăĩ ÑÇŪÝăĩÇÝ ÷ăĒĩ»ô. ý³ĬăôĒĩ»ĩĂ Ĭ»ñ³½Ū³ĩ»ñăĩ»ô Ñ»ĩμăôÑ³ĩÝ Ū³ēÝ³.Çĩ³ĩÝ ĨñĂăôĀŪ³Ý ĩñăăôĀŪ³Ý: ĬăôăôŵĩŭŪÇÝ ÝŪ³Ý ÷ă÷ăĒăôĀŪăôÝĂ »ñ»ŭ Ýă³ĩăôÝ»ñ.

1. ³ēĒăăēÝ»ñÇ Çñ³½»ĬĩĬăôĀŪ³ÝăñĩĂăăÑ»Ē ē»ĬĩăñĩÇăôß¹ăăôĀŪ³Ý Ĭ»ÝĩăăÝăôŪ:
2. Đ³Ū³ĩ»Ē ĨñĂăôĀŪ³ÝăñĩÇ ³ă³ĩăĩŪ³Ý »ñĬăô ÑÇŪÝ³ĩÝ .ăñĬăôŪĂ`ăăă-ý»ēăñ¹ĬēĒăăēĩ³Ý Ĭ³ĩñ»ñÇăăĩñēĩăôŪĂ ..ăñĩĩăñŪ³Ý μ³ñŌñ³ăôŪĂ` Ĭ³Ýŭ ĬÇĩñĬ»Ēăĩ ³ÝĂÝ¹Ñĩ ĨñĂăôĀŪ³Ý Ñ³Ū³»ŭēĩăôŪ: Ē Ĭ»ă,ăñĩĩăñŪ³Ý μ³ñŌñ³ăôŪĂăăă»ēăăĩñ¹ÇñăăŪŪ³Ý ĬĩăôŪ ĭñ ĬēĒăăēÝ»ñÇ ŪñôăôĀ³ŪÇÝĂÝĩăăôĀŪ³Ý ÑÇŪŭăôŪ:
3. ³ēĒăăēÝ»ñÇăñĩĩăñŪ³Ý μ³ñŌñ³ôŪ³ÝĂ Ý»ñĬ³Ū³ôĩăŌăăÑ³ÝÇÝ»ñĂ Ñ³Ū³ă³ĩēĒ³Ý»ôÝ»Ē μ³ñŌñ³.ăôŪÝ ĨñĂăôĀŪ³Ý Ñ³Ū³ĩñ.ăôŪ Ĭ³ĩñăŌ ÷ă÷ăĒăôĀŪăôÝÝ»ñÇÝ:

³ēĒăăēÝ»ñÇăñĩĩăñŪ³Ý μ³ñŌñ³ôŪ³Ý Ýăñ Ñ³Ū»ô³ĩñ.Ă Ñ³Ū³Ēēñ³ÝăôŪ ĬÇĩñĬăôŪ ĭñ ĒñôăôôÇă (μăĒĂÝŪ³Ý ³ñ¹Ç Ĭ»ñŪÇÝ³μ³ÝăôĀŪ³Ūμ` Ñ³ñ³ ĨñĂăôĀŪ³Ý Ĭñ³.ñÇ ßñçÝ³ĩÝ»ñăôŪ: Ūăñ Ñ³Ū»ô³ĩñ.Ç Çñ³ĩÝôăôŪÝăôÝ»ñ Ĭ³½Ū³ĩ»ăăĩ³Ý Ĭ³ĩñăôĀŪăôÝÝ»ñ,ăăăÝŭăēĩ ĭÇÝ »ñĬăô Ū³ĩñ¹Ĭăí Ñ³Ū³ĩñ.³ŪÇÝ .. Ý»ñμăôÑ³ĩÝ:

Đ<sup>3</sup>Ú<sup>3</sup>Í<sup>3</sup>ñ<sup>3</sup>·<sup>3</sup>Ú<sup>3</sup>Ç<sup>3</sup>Ý<sup>3</sup> <sup>3</sup>é<sup>3</sup>ç<sup>3</sup>Ç<sup>3</sup>Ý<sup>3</sup> È<sup>3</sup>Ý<sup>3</sup>Ç<sup>3</sup>ñ<sup>3</sup>Á<sup>3</sup> μ<sup>3</sup>Ý<sup>3</sup>·<sup>3</sup>Í<sup>3</sup>é<sup>3</sup>Ç<sup>3</sup> ù<sup>3</sup>ñ<sup>3</sup>»Ý<sup>3</sup>è<sup>3</sup>ñ<sup>3</sup>ñ<sup>3</sup>»Ý<sup>3</sup> Í<sup>3</sup>ñ<sup>3</sup>·<sup>3</sup>í<sup>3</sup>ñ<sup>3</sup>Í<sup>3</sup>í<sup>3</sup> á<sup>3</sup>È<sup>3</sup>Ç<sup>3</sup>Ý<sup>3</sup>»È<sup>3</sup>Ý<sup>3</sup> ¿, á<sup>3</sup>ñ<sup>3</sup>Ç<sup>3</sup> ¿È<sup>3</sup> Í<sup>3</sup>·<sup>3</sup>áo<sup>3</sup>Ú<sup>3</sup> »Ý<sup>3</sup> Ú<sup>3</sup>Ç<sup>3</sup> ß<sup>3</sup>ñ<sup>3</sup>ú<sup>3</sup> <sup>3</sup>Ú<sup>3</sup>È<sup>3</sup> Ñ<sup>3</sup>ñ<sup>3</sup>ó<sup>3</sup>»ñ<sup>3</sup>: °ñ<sup>3</sup>μ<sup>3</sup> Ñ<sup>3</sup>Ú<sup>3</sup>È<sup>3</sup>é<sup>3</sup>ñ<sup>3</sup>Ý<sup>3</sup>Á<sup>3</sup> Ý<sup>3</sup>È<sup>3</sup>Ó<sup>3</sup>»é<sup>3</sup>Ý<sup>3</sup>»ó<sup>3</sup> È<sup>3</sup>ñ<sup>3</sup>ó<sup>3</sup>áo<sup>3</sup>Ç<sup>3</sup>á<sup>3</sup> Í<sup>3</sup>ñ<sup>3</sup>Á<sup>3</sup>áo<sup>3</sup>Á<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup> Ç<sup>3</sup>ñ<sup>3</sup>Í<sup>3</sup>Ý<sup>3</sup>ó<sup>3</sup>áo<sup>3</sup>Ú<sup>3</sup>Á<sup>3</sup>, §<sup>3</sup>·<sup>3</sup>ñ<sup>3</sup>Ó<sup>3</sup>ñ<sup>3</sup>·<sup>3</sup>áo<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup> ·<sup>3</sup> Ñ<sup>3</sup>»í<sup>3</sup>μ<sup>3</sup>áo<sup>3</sup>Ñ<sup>3</sup>Í<sup>3</sup>Ý<sup>3</sup> Ú<sup>3</sup>é<sup>3</sup>Ý<sup>3</sup>·<sup>3</sup>Ç<sup>3</sup>Í<sup>3</sup>Ý<sup>3</sup> Í<sup>3</sup>ñ<sup>3</sup>Á<sup>3</sup>áo<sup>3</sup>Á<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup> Ú<sup>3</sup>é<sup>3</sup>Ç<sup>3</sup>Ý<sup>3</sup>! ĐĐ<sup>3</sup> ù<sup>3</sup>ñ<sup>3</sup>»Ý<sup>3</sup>ù<sup>3</sup>Á<sup>3</sup> á<sup>3</sup>Í<sup>3</sup>ñ<sup>3</sup>: <sup>2</sup>Ú<sup>3</sup>è<sup>3</sup>ù<sup>3</sup>ñ<sup>3</sup> ù<sup>3</sup>ñ<sup>3</sup>»Ý<sup>3</sup>ù<sup>3</sup>Ý<sup>3</sup> Á<sup>3</sup>Ý<sup>3</sup>áo<sup>3</sup>Ý<sup>3</sup>í<sup>3</sup>»È<sup>3</sup>áo<sup>3</sup>ó<sup>3</sup>·<sup>3</sup>ñ<sup>3</sup>»Á<sup>3</sup>» á<sup>3</sup>ñ<sup>3</sup>è<sup>3</sup> Í<sup>3</sup>ñ<sup>3</sup>Ç<sup>3</sup> <sup>3</sup>Ý<sup>3</sup>ó<sup>3</sup>, <sup>1</sup>»é<sup>3</sup>·<sup>3</sup>è<sup>3</sup> Ò<sup>3</sup>ß<sup>3</sup>Í<sup>3</sup>Í<sup>3</sup>í<sup>3</sup> á<sup>3</sup>¿, á<sup>3</sup>ñ<sup>3</sup>á<sup>3</sup>ý<sup>3</sup>»é<sup>3</sup>á<sup>3</sup>ñ<sup>3</sup>·<sup>3</sup>Í<sup>3</sup>é<sup>3</sup>Á<sup>3</sup>é<sup>3</sup>Í<sup>3</sup>Ý<sup>3</sup> Í<sup>3</sup>·<sup>3</sup>Ú<sup>3</sup>Ç<sup>3</sup> í<sup>3</sup>»ñ<sup>3</sup>á<sup>3</sup>·<sup>3</sup>ñ<sup>3</sup>é<sup>3</sup>í<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup> Í<sup>3</sup>Ý<sup>3</sup>Á<sup>3</sup>Ý<sup>3</sup>Í<sup>3</sup>ñ<sup>3</sup>·<sup>3</sup>Á<sup>3</sup>, á<sup>3</sup>ñ<sup>3</sup>Á<sup>3</sup> á<sup>3</sup>»í<sup>3</sup>ù<sup>3</sup> ¿, È<sup>3</sup>áo<sup>3</sup>Í<sup>3</sup>»ñ<sup>3</sup> Ñ<sup>3</sup>Ú<sup>3</sup>»ó<sup>3</sup>Í<sup>3</sup>ñ<sup>3</sup>·<sup>3</sup>Ú<sup>3</sup>Ç<sup>3</sup>Ý<sup>3</sup> Ñ<sup>3</sup>ñ<sup>3</sup>ó<sup>3</sup>»ñ<sup>3</sup>:

°ñ<sup>3</sup>í<sup>3</sup>ñ<sup>3</sup>á<sup>3</sup>ñ<sup>3</sup>·<sup>3</sup>Á<sup>3</sup> á<sup>3</sup>»Í<sup>3</sup>Í<sup>3</sup>Ý<sup>3</sup> ý<sup>3</sup>Ç<sup>3</sup>Ý<sup>3</sup>Ý<sup>3</sup>é<sup>3</sup>í<sup>3</sup>ñ<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup> μ<sup>3</sup>ó<sup>3</sup>Í<sup>3</sup>Ú<sup>3</sup>áo<sup>3</sup>Á<sup>3</sup>Ú<sup>3</sup>áo<sup>3</sup>Ý<sup>3</sup>Ý<sup>3</sup> ¿, á<sup>3</sup>ñ<sup>3</sup>Ç<sup>3</sup> á<sup>3</sup>·<sup>3</sup>×<sup>3</sup>é<sup>3</sup>á<sup>3</sup>í<sup>3</sup> á<sup>3</sup>ñ<sup>3</sup>Í<sup>3</sup>í<sup>3</sup>ñ<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup> μ<sup>3</sup>ñ<sup>3</sup>Ó<sup>3</sup>ñ<sup>3</sup>ó<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup> Ñ<sup>3</sup>Ú<sup>3</sup>È<sup>3</sup>é<sup>3</sup>ñ<sup>3</sup>Ý<sup>3</sup>Í<sup>3</sup>Ý<sup>3</sup> <sup>1</sup>é<sup>3</sup>Á<sup>3</sup>Ý<sup>3</sup>Á<sup>3</sup>ó<sup>3</sup>Ý<sup>3</sup>»ñ<sup>3</sup>Ç<sup>3</sup>Ý<sup>3</sup> Ú<sup>3</sup>Ú<sup>3</sup>áo<sup>3</sup>è<sup>3</sup> μ<sup>3</sup>áo<sup>3</sup>Ñ<sup>3</sup>»ñ<sup>3</sup>Ç<sup>3</sup> Ú<sup>3</sup>é<sup>3</sup>Ý<sup>3</sup>Í<sup>3</sup>ó<sup>3</sup>áo<sup>3</sup>Á<sup>3</sup>Ú<sup>3</sup>áo<sup>3</sup>Ý<sup>3</sup>Á<sup>3</sup> ·<sup>3</sup>á<sup>3</sup>Ñ<sup>3</sup>ó<sup>3</sup>áo<sup>3</sup>ó<sup>3</sup>Ç<sup>3</sup>á<sup>3</sup> á<sup>3</sup>¿: <sup>2</sup>Ý<sup>3</sup>μ<sup>3</sup>Í<sup>3</sup>ñ<sup>3</sup>ñ<sup>3</sup> »Ý<sup>3</sup> Ý<sup>3</sup>·<sup>3</sup> Ñ<sup>3</sup>Ú<sup>3</sup>Á<sup>3</sup>Ú<sup>3</sup>Á<sup>3</sup>í<sup>3</sup>á<sup>3</sup>Ó<sup>3</sup> <sup>3</sup>ñ<sup>3</sup>Í<sup>3</sup>μ<sup>3</sup>Ú<sup>3</sup>áo<sup>3</sup>ç<sup>3</sup>»Í<sup>3</sup>Ú<sup>3</sup>Ç<sup>3</sup>Ý<sup>3</sup> Ú<sup>3</sup>Ç<sup>3</sup>ç<sup>3</sup>áo<sup>3</sup>Ý<sup>3</sup>»ñ<sup>3</sup>Á<sup>3</sup>, Ý<sup>3</sup>»ñ<sup>3</sup>í<sup>3</sup>áo<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup>»ñ<sup>3</sup>Á<sup>3</sup> ù<sup>3</sup>Ç<sup>3</sup>á<sup>3</sup> »Ý<sup>3</sup> ·<sup>3</sup> Ñ<sup>3</sup>Ú<sup>3</sup>Í<sup>3</sup>ñ<sup>3</sup>·<sup>3</sup>Í<sup>3</sup>í<sup>3</sup> á<sup>3</sup>»Ý<sup>3</sup>:

°ñ<sup>3</sup>ñ<sup>3</sup>á<sup>3</sup>ñ<sup>3</sup>·<sup>3</sup>Á<sup>3</sup> È<sup>3</sup>Ý<sup>3</sup>Ç<sup>3</sup>ñ<sup>3</sup>Á<sup>3</sup> È<sup>3</sup>ñ<sup>3</sup>ó<sup>3</sup>áo<sup>3</sup>Ç<sup>3</sup>á<sup>3</sup> Ú<sup>3</sup>é<sup>3</sup>Ý<sup>3</sup>·<sup>3</sup>Ç<sup>3</sup>Í<sup>3</sup>Ý<sup>3</sup> Í<sup>3</sup>ñ<sup>3</sup>Á<sup>3</sup>áo<sup>3</sup>Á<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup> <sup>1</sup>·<sup>3</sup>ñ<sup>3</sup>·<sup>3</sup>ó<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup> Ñ<sup>3</sup>Ú<sup>3</sup>»ó<sup>3</sup>Í<sup>3</sup>ñ<sup>3</sup>·<sup>3</sup>Ç<sup>3</sup> μ<sup>3</sup>ó<sup>3</sup>Í<sup>3</sup>Ú<sup>3</sup>áo<sup>3</sup>Á<sup>3</sup>Ú<sup>3</sup>áo<sup>3</sup>Ý<sup>3</sup>Ý<sup>3</sup> ¿, <sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup>Ç<sup>3</sup>Ý<sup>3</sup>á<sup>3</sup> Ñ<sup>3</sup>ñ<sup>3</sup>·<sup>3</sup>á<sup>3</sup> ¿, Ý<sup>3</sup>ñ<sup>3</sup>·<sup>3</sup> í<sup>3</sup>»ñ<sup>3</sup>·<sup>3</sup>Ç<sup>3</sup>Ú<sup>3</sup>é<sup>3</sup>í<sup>3</sup>ñ<sup>3</sup>áo<sup>3</sup>Ú<sup>3</sup>Á<sup>3</sup> Ñ<sup>3</sup>Ç<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup>Í<sup>3</sup>Ý<sup>3</sup> Í<sup>3</sup>ñ<sup>3</sup>Á<sup>3</sup>Í<sup>3</sup>Ý<sup>3</sup> Í<sup>3</sup>ñ<sup>3</sup>·<sup>3</sup>ñ<sup>3</sup>Ç<sup>3</sup> Í<sup>3</sup>é<sup>3</sup>áo<sup>3</sup>ó<sup>3</sup>Í<sup>3</sup>ù<sup>3</sup>Ç<sup>3</sup> ·<sup>3</sup> μ<sup>3</sup>á<sup>3</sup>Ý<sup>3</sup>·<sup>3</sup>Í<sup>3</sup>áo<sup>3</sup>Á<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup> Ç<sup>3</sup>ñ<sup>3</sup>Í<sup>3</sup>Ý<sup>3</sup>ó<sup>3</sup>í<sup>3</sup>á<sup>3</sup>Ó<sup>3</sup> í<sup>3</sup>»ñ<sup>3</sup>·<sup>3</sup>é<sup>3</sup>Á<sup>3</sup>áo<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup>»ñ<sup>3</sup>Ç<sup>3</sup>Ý<sup>3</sup> Ñ<sup>3</sup>Ú<sup>3</sup>·<sup>3</sup>á<sup>3</sup>·<sup>3</sup>é<sup>3</sup>È<sup>3</sup>Ý<sup>3</sup>: <sup>3</sup>·<sup>3</sup>Ú<sup>3</sup>é<sup>3</sup>í<sup>3</sup>Ç<sup>3</sup>×<sup>3</sup>Ý<sup>3</sup> Í<sup>3</sup>ñ<sup>3</sup>Á<sup>3</sup>áo<sup>3</sup>Á<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup> Ñ<sup>3</sup>Ú<sup>3</sup>Í<sup>3</sup>ñ<sup>3</sup>·<sup>3</sup>áo<sup>3</sup>Ú<sup>3</sup> È<sup>3</sup>·<sup>3</sup>áo<sup>3</sup>Ú<sup>3</sup> Í<sup>3</sup>·<sup>3</sup> μ<sup>3</sup>áo<sup>3</sup>Ñ<sup>3</sup>Í<sup>3</sup>Ý<sup>3</sup> ·<sup>3</sup> Ñ<sup>3</sup>»í<sup>3</sup>μ<sup>3</sup>áo<sup>3</sup>Ñ<sup>3</sup>Í<sup>3</sup>Ý<sup>3</sup> Í<sup>3</sup>ñ<sup>3</sup>Á<sup>3</sup>Í<sup>3</sup>Ý<sup>3</sup> Ú<sup>3</sup>Í<sup>3</sup>ñ<sup>3</sup>Í<sup>3</sup>Í<sup>3</sup>Ý<sup>3</sup>»ñ<sup>3</sup>Ç<sup>3</sup> Ú<sup>3</sup>Ç<sup>3</sup>ç<sup>3</sup>·<sup>3</sup>: <sup>2</sup>Ú<sup>3</sup>è<sup>3</sup>ù<sup>3</sup>ñ<sup>3</sup> á<sup>3</sup>ñ<sup>3</sup>Í<sup>3</sup>í<sup>3</sup>ñ<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup> μ<sup>3</sup>ñ<sup>3</sup>Ó<sup>3</sup>ñ<sup>3</sup>ó<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup> á<sup>3</sup>ó<sup>3</sup>é<sup>3</sup>áo<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup>Í<sup>3</sup>Ý<sup>3</sup> á<sup>3</sup>È<sup>3</sup>Ý<sup>3</sup>Ý<sup>3</sup>»ñ<sup>3</sup>Á<sup>3</sup> Í<sup>3</sup>·<sup>3</sup>Ú<sup>3</sup>»È<sup>3</sup>Ç<sup>3</sup>é<sup>3</sup> <sup>3</sup>Ý<sup>3</sup>Ñ<sup>3</sup>ñ<sup>3</sup>·<sup>3</sup>Á<sup>3</sup>»í<sup>3</sup> ¿, Ñ<sup>3</sup>ß<sup>3</sup>Í<sup>3</sup>Ç<sup>3</sup> <sup>3</sup>é<sup>3</sup>Ý<sup>3</sup>»È<sup>3</sup> Ý<sup>3</sup>·<sup>3</sup> Ú<sup>3</sup>áo<sup>3</sup>ñ<sup>3</sup>·<sup>3</sup>ú<sup>3</sup>Ý<sup>3</sup>á<sup>3</sup>Ú<sup>3</sup>áo<sup>3</sup>ñ<sup>3</sup> Ú<sup>3</sup>é<sup>3</sup>Ý<sup>3</sup>·<sup>3</sup>Ç<sup>3</sup>í<sup>3</sup>áo<sup>3</sup>Á<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup> Ñ<sup>3</sup>Ú<sup>3</sup>ñ<sup>3</sup> μ<sup>3</sup>Í<sup>3</sup>É<sup>3</sup>í<sup>3</sup>ñ<sup>3</sup>Ç<sup>3</sup> ·<sup>3</sup> Ú<sup>3</sup>·<sup>3</sup>Ç<sup>3</sup>è<sup>3</sup>í<sup>3</sup>ñ<sup>3</sup>á<sup>3</sup>è<sup>3</sup>Ç<sup>3</sup> Í<sup>3</sup>ñ<sup>3</sup>Á<sup>3</sup>Í<sup>3</sup>Ý<sup>3</sup> Í<sup>3</sup>ñ<sup>3</sup>·<sup>3</sup>ñ<sup>3</sup>Ç<sup>3</sup> Ý<sup>3</sup>á<sup>3</sup>ñ<sup>3</sup>áo<sup>3</sup>Ú<sup>3</sup>Á<sup>3</sup>Ý<sup>3</sup>»ñ<sup>3</sup>Á<sup>3</sup>, ù<sup>3</sup>Ý<sup>3</sup>·<sup>3</sup>Ú<sup>3</sup>Ç<sup>3</sup> <sup>1</sup>é<sup>3</sup>é<sup>3</sup>Á<sup>3</sup>é<sup>3</sup>Á<sup>3</sup> Ñ<sup>3</sup>×<sup>3</sup>·<sup>3</sup>È<sup>3</sup> í<sup>3</sup>»Ó<sup>3</sup>Ú<sup>3</sup>Í<sup>3</sup> á<sup>3</sup>¿ ·<sup>3</sup>Ç<sup>3</sup>í<sup>3</sup>»È<sup>3</sup>Ç<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup>»ñ<sup>3</sup>Ç<sup>3</sup> <sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup> Ý<sup>3</sup>Í<sup>3</sup>·<sup>3</sup>áo<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup>Ç<sup>3</sup>Ý<sup>3</sup>, á<sup>3</sup>ñ<sup>3</sup>Á<sup>3</sup> á<sup>3</sup>·<sup>3</sup>Ñ<sup>3</sup>Ý<sup>3</sup>ç<sup>3</sup>í<sup>3</sup>áo<sup>3</sup>Ú<sup>3</sup> ¿, í<sup>3</sup>Ú<sup>3</sup>È<sup>3</sup> Ú<sup>3</sup>é<sup>3</sup>Ý<sup>3</sup>·<sup>3</sup>Ç<sup>3</sup>í<sup>3</sup>áo<sup>3</sup>Á<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup> ß<sup>3</sup>ñ<sup>3</sup>ç<sup>3</sup>Ý<sup>3</sup>Í<sup>3</sup>ñ<sup>3</sup>Í<sup>3</sup>Ç<sup>3</sup>ó<sup>3</sup>:

<sup>2</sup>Ú<sup>3</sup>è<sup>3</sup> Ñ<sup>3</sup>ñ<sup>3</sup>·<sup>3</sup>á<sup>3</sup> Ñ<sup>3</sup>ñ<sup>3</sup>ó<sup>3</sup>»ñ<sup>3</sup>Ç<sup>3</sup>Ý<sup>3</sup> á<sup>3</sup>ñ<sup>3</sup>á<sup>3</sup>ß<sup>3</sup>Í<sup>3</sup>Ç<sup>3</sup> È<sup>3</sup>áo<sup>3</sup>Í<sup>3</sup>áo<sup>3</sup>Ú<sup>3</sup> Í<sup>3</sup>È<sup>3</sup>áo<sup>3</sup> Ý<sup>3</sup>á<sup>3</sup>·<sup>3</sup>Í<sup>3</sup>á<sup>3</sup> Ñ<sup>3</sup>Ú<sup>3</sup>È<sup>3</sup>é<sup>3</sup>ñ<sup>3</sup>Ý<sup>3</sup>Á<sup>3</sup> Ú<sup>3</sup>ß<sup>3</sup>Í<sup>3</sup>·<sup>3</sup>ó<sup>3</sup> ·<sup>3</sup> ·<sup>3</sup>á<sup>3</sup>ñ<sup>3</sup>Í<sup>3</sup>áo<sup>3</sup>Á<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup> Ú<sup>3</sup>»ç<sup>3</sup> <sup>1</sup>ñ<sup>3</sup>»ó<sup>3</sup> Ú<sup>3</sup>Ç<sup>3</sup> ß<sup>3</sup>ñ<sup>3</sup>ú<sup>3</sup> Í<sup>3</sup>ñ<sup>3</sup>·<sup>3</sup>á<sup>3</sup>ñ<sup>3</sup>·<sup>3</sup>áo<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup> ÷<sup>3</sup>é<sup>3</sup>Í<sup>3</sup>Á<sup>3</sup>Ó<sup>3</sup>Á<sup>3</sup>»ñ<sup>3</sup>.

1. Đ<sup>3</sup>»í<sup>3</sup>μ<sup>3</sup>áo<sup>3</sup>Ñ<sup>3</sup>Í<sup>3</sup>Ý<sup>3</sup> È<sup>3</sup>ñ<sup>3</sup>ó<sup>3</sup>áo<sup>3</sup>Ç<sup>3</sup>á<sup>3</sup> Í<sup>3</sup>ñ<sup>3</sup>Á<sup>3</sup>áo<sup>3</sup>Á<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup> Í<sup>3</sup>·<sup>3</sup>Ú<sup>3</sup>Ú<sup>3</sup>Í<sup>3</sup>»ñ<sup>3</sup>á<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup> Ñ<sup>3</sup>Ú<sup>3</sup>»ó<sup>3</sup>Í<sup>3</sup>ñ<sup>3</sup>·<sup>3</sup>Á<sup>3</sup>:
2. Đ<sup>3</sup>»í<sup>3</sup>μ<sup>3</sup>áo<sup>3</sup>Ñ<sup>3</sup>Í<sup>3</sup>Ý<sup>3</sup> È<sup>3</sup>ñ<sup>3</sup>ó<sup>3</sup>áo<sup>3</sup>Ç<sup>3</sup>á<sup>3</sup> Í<sup>3</sup>ñ<sup>3</sup>Á<sup>3</sup>áo<sup>3</sup>Á<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup> Í<sup>3</sup>ñ<sup>3</sup>·<sup>3</sup>ñ<sup>3</sup>Ç<sup>3</sup>Ý<sup>3</sup> Ý<sup>3</sup>»ñ<sup>3</sup>Í<sup>3</sup>Ú<sup>3</sup>ó<sup>3</sup>í<sup>3</sup>á<sup>3</sup>Ó<sup>3</sup> á<sup>3</sup>·<sup>3</sup>Ñ<sup>3</sup>Ý<sup>3</sup>Ç<sup>3</sup>Ý<sup>3</sup>»ñ<sup>3</sup>Á<sup>3</sup>:
3. Í<sup>3</sup>ñ<sup>3</sup>Á<sup>3</sup>·<sup>3</sup>Ç<sup>3</sup>Í<sup>3</sup>Ý<sup>3</sup> μ<sup>3</sup>Ý<sup>3</sup>·<sup>3</sup>Í<sup>3</sup>é<sup>3</sup>Ý<sup>3</sup>»ñ<sup>3</sup>Ç<sup>3</sup> Ñ<sup>3</sup>Ç<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup>È<sup>3</sup>Ý<sup>3</sup>·<sup>3</sup>Ç<sup>3</sup>ñ<sup>3</sup>Ý<sup>3</sup>»ñ<sup>3</sup>Á<sup>3</sup> ·<sup>3</sup> ·<sup>3</sup> <sup>1</sup>·<sup>3</sup>ñ<sup>3</sup>·<sup>3</sup>ó<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup> ·<sup>3</sup>»ñ<sup>3</sup>Í<sup>3</sup>áo<sup>3</sup>Ó<sup>3</sup>áo<sup>3</sup>Á<sup>3</sup>Ú<sup>3</sup>áo<sup>3</sup>Ý<sup>3</sup>»ñ<sup>3</sup>Á<sup>3</sup>:

<sup>3</sup>é<sup>3</sup>È<sup>3</sup>á<sup>3</sup>é<sup>3</sup>Ý<sup>3</sup>»ñ<sup>3</sup>Ç<sup>3</sup> í<sup>3</sup>»ñ<sup>3</sup>á<sup>3</sup>·<sup>3</sup>ñ<sup>3</sup>é<sup>3</sup>í<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup> Ñ<sup>3</sup>ñ<sup>3</sup>ó<sup>3</sup>»ñ<sup>3</sup>Á<sup>3</sup> È<sup>3</sup>ñ<sup>3</sup>ó<sup>3</sup>áo<sup>3</sup>Ç<sup>3</sup>á<sup>3</sup> Ú<sup>3</sup>é<sup>3</sup>Ý<sup>3</sup>·<sup>3</sup>Ç<sup>3</sup>Í<sup>3</sup>Ý<sup>3</sup> Í<sup>3</sup>ñ<sup>3</sup>Á<sup>3</sup>áo<sup>3</sup>Á<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup> Ñ<sup>3</sup>»Ý<sup>3</sup>ù<sup>3</sup>Ç<sup>3</sup>Ý<sup>3</sup> <sup>1</sup>Ç<sup>3</sup>·<sup>3</sup>ñ<sup>3</sup>Í<sup>3</sup>»È<sup>3</sup>Á<sup>3</sup> <sup>3</sup>ñ<sup>3</sup>·<sup>3</sup>Ç<sup>3</sup>Í<sup>3</sup>Ý<sup>3</sup> ¿, Ñ<sup>3</sup>Ú<sup>3</sup>Ç<sup>3</sup> ù<sup>3</sup>Ý<sup>3</sup>Ç<sup>3</sup> <sup>3</sup>é<sup>3</sup>áo<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup>»ñ<sup>3</sup>á<sup>3</sup>í<sup>3</sup>.

1. á<sup>3</sup>á<sup>3</sup> Ú<sup>3</sup>Ç<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup> È<sup>3</sup>ñ<sup>3</sup>ó<sup>3</sup>áo<sup>3</sup>Ç<sup>3</sup>á<sup>3</sup> Í<sup>3</sup>ñ<sup>3</sup>Á<sup>3</sup>áo<sup>3</sup>Á<sup>3</sup>Ú<sup>3</sup>áo<sup>3</sup>Ý<sup>3</sup>Ý<sup>3</sup> ¿, »Ý<sup>3</sup>Á<sup>3</sup>·<sup>3</sup>ñ<sup>3</sup>áo<sup>3</sup>Ú<sup>3</sup> ·<sup>3</sup>Ç<sup>3</sup>í<sup>3</sup>»È<sup>3</sup>Ç<sup>3</sup>ù<sup>3</sup>Ý<sup>3</sup>»ñ<sup>3</sup>Ç<sup>3</sup> Ý<sup>3</sup>á<sup>3</sup>ñ<sup>3</sup>ó<sup>3</sup>áo<sup>3</sup>Ú<sup>3</sup>, <sup>3</sup>Ú<sup>3</sup>È<sup>3</sup>·<sup>3</sup> μ<sup>3</sup>ñ<sup>3</sup>Ó<sup>3</sup>ñ<sup>3</sup>·<sup>3</sup>áo<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup> Í<sup>3</sup>ñ<sup>3</sup>Á<sup>3</sup>áo<sup>3</sup>Á<sup>3</sup>Ú<sup>3</sup>áo<sup>3</sup>Ý<sup>3</sup>Ý<sup>3</sup> ¿, Ú<sup>3</sup>í<sup>3</sup>»È<sup>3</sup> È<sup>3</sup>á<sup>3</sup>ñ<sup>3</sup>·<sup>3</sup>áo<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup> ÷<sup>3</sup>á<sup>3</sup>÷<sup>3</sup>á<sup>3</sup>È<sup>3</sup>áo<sup>3</sup>Á<sup>3</sup>Ú<sup>3</sup>áo<sup>3</sup>Ý<sup>3</sup>Ý<sup>3</sup>»ñ<sup>3</sup>Ç<sup>3</sup> Ñ<sup>3</sup>áo<sup>3</sup>Ý<sup>3</sup>, ·<sup>3</sup> μ<sup>3</sup>·<sup>3</sup>Ú<sup>3</sup>é<sup>3</sup>í<sup>3</sup>Ç<sup>3</sup>×<sup>3</sup>Ý<sup>3</sup> μ<sup>3</sup>ñ<sup>3</sup>Ó<sup>3</sup>ñ<sup>3</sup>·<sup>3</sup>áo<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup> Í<sup>3</sup>ñ<sup>3</sup>Á<sup>3</sup>áo<sup>3</sup>Á<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup> á<sup>3</sup>·<sup>3</sup>ñ<sup>3</sup>·<sup>3</sup>Ú<sup>3</sup>áo<sup>3</sup>Ú<sup>3</sup> <sup>3</sup>Ý<sup>3</sup>Ñ<sup>3</sup>ñ<sup>3</sup>·<sup>3</sup>Á<sup>3</sup>»í<sup>3</sup> ¿, Ñ<sup>3</sup>·<sup>3</sup>Ú<sup>3</sup>Í<sup>3</sup>áo<sup>3</sup>Ý<sup>3</sup>á<sup>3</sup> <sup>1</sup>ñ<sup>3</sup>Ó<sup>3</sup>Ý<sup>3</sup>»È<sup>3</sup> ÷<sup>3</sup>á<sup>3</sup>÷<sup>3</sup>á<sup>3</sup>È<sup>3</sup>áo<sup>3</sup>Á<sup>3</sup>Ú<sup>3</sup>áo<sup>3</sup>Ý<sup>3</sup>Ý<sup>3</sup>»ñ<sup>3</sup>Á<sup>3</sup> μ<sup>3</sup>á<sup>3</sup>È<sup>3</sup>á<sup>3</sup>ñ<sup>3</sup> Ú<sup>3</sup>Í<sup>3</sup>ñ<sup>3</sup>·<sup>3</sup>Í<sup>3</sup>Ý<sup>3</sup>»ñ<sup>3</sup>áo<sup>3</sup>Ú<sup>3</sup>:
2. È<sup>3</sup>ñ<sup>3</sup>ó<sup>3</sup>áo<sup>3</sup>Ç<sup>3</sup>á<sup>3</sup> Ú<sup>3</sup>é<sup>3</sup>Ý<sup>3</sup>·<sup>3</sup>Ç<sup>3</sup>Í<sup>3</sup>Ý<sup>3</sup> Í<sup>3</sup>ñ<sup>3</sup>Á<sup>3</sup>áo<sup>3</sup>Á<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup> <sup>3</sup>é<sup>3</sup>Ý<sup>3</sup>Ó<sup>3</sup>Ý<sup>3</sup>·<sup>3</sup>Ñ<sup>3</sup>·<sup>3</sup>Í<sup>3</sup>áo<sup>3</sup>Á<sup>3</sup>Ú<sup>3</sup>áo<sup>3</sup>Ý<sup>3</sup>Ý<sup>3</sup>»ñ<sup>3</sup>Ç<sup>3</sup>ó<sup>3</sup> ¿, á<sup>3</sup>ñ<sup>3</sup>·<sup>3</sup>Í<sup>3</sup>Ç<sup>3</sup>Ý<sup>3</sup>Ý<sup>3</sup>»ñ<sup>3</sup>Í<sup>3</sup>Ú<sup>3</sup>ó<sup>3</sup>í<sup>3</sup>á<sup>3</sup>Ó<sup>3</sup> μ<sup>3</sup>ñ<sup>3</sup>Ó<sup>3</sup>ñ<sup>3</sup>·<sup>3</sup>á<sup>3</sup>·<sup>3</sup>Ñ<sup>3</sup>·<sup>3</sup>Ý<sup>3</sup>Ç<sup>3</sup>Ý<sup>3</sup>»ñ<sup>3</sup>Á<sup>3</sup>: Đ<sup>3</sup>Ú<sup>3</sup>È<sup>3</sup>é<sup>3</sup>ñ<sup>3</sup>Ý<sup>3</sup>áo<sup>3</sup>Ú<sup>3</sup> Ç<sup>3</sup>ñ<sup>3</sup>Í<sup>3</sup>Ý<sup>3</sup>ó<sup>3</sup>í<sup>3</sup>á<sup>3</sup>Ó<sup>3</sup> »Ý<sup>3</sup> È<sup>3</sup>ñ<sup>3</sup>ó<sup>3</sup>áo<sup>3</sup>Ç<sup>3</sup>á<sup>3</sup> Í<sup>3</sup>ñ<sup>3</sup>Á<sup>3</sup>áo<sup>3</sup>Á<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup> μ<sup>3</sup>·<sup>3</sup>Ú<sup>3</sup>Ú<sup>3</sup>Í<sup>3</sup>·<sup>3</sup>Ý<sup>3</sup> Í<sup>3</sup>ñ<sup>3</sup>·<sup>3</sup>ñ<sup>3</sup>»ñ<sup>3</sup>, á<sup>3</sup>ñ<sup>3</sup>á<sup>3</sup>Ý<sup>3</sup>ó<sup>3</sup> Ú<sup>3</sup>é<sup>3</sup>Ý<sup>3</sup>Í<sup>3</sup>ó<sup>3</sup>áo<sup>3</sup>Á<sup>3</sup>Ú<sup>3</sup>áo<sup>3</sup>Ý<sup>3</sup>Á<sup>3</sup> <sup>1</sup>é<sup>3</sup>é<sup>3</sup>Á<sup>3</sup>é<sup>3</sup>Ç<sup>3</sup>Ý<sup>3</sup> Ñ<sup>3</sup>ñ<sup>3</sup>Í<sup>3</sup>í<sup>3</sup>ñ<sup>3</sup>áo<sup>3</sup>Ú<sup>3</sup> ¿, è<sup>3</sup>í<sup>3</sup>»Ó<sup>3</sup>Í<sup>3</sup>»È<sup>3</sup> Ý<sup>3</sup>á<sup>3</sup>ñ<sup>3</sup> <sup>1</sup>é<sup>3</sup>Á<sup>3</sup>Ý<sup>3</sup>Á<sup>3</sup>ó<sup>3</sup>Ý<sup>3</sup>»ñ<sup>3</sup>, Í<sup>3</sup>Ç<sup>3</sup>ñ<sup>3</sup>é<sup>3</sup>»È<sup>3</sup> Í<sup>3</sup>ñ<sup>3</sup>Á<sup>3</sup>Í<sup>3</sup>Ý<sup>3</sup> í<sup>3</sup>»È<sup>3</sup>Ý<sup>3</sup>á<sup>3</sup>È<sup>3</sup>á<sup>3</sup>·<sup>3</sup>Ç<sup>3</sup>Ý<sup>3</sup>»ñ<sup>3</sup>: <sup>2</sup>Ú<sup>3</sup>è<sup>3</sup> Ç<sup>3</sup>Ú<sup>3</sup>é<sup>3</sup>í<sup>3</sup>á<sup>3</sup> í<sup>3</sup>»ñ<sup>3</sup>á<sup>3</sup>·<sup>3</sup>ñ<sup>3</sup>é<sup>3</sup>í<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup> Í<sup>3</sup>ñ<sup>3</sup>·<sup>3</sup>ñ<sup>3</sup>Á<sup>3</sup> Ú<sup>3</sup>áo<sup>3</sup>ñ<sup>3</sup>·<sup>3</sup>é<sup>3</sup>Í<sup>3</sup> Ñ<sup>3</sup>é<sup>3</sup>ñ<sup>3</sup>Í<sup>3</sup>Í<sup>3</sup>Ý<sup>3</sup> Ñ<sup>3</sup>Í<sup>3</sup>Í<sup>3</sup>ñ<sup>3</sup>Ú<sup>3</sup>·<sup>3</sup>ñ<sup>3</sup>Ú<sup>3</sup>Ý<sup>3</sup> <sup>1</sup>»ñ<sup>3</sup> »Ý<sup>3</sup> Í<sup>3</sup>·<sup>3</sup>ñ<sup>3</sup>áo<sup>3</sup>Ú<sup>3</sup> <sup>1</sup>é<sup>3</sup>é<sup>3</sup>Ý<sup>3</sup>·<sup>3</sup>áo<sup>3</sup>Ç<sup>3</sup>Ý<sup>3</sup> ·<sup>3</sup>Ý<sup>3</sup>Ñ<sup>3</sup>·<sup>3</sup>Í<sup>3</sup>»È<sup>3</sup>á<sup>3</sup>í<sup>3</sup> <sup>3</sup>ñ<sup>3</sup>·<sup>3</sup>Ý<sup>3</sup> Ú<sup>3</sup>é<sup>3</sup>Ý<sup>3</sup>·<sup>3</sup>»Í<sup>3</sup>Ç<sup>3</sup> í<sup>3</sup>»è<sup>3</sup>Ý<sup>3</sup>Í<sup>3</sup>Ú<sup>3</sup>áo<sup>3</sup>Ý<sup>3</sup>Ç<sup>3</sup>ó<sup>3</sup>:
3. È<sup>3</sup>ñ<sup>3</sup>ó<sup>3</sup>áo<sup>3</sup>Ç<sup>3</sup>á<sup>3</sup>



μάδΝ»ñÇó: ε³Ι³ÚÝ Çñ³Ψ³ΥάδÙ ÙÇçμάδΝ³Ψ³Υ άδεάδóÙ³Ý Ι³½Ú³Ψ³»ñάάδÙÁ ..  
 Ν³Ú³Ψ³»Õ Ιñ³.ñ»ñÇ Çñ³Ψ³Υ³άάδÙÝ ÁÝ¹³Ù»ÝÁ ΙñÁ³÷άñÓÇ Ι³ñ.³Ψ³×³Ψ³ άδÝ»Ý:

7. ³ε³ΕάεÝ»ñÇ Εñ³άάδóÇά ΙñÁάδóÃÙ³Ý ι³ñμ»ñ³άάδÙÁ (άñ³Ψ³ίáñÙ³Ý μ³ñÓñ³άάδÙ, ί»ñ³ά³ñ³εíάδÙ, εí³Á³ίáñάδÙ, εí»ÕÍ³.άñÍ³Ψ³Υ ³ñÓ³ίάδñ¹ .. ³ÚΕÝα ÁÝíñάάÃÙ³Ý Çñ³ίάδÝù ¿ ι³ΕÇε ³ÙμÇάÝÝ»ñÇÝ άδ γ³ίάδΕí»íÝ»ñÇÝ, ÇεÍ Ν³Ú³Εε³ñ³ÝÇÝ ΝÝ³ñ³ίáñάάÃÙάδÝ Ν³çάñ¹ ι³ñ³ÝÇό ³ÝόÝ»Εάδ ¹³ε³ΕάεÝ»ñÇ άδεάδóÙ³Ý Ι³½-  
 Ù³Ψ³»ñάÙ³Ý Ιñ»¹Ç³Ψ³ÙÇÝ Ν³Ú³Ψ³.Ç:

8. ð³Íñ ³ΒΕ³Ψ³ñÓÇ ά³×³εάί Ù³ÝΨ³Ψ³ñ³Ψ³Υ ³ΒΕ³Ψ³ÝùÁ ¹³ñÓ»Ε ¿ άά .ñ³Ψ³Çά μάδΝÇ Ε³Ψ³.άδÙÝ Βñç³Ý³Ψ³ñíÝ»ñÇ Ν³Ú³ñ: ά³Ψ³εάδÙ »Ý ι³ε ³ÝΝ³Ψ³Ψ³ΥάδóÃÙάδóÝÝ»ñÁ, άñάÝόάί άÇΨ³ ά³ÙÙ³Ý³ίáñí»ñ ííÙ³Ε μÝ³.³Ψ³εάδÙ μάδΝÇ .ÇΨ³Ψ³Υ .. ΙñÁ³Ψ³Υ ³ε³ÇÁÝÁ³όÁ: ΑεÍ Ε³Ψ³.άδÙÝ ¹³ε³ΕάεÝ»ñÇ Β³ñùάδÙ ¿Ε ÷άùñ ¿ Ýñ³Ýό ÁÇίÁ, άíù»ñ Ι³ñάÕ »Ý ¹³εÁ ι³ñ»Ε´ ù-íí»Εάί Ýάñ³.άδÙÝ ΙñÁ³Ψ³Υ í»ΕÝάΕά.Ç³Ý»ñÇό .. Ù»Áά¹Ý»ñÇό: Ù³· ε³ ¿ ά³×³εÁ, άñ άñάβ Ù³εÝ³.ÇΨ³άδóÃÙάδóÝÝ»ñάί ά³Β³× άñ³Ψ³-  
 ίáñÙ³Ùμ ί»ñ³ά³ñ³εíάδÝ»ñ άΨ³Ý:

²ε³Ψ³Υ ³ñ¹»Ý μ³ό³Ν³Ú³ίάδÙ ¿, άñ άÝ³ÙΨ³Í Ó»éùμ»ñάδÙÝ»ñÇÝ ¹³ε³ΕάεÝ»ñÇ άñ³-  
 Ψ³ίáñÙ³Ý μ³ñÓñ³όÙ³Ý Ν³Ú³Ψ³ñ.Á ¹»é·ε ΕÇάίÇÝ άÇ Ν³Ú³ά³Ψ³εΕ³ÝάδÙ Á³Ù³Ý³Ψ³Çό ΙñÁάδóÃÙ³Ý ά³Ν³ΥÇÝ»ñÇÝ: ²εΝ³ε³ñ³Ψ³ Ν³Ýñ³ά»íάδóÃÙάδóÝάδÙ Εñ³άάδóÇά ΙñÁάδóÃÙ³Ý Ν³Ú³Ψ³ñ.Á Ó³ίáñí»Ε ¿ ι³ñ»ñ³ÙÝάñ»Ý .. ùñ»Ýε¹ñάñ»Ý ά³Β³íά³ÝΨ³Í ά¿: ²Ùε Ù³Ψ³Νά.άδóÃÙ³Ùμ ³ÝόÙ³Ε ι³ñÇ °αÐ-Ý Ι³½Ú³Ψ³»ñά»ό Ν³Ýñ³ά»í³Ψ³Υ ε»ÙÇÝ³ñ· .άñÍÁÝÍ»ñ μάδΝ»ñÇÝ ³ε³Ç³ñÍ»Εάί Ν³Ú³ñ»Ε μάΕάñ άόÁ»ñÁ Ι³Ψ³ñ»Ε³.άñÍ»Εάό ¹³ε³ΕάεÝ»ñÇ άñ³Ψ³ίáñÙ³Ý μ³ñÓñ³όÙ³Ý ΙñÁ³Ψ³ Ιñ³.ÇñÁ:

### ²Ψ³Ψ³ΕίάÕ ³ñ¹ÙάάδÝùÝ»ñÁ

Íάδó³Ψ³Í ÷άñÓÁ, ³ÚÝάδó³Ù»Ý³ÙÝÇÍ, °αÐ-ÇÝ ΝÝ³ñ³ίáñάάÃÙάδóÝ ¿ ι³ΕÇε »íñάά³Ψ³Υ ά³÷άñάβάÇÝ .. άόÕ»ÝÇΒÝ»ñÇÝ Ν³Ú³ά³Ψ³εΕ³Ý ³εíÇ×³Ý³μ³ñ Ó³ίáñ»Εάό ¹³ε³Εάε³Ψ³Υ Ι³½ÙÇ άñ³Ψ³.Ý³Ν³Ψ³Ù³Ý Ù»Ε³ÝÇ½ÙÝ»ñ .. ά³÷³ÝÇΒÝ»ñ: ά»íù ¿ ÝΒ»Ε, άñ Ν»ΒΨ³ ά¿ ¹ñ³Ýù ε³ΝÙ³Ý»Ε: °Á» ά³÷»ΕÇ »Ý ¹³ε³ΕάεÇ .ÇΨ³Ψ³Υ ³εíÇ×³ÝÁ, .ÇΨ³Ψ³Υ ³ñ¹ÙάάδÝùÝ»ñÁ, ³ε³ñÍ³ÙÇ ÇÙ³-  
 óάάÃÙάάÝÁ, ³ά³ ¹Á³ñ ¿ .Ý³Ν³Ψ³»Ε Ýñ³ ³ÝÓÝ³ÙÇÝ άñ³Ψ³»ñÁ, ÁÝ¹.ÍΨ³ ³ÝΝ³Ψ³Ψ³ΥάδóÃÙάάÝÁ: ØÇÝά¹»é Ν³Ýό ³Ùε άñ³Ψ³»ñÝ άδóÝ»όάÕ ¹³ε³ΕάεÁ Ν³ίάδÍ ¹»ñ³Ψ³ñάδÙ άδóÝÇ Ν³Ú³Εε³ñ³Ý³Ψ³Υ ΙÙ³ÝùάδÙ:

°íε ÙÇ Ν³Ý.³Ù³Ýù: ØΒ³Ψ³άÕ Ý»ñμάδΝ³Ψ³Υ ά³Ν³ÝÇÝ»ñÁ Ý³Ε άÇΨ³ μ»ñí»Ý ³½.³ÙÇÝ, ³ά³ »íñάά³Ψ³Υ ά³÷Ù³Ý: ²Ùε ³εάδóáί άñ³Ψ³ Ý»ñùÇÝ ³ά³ΝάíÙ³Ý Ð³Ù³εí³ÝάδÙ ¹»é·ε Ó³ίáñíάÕ Ν³Ú³Ψ³ñ.Á Ι³ñÇù άδóÝÇ ÙÇç³½.³ÙÇÝ ÷άñÓ³.ÇΨ³Ψ³Υ ³ç³ÍόάάÃÙ³Ý άδ Ν³Ú³Ψ³ñ.Ù³Ý:

´εάÝÇ³ÙÇ .άñÍÁÝÁ³όÇ ÷³εí³ΑÕά»ñάδÙ Βñç³Ý³εάδÙ ¿ Ýάñ í»ñÙÇÝ §Ν³ñ³· ΙñÁάδóÃÙάάÝ¹, μ³Ùό ΝÇÝ Ν³Ù»ñ»ÝÇ· .ñ³μ³ñç μ³ε³ά³Β³ñάδÙ ³ñ¹»Ý Ι³ñ §Ν³ñ³ΙñÁάδóÃÙάάÝ¹ μ³εÁ, άñÝ ³Ùεùñ í»ñÙÇÝ³ίáñí»Εάί Ι³ñάÕ ¿ Ν³ñεí³όÝ»Ε ΙñÁάδóÃÙ³Ý άñ³Ψ³ ³½.³ÙÇÝ ÙΒ³Ψ³άδóÃÁ: °ñ³ÝÇ ά»í³Ψ³ Ν³Ú³Εε³ñ³ÝÁ μ³ñÓñ³.άδÙÝ ΙñÁάδóÃÙ³Ý »íñάά³Ψ³ ι³ñ³íù ¿ ÙΨ³»Εάδ· Ýñ³ Ùç μ³ό»Εάί ³½.³ÙÇÝ ÙΒ³Ψ³άδóÃÁÇ ³Ψ³άδóÝùÝ»ñÁ:

## **Problems of Internal Quality Assurance of Higher Education**

A. Tshughuryan (Armenian State University of Economics)

*The methodology of Internal Quality Assurance of Higher Education is observed in the context of the Bologna Process standards. Particularly, we observe the issues of the connection of analysis results of the faculty members' work quality, students' knowledge, level of interuniversity resources for educational process assurance. On the basis of special rates the mechanism of specialisations rating tables' formation are presented on the criteria of quality.*

In the Berlin communiqué of 19 September 2003 the Ministers of the Bologna Process agreed set of standards, procedures and guidelines on quality assurance and to explore ways of ensuring an adequate peer review system for quality assurance and to report back through the Bologna Follow- Up. As their starting point, the standards and guidelines endorse the spirit of the July 2003 Graz Declaration of the European University Association (EUA) which states that the purpose of a European dimension to quality assurance is to promote mutual trust and improve transparency while respecting the diversity of national contexts and subject areas. Consonant with the Graz declaration, the standards and guidelines contained in this report recognize the primacy of national systems of higher education, the importance of institutional and agency autonomy within those national systems, and the particular requirements of different academic subjects.

The standards and guidelines are based on a number of basic principles about quality assurance, both internal and external to higher education in the European Higher Education Area (EHEA). Particularly, providers of higher education have the primary responsibility for the quality of their provision and its assurance. There should be encouragement of a culture of quality within higher education institutions.

*The purposes of the standards and guidelines are<sup>1</sup>:*

- to improve the education available to students in higher education institutions in the EHEA;
- to assist higher education institutions in managing and enhancing their quality and, thereby, to help to justify their institutional autonomy;
- to form a background for quality assurance agencies in their work;
- to make quality assurance more transparent and simpler to understand for everybody involved.

According to mentioned purposes, the standards have objectives, such as encouraging the development of higher education institutions which foster vibrant intellectual and educational achievement, providing sources of assistance and guidance to higher education institutions and other relevant agencies in developing their own culture of quality assurance.

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<sup>1</sup> Standards and Guidelines for Quality Assurance in the European Higher Education Area  
© European Association for Quality Assurance in Higher Education, 2005, Helsinki  
Layout: Pikseri Julkaisupalvelut Helsinki, Finland 2005.

Currently are in use seven European standards and guidelines for internal quality assurance within higher education institutions:

1. Policy and procedures for quality assurance
2. Approval, monitoring and periodic review of programs' and awards
3. Assessment of students
4. Quality assurance of teaching staff
5. Learning resources and students' support
6. Information systems
7. Public information.

Institutions should have a policy and associated procedures for the assurance of the quality and standards of their programs and awards. They should also commit themselves explicitly to the development of a culture which recognizes the importance of quality, and quality assurance, in their work. To achieve this, institutions should develop and implement a strategy for the continuous enhancement of quality.

The confidence of students in higher education is more likely to be established and maintained through effective quality assurance activities which ensure that programs are well-designed, regularly monitored and periodically reviewed. In order for having quality assurance of education programs its necessary to development and publication of explicit intended learning outcomes, making specific needs of different modes of delivery (e.g. full time, part-time, distance-learning, e-learning) and types of higher education (e.g. academic, vocational, professional), creation regular feedback from employers, labour market representatives and other relevant organisationorganisations.

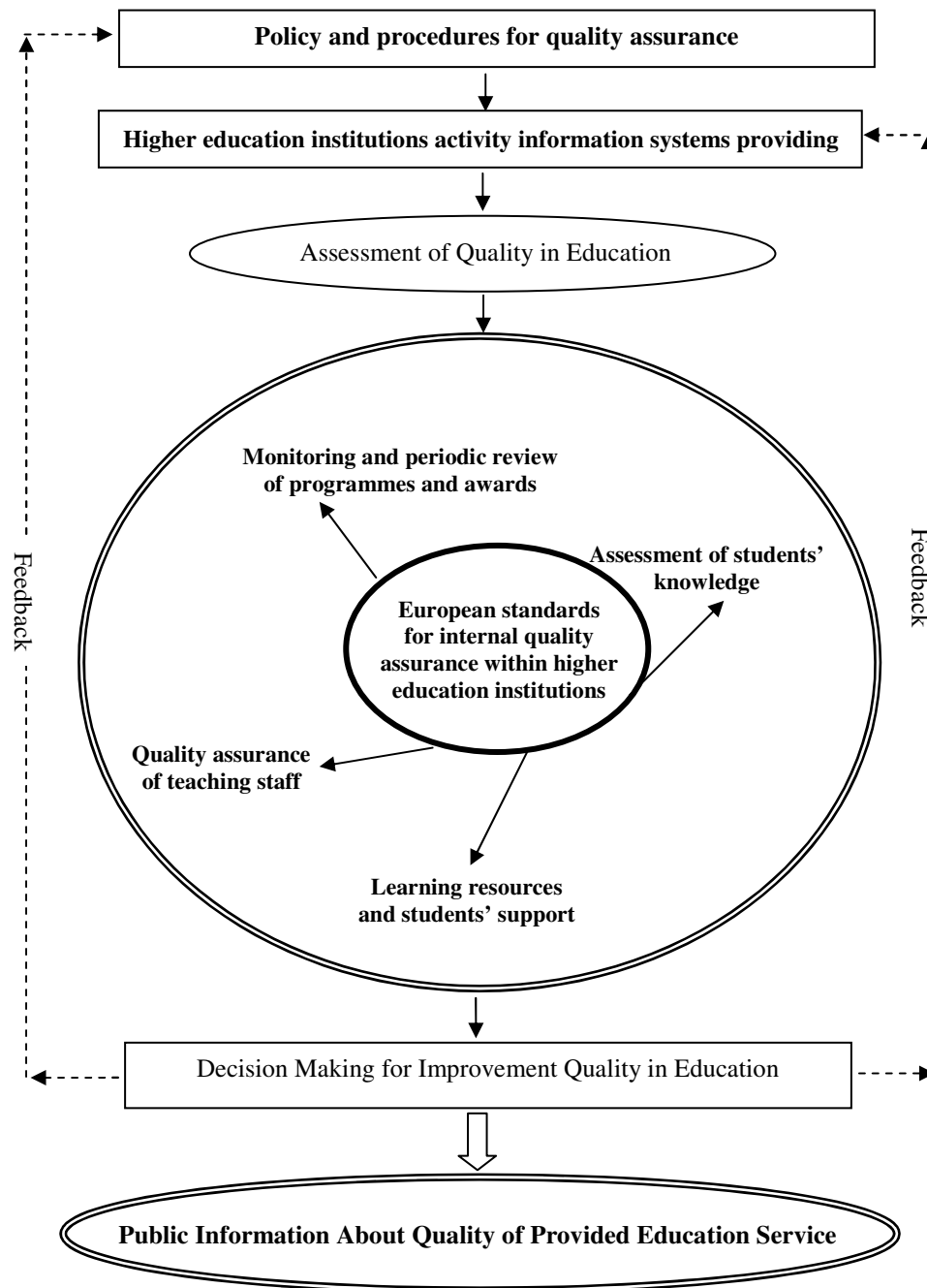
In quality assurance process is very important assessment of students' knowledge and activity. It is therefore important that assessment is carried out professionally at all times and takes into account the extensive knowledge which exists about testing and examination processes. Students' assessment procedures are expected where possible, not rely on the judgments of single examiners and take into account all possible consequences of examination regulations knowledge obtaining factors (individual and group work, absence, presentations).

Institutions should have ways of satisfying themselves that staff involved with the teaching of students is qualified and competent to do so. Teaching staff should be given opportunities to develop and extend their teaching capacity and should be encouraged to value their skills. Institutions should provide poor teachers with opportunities to improve their skills to an acceptable level and should have the means to remove them from their teaching duties if they continue to be demonstrably ineffective.

The assessment of learning resources is one of the most important elements of higher education.

In addition to their teachers, students rely on a range of resources to assist their learning. These vary from physical resources such as libraries or computing facilities to human support in the form of tutors, counselors, and other advisers. Learning resources and other support mechanisms should be readily accessible to students, designed with their needs in mind and responsive to feedback from those who use the services provided.

**Figure 1. Model of Internal Quality Assurance in Higher Institution**



Institutional self-knowledge is the starting point for effective quality assurance. It is important that institutions have the means of collecting and analyzing information about their own activities. Without this they will not know what is working well and what needs attention, or the results of innovatory practices. The quality-related information systems required by individual institutions will depend to some extent on local circumstances, but it is at least expected to cover:

- students' progression and success rates;
- employability of graduates;
- students' satisfaction with their programs;
- effectiveness of teachers;
- profile of the students' population;
- learning resources available and their costs;
- the institution's own key performance indicators.

In fulfilment of their public role, higher education institutions have a responsibility to provide information about the programs they are offering, the intended learning outcomes of these, the qualifications they award, the teaching, learning and assessment procedures used, and the learning opportunities available to their students. Published information might also include the views and employment destinations of past students and the profile of the current students' population. This information should be accurate, impartial, objective and readily accessible and should not be used simply as a marketing opportunity. The institution should verify that it meets its own expectations in respect of impartiality and objectivity.

Basis on European Standards, we are recommended to implement internal quality assurance model in higher institution (see figure 1). According to suggested by us model, the quality assurance in higher education will provide work for by following sequence "information collection information – performance of institution's own key indicators – feedback – public information". Currently Internal Quality Assurance Standards are in use, but still there is an issue to make up indicators performance about quality of providing education service. The problem is to present quantity measure of quality provided education, which we are suggested to do through creating ranking table for program of prepared specialization within universities.

Ranking tables of quality implemented various education programs is coming to solve two key tasks: present public information to internal (students, teaching staff, management board) and external users (job offers, partners) about level of provided education in concrete university, and also make available comparable analyzing of quality prepared specialization quality levels through various factors. These factors can be collected in following groups:

*Monitoring and periodic review of programs*

- a. frequency of monitoring of education programs;



- b. quantity of enhancing suggestion from job offers, reviewed academic programs;
- c. types of delivery academic programs (full time, part time, distance learning).

*Quality assurance of teaching staff*

- d. percentage of doctoral in tutorial staff;
- e. published volume of manuals per year;
- f. students' opinion and grading about training professionalism;
- g. level of execution of tutorial responsibility.

*Assessments of students' knowledge*

- h. examination GPA scores;
- i. individual or group presentation outcomes;
- j. attendance level in lectures and seminars trainings.

*Learning reassures*

- k. university computers per student;
- l. manuals in library for per student;
- m. internet access level for students;
- n. proportion of implemented new training technologies in training.

Each evaluating group, depending of dynamic changes in education environment can be changed to the extension or recruiting factors. However, it is very important to have independent multiple source information for assessment quality assurance. For instance, training professionalism can be evaluate both internal and external sides, by students and job offers, at the same can be happened for students examination GPA scores. Also, using various factors in order to analyzing quality of providing education, giving opportunity for making evaluation on basis divaricated information sources, such as from students, job offers, professors, university administration, which is presenting performance outcomes more qualified.

In process of self analyzing of providing education service is important also to use methodology of performance key indicators quality assurance. The problem is to transfer various quantity measured indicators of provided education in compared level. Using method of "distance analyzing" this issue can be solved.

Assume, that in end of year university is going to publish ranking table about 5 operating education programs – "X" (lawyers), "Y" (journalists'), "Z" (managers), "U" (economists), "V"(IT programmers'). In order for making ranking tables of quality of provided programs, the method of "distance analyzing" requiring to make following steps.

**Step I.** Collecting information from various sources about factors, indicated quality for operating in university program and attachment the level of influence power to each factor. The problem is, that chosen factors are not having equal authority on quality of provided education, therefore it is necessary to involve them in evaluation process by weight pointers (see table 1, column 2).

**Table 1.** Education Programs Quality Assurance Ranking Information

	The factors of ranking	Influence weights	EDUCATION PROGRAMS				
			“X”	“Y”	“Z”	“U”	“V”
a	Frequency of monitoring of education programs (times)	20%	1	3	2	4	1
b	Quantity of enhancing suggestion from job offers, reviewed academic programs	5%	2	5	4	7	2
c	Types of delivery academic programs	2%	4	3	1	2	2
d	Percentage of doctoral in tutorial staff	5%	45	60	70	40	85
e	Published volume of manuals per year (pages)	7%	1840	2435	3241	560	425
f	Students' opinion and grading level about training professionalism (%)	2%	70	50	60	85	90
g	Level of execution of tutorial responsibility	6%	90	100	95	95	100
h	Examination GPA scores	25%	92	85	90	79	45
i	Individual or group presentation outcomes (time)	2%	25	60	85	5	35
j	Attendance level in lectures and seminars trainings	12%	92	87	93	90	85
k	University computers per student	3%	0.5	0.25	0.75	0.5	0.25
l	Manuals in library for per student	5%	1	2	3	3	2
m	Internet access level for students (%)	4%	70	67	80	95	75
n	Proportion of implemented new training technologies in training	2%	30	15	10	35	33

**Step II.** Highlighting sells in the table, indicating best achievement for quality, provided education for each operating in university program. As shown in the table 1, the programs having various quality level opportunities compare to each other. For example, program “X” is in best positions of examination GPA scores (92%), types of delivery academic programs (4), however, there are some points, indicated low levels of provided education service quality in program “X”.

**Step III.** Because each operating program has more or less quality advantages comparing to another, it is making difficulties to choose the most excellent one of them. In order to have idea about best quality assurance, it is reasonable to calculate distance from the best quality position, achieved by various programs. The distance from the best quality position is reasonable to perform by percentage level. As more the percentage nearer to 1, this point of quality is in a best position. For example, “A” factor standing in a best position for program “U” (4/4), and in order scheming nearer position for another factors to this indicator, there is calculated percentage and as result the program “Y” is standing in second position in process of frequently of monitoring of education programs ( $3/4 = 0.75$ ), programs “X” and “V” are in a most awful positions ( $1/4 = 0.25$ ).

**Table 2.** Matrix of Education Programs Quality Assurance Ranking Indicator

	“X”	“Y”	“Z”	“U”	“V”
<b>A</b>	0,250	0,750	0,50	1,000	0,250
<b>B</b>	0,286	0,714	0,571	1,000	0,286
<b>C</b>	1,000	0,750	0,250	0,500	0,500
<b>D</b>	0,529	0,706	0,824	0,471	1,000
<b>E</b>	0,568	0,751	1,000	0,173	0,131
<b>F</b>	0,778	0,556	0,667	0,944	1,000
<b>G</b>	0,900	1,000	0,950	0,950	1,000
<b>H</b>	1,000	0,924	0,978	0,859	0,489
<b>I</b>	0,294	0,706	1,000	0,059	0,412
<b>J</b>	0,989	0,935	1,000	0,968	0,914
<b>K</b>	0,666	0,333	1,000	0,666	0,333
<b>L</b>	0,333	0,667	1,000	1,000	0,667
<b>M</b>	0,737	0,705	0,842	1,000	0,789
<b>N</b>	0,857	0,429	0,286	1,000	0,943

**Step IV.** Because of different level influencing by each factor to quality assurance provided education programs, we are making adjustments in calculated indicators in table 2. For example, in case of assuming by university, that influence weight for frequency of monitoring education programs is 20%, the adjustments in first row of table 2 will be:  $20\% \times 0,250 = 0,05$ ,  $20\% \times 0,750 = 0,15$ ,  $20\% \times 0,50 = 0,1$  (see table 3). Consequently, using adjusting indicators, we are making quality assurance raking more real, while each factor didn't having equal weight in process formation quality of education within university.

**Table 3.** Adjusted Indicators of Education Programs Quality Assurance Ranking

	“X”	“Y”	“Z”	“U”	“V”
<b>a 20%</b>	0,050	0,150	0,100	0,200	0,050
<b>b 5%</b>	0,014	0,036	0,029	0,050	0,014
<b>c 2%</b>	0,020	0,015	0,005	0,010	0,010
<b>d 5%</b>	0,026	0,035	0,041	0,024	0,050
<b>e 7%</b>	0,040	0,053	0,070	0,012	0,009
<b>f 2%</b>	0,016	0,011	0,013	0,019	0,020
<b>g 6%</b>	0,054	0,060	0,057	0,057	0,060
<b>h 25%</b>	0,250	0,231	0,245	0,215	0,122
<b>I 2%</b>	0,006	0,014	0,020	0,001	0,008
<b>j 12%</b>	0,119	0,112	0,120	0,116	0,110
<b>k 3%</b>	0,020	0,010	0,030	0,020	0,010
<b>l 5%</b>	0,017	0,033	0,050	0,050	0,033
<b>M 4%</b>	0,029	0,028	0,034	0,040	0,032
<b>n 2%</b>	0,017	0,009	0,006	0,020	0,019
<b>Total</b>	0,678	0,797	0,819	0,833	0,547

**Step V.** Creating internal ranking table of education program, operating within university (see table 4). Method of “distance analyzing” allowing summarizing selected factors, which influence results on quality assurance of operating programs and as a result, present position each of them in ranking table. Consequently, the first position will take that education program, which collect more indicators, nearer to 1, 0, so having less distance from desiring quality position. Accordingly the closely standing in best point, in our case it will be program “U” (economists), the next will “Z” (managers). The last position in education providing quality raking table is taken by program “V” (IT programmers’), collected only 0,547 scores, that is almost the half of achieved level, reached by another programs.

**Table 4.** Internal Ranking Table of Education Operating Programs in Higher Education Institution

Ranking	Operating program	Total of adjusted indicators
1	“U” (economists)	0,833
2	“Z” (managers)	0,819
3	“Y” (journalists’)	0,797
4	“X” (lawyers)	0,678
5	“V” (IT programmers’)	0,547

Thus, suggested model of quality assurance assessment giving opportunity for keeping feedback between policy of provided education and decision making in development of operating programs within university (see figure 1). And secondly, this model giving best conditions by providing information related factors of quality higher educational activity, promoting preparation of making **Public Information about Quality of Provided Education Service**. And finally, suggested steps for assessment quality assurance at least in outline can be used as a self analyzing in order for development university activity outcomes.

**ÆÝÙÝ³»ñÉáóíáóÃûáóÝÁ áñ»è áñ³İÇ ³á³ÑáíÙ³Ý ·áñİÇù³ÜÇçáó`  
ĐäÖĐ-Ç ØØ¶ ¹»á³ñ³Ù»ÝİÇ ûñÇÝ³İáí  
è. ¶`·áñ·Ù³Ý, İ. ²ñ¹áóÙ³ÝÙ³Ý (ĐäÖĐ)**

**Self- Assessment as a Tool for QA.  
SEUA MMS Department Case Study**

R. Gevorgyan, K. Arzumanyan (State Engineering University of Armenia)

*One of the most important goals of SEUA strategy is improvement of education quality. In this regard, the main tool for quality assurance of higher education is self-assessment of the university.*

*The article includes descriptions of self-assessment methods and principles that can be used for evaluation of university activity. Assessment provides valuable information for the university about the effectiveness of teaching and learners' support. With the help of created mechanisms and criteria departments can evaluate the study programs, availability of human and physical resources, self-analysis and internal assessment of the learning outputs and further monitoring. It could be regarded as a preparation stage for the process of external assessment and accreditation of all the degree programs of the University.*

´áÉáÝÇ³ÜÇ ·áñİÁÝÃ³Ç ³é³Ýóù³ÜÇÝ Ýá³İÁ µ³ñÓñ³·áóÙÝ İñÃáóÃÙ³Ý °íñáá³İ³Ý İ³ñ³İüÇ Ó´íáñáóÙÝ ĸ, áñÇ ÑÇÙáóÙ ÁÝİİ ĸ İñÃáóÃÙ³Ý áñ³İÇ ³á³ÑáíáóÙÁ: Ùá³ëi»É İñÃáóÃÙ³Ý áñ³İÇ ³á³ÑáíÙ³ÝÁ` Ýß³Ý³İáóÙ ĸ İÇñ³é»É İñÃáóÃÙ³Ý áñ³İÇ ÙÇ³éÝ³İ³Ý »íñáá³İ³Ý á³÷³ÝÇßÝ»ñ:

İ³ñ`áñ»Éáí İñ³Ýù` ĐäÖĐ-Ç áñ³İÇ ³á³ÑáíÙ³Ý · í»ñ³ÑëİÙ³Ý Ý»ñùÇÝ Ñ³Ù³İñ·Á ·áñİáóÙ ĸ Ñ»Ýİ»Éáí áñ³İÇ ³á³ÑáíÙ³Ý »íñáá³İ³Ý ó³ÝóÇ (ENQA) µ³Ö³İñ³Ù³ë»ñÇ İñ³:

´áÉáÝÇ³ÜÇ ·áñİÁÝÃ³Ç ÄÃ³ÝáóÙ ĸ Ý³· µáóÑ»ñáóÙ Ý»ñùÇÝ ·áñİáéáóÙÁÝ»ñÇ áñ³İÇ ·Ý³Ñ³İÙ³Ý · µ³ñÓñ³óÙ³Ý Ý»ñùÇÝ Ù»É³ÝÇ½ÙÝ»ñÇ Ý»ñ¹ñÙ³ÝÁ: éáíáñ³µ³ñ Ý»ñùÇÝ ·Ý³Ñ³İÙ³Ý »Ý »ÝÃ³İİáóÙ ¹³ë³Ý¹áóÙÁ, áóéáóÙÝ³İ³Ý ·áñİÁÝÃ³Ç · Çİ³Ñ»İ³·½áí³İ³Ý ³ßÉ³İ³Ýù»ñÁ: ³ë³Ý¹Ù³Ý ·Ý³Ñ³İÙ³Ý ·áñİÁÝÃ³ÇáóÙ İ³ñ`áñİáóÙ ĸ áóé³ÝáÓÝ»ñÇ ³İÇİ Ù³éÝ³İáóóÃÙáóÝÁ` ³Ýİ»İ³ÜÇÝ Ñ³ñóÙ³ÝÁ: ÁÝ¹ áñáóÙ` áóé³ÝáÓÝ»ñÇ Ù³éÝ³İáóóÃÙáóÝÁ áÇ ë³ÑÙ³Ý³·İáóÙ ÙÇ³ÜÝ Ñ³ñóÃ»ñÄÇİÝ»ñÇ Éñ³ó·Ù³Ùµ, ³ÙÉ Ý³É³İ»éíáóÙ ĸ áóé³ÝáÓÝ»ñÇ · ¹³ë³ÉáéÝ»ñÇ ÙÇÇ· Ñ»İ³İñÓ İ³áÇ ³éİ³ÙáóÃÙáóÝ, İ³ÝáÝ³íáñ Ñ³Ý¹ÇááóÙÝ»ñ` ³é³Ç³óİ ÉÝ¹ÇñÝ»ñÁ á³ñ¹³µ³Ý»Éáó · İñ³Ýù İ»ñ³óÝ»Éáó Ýá³İáí:

Ùßİİİ ·áñİÁÝÃ³Ç»ñÇ Çñ³İ³ÝóÙ³Ý ³ñ¹ÙáóÝ³İ»íáóÃÙáóÝÝ ³á³Ñáí»Éáó Ñ³Ù³ñ ³ÝÑñ³Á»ßİ ĸ Ý³É³á»è İ³İñ»É éíáñ³µ³Á³ÝáóÙÝ»ñÇ ·áñİáóÝ»áóÃÙ³Ý ÇÝù·Ý³»ñÉáóíáóÃÙáóÝ · Ý³İ³İáóÙ:

**ÆÝÙÝ³»ñÉáóíáóÃûáóÝ Ýá³İÁ`** Ñ³İ³ñÙ³·ñÙ³ÝÁ Ý³É³á³ñ³ëİÙ³Ý İ³á³İáóÃÙ³Ùµ ¹»á³ñ³Ù»ÝİÇ ·áñİáóÝ»áóÃÙ³Ý Ñ³Ù³İáÓÙ³ÝÇ ·Ý³İáóÙÝ ĸ: ØÇ³Á³Ù³Ý³İ ÇÝùÝ³»ñÉáóíáóÃÙáóÝÁ İ³ñáÓ ĸ á³ñµ»ñ³µ³ñ İÇñ³éí»É` áñá»è ¹»á³ñ³Ù»ÝİÇ ÇÝùÝ³¹³ñ·³óÙ³Ý · İ³İñ»É³·áñİÙ³Ý ·áñİÁÝÃ³Ç ÄÃ³Ýáó İ³ñ`áñ Ù»É³ÝÇ½Ù:

**Đ»İ³¹áíáóÃÙ³Ý ûµÙ»İİÁ`** ¹»á³ñ³Ù»ÝİáóÙ áóéáóóÙ³Ý áñ³İÇ Ù³İ³ñ¹İÇ ·Ý³İáóÙÝ ĸ, áñÁ ¹Çİ³ñİİ»É ĸ »ñİáó` áóéáóóÙ³Ý ·áñİÁÝÃ³Ç İ³¹²Ù³İ»ñáÙ³Ý · Çİ»ÉÇùÝ»ñÇ ÷áÉ³ÝóÙ³Ý áó í»ñ³ÑëİÙ³Ý İ»ë³ÝİÙáóÝÇó: Úáóñ³ù³ÝáÚáóñ Ù³İ³ñ¹İ µÝáóÃ³·ñíáóÙ ĸ áóéáóóÙ³Ý áñ³İÇ Ñ³Ù³á³İ³ëÉ³Ý á³÷áñáßÇáÝ»ñáí: áóéáóóÙ³Ý ·áñİÁÝÃ³Ç İ³¹²Ù³İ»ñáóÙÝ ÁÝ¹·ñİáóÙ ĸ Ñ»İ³ÙÉ á³÷áñáßÇáÝ»ñÁ.

- ÝÙáòÃ³»ËÝÇİ³İÝ μ³¹⁄³ÛÇ ³â³ÑááòÙ,
  - áòëáòÙÝ³İÝ ÝÙáòÃ»ñÇ · ·ñ³İ³ÝáòÃÙ³Ý ³ëİ³ÙáòÃÙáòÝ,
  - áòëáòÙÝ³ùÃ³Ý¹³İ İ³¹⁄²ÛÇ ³BË³Ý³ÝùÇ ×ÇBİ İ³¹⁄²Ûİ»ñááòÙ,
  - ÇÝÝáñÙ³òÇ³ÛÇ ÷áË³ÝóÙ³Ý ùâ»ñ³ÇİáòÃÙ³Ý μ³ñÓñ³óáòÙ:
- ¶Çİ»ËÇùÝ»ñÇ ÷áË³ÝóÙ³Ý · ·İ»ñ³ÑëİÙ³Ý ·áñÍÁÝÃ³óÁ μÝáòÃ³·ñááòÙ ¿.
- ·Çİ»ËÇùÝ»ñ, áñáÝù Ó»éù »Ý μ»ñí»Ë Èë³ñ³ÝáòÙ · ·áñÍÝ³İ³Ý á³ñ³àÙáòÝùÝ»ñÇ Á³Ù³Ý³İ,
  - áá Èë³ñ³Ý³ÛÇÝ Ñ³Ý¹ÇááòÙÝ»ñÇ İ³¹⁄²Ûİ»ñááòÙ,
  - ¹³ë³ÈáëÇ ³BË³Ý³ÝùÇ áñ³İÇ · ·Çİ»ËÇùÝ»ñÇ İ»ñ³ÑëİáòÙ:

### Đ»İ³¹⁄²áíÙ³Ý Çñ³İ³Ý³óÙ³Ý Ù»ÃáÍÁ

ÆÝùÝ³»ñÈáòÍáòÃÙáòÝÁ Çñ³İ³Ý³óİ»Ë ¿ Ù»Ë³ÝÇİ³ÛÇ · Ù»ù»Ý³·ÇİáòÃÙ³Ý ¹»-  
 á³ñ³Ù»ÝÍáòÙ Áëİ ÝBİİ İ³ñ·Ç· ÑÇÙù ÁÝ¹áòÝ»Ëáí ĐáÖĐ é»İíáñ à. ¼. Ø³ñáòÈÙ³ÝÇ  
 ÍáÒÙÇó ÙBİİİÍ áòëáòÙÝ³İ³Ý ëíáñ³μ³Á³ÝáòÙÝ»ñÇ ÇÝùÝ³İ»ñÈáòÍáòÃÙ³Ý · ·áñ-  
 ÍáòÝ»áòÃÙ³Ý ·Ý³Ñ³Ù³Ý ÑÇÙÝ³İ³Ý ¹ñáòÙÃÝ»ñÁ, ÇÝáá»ë Ý³· İÇñ³éí»Ë »Ý ³Ù¹ áÈáñ-  
 íáòÙ ³ëİ³ Ù»ÃáÍ³İ³Ý áòÖ»óáòÙóÝ»ñÁ · ÇÝİ»ñÝ»İ³ÛÇÝ Ñ»İ³¹⁄²áíáòÃÙ³Ý ÙÇÇáóáí ³ÙÈ  
 μáòÑ»ñÇ ÷áñÓÇ áòëáòÙÝ³ëÇñáòÃÙ³Ý ³ñ¹ÙáòÝùÝ»ñÁ:

İ³İñİ»Ë ¿ ¹»á³ñ³Ù»ÝİÇ Ù³ëÝ³·Çİ³İ³Ý ÈÙμ»ñáòÙ ³Ýİ»İ³ÛÇÝ Ñ³ñóáòÙ· áòë³ÝáÒÇ  
 ÍáÒÙÇó ¹³ë³ÈáëÇ ·áñÍáòÝ»áòÃÙ³Ý áñ³İÇ, ¹³ëÁÝÃ³óÇ · ùÝÝáòÃÙ³Ý İ³¹⁄²Ûİ»ñáòÙ³Ý  
 áñ³İÇ, á»İ³İ³Ý Ù³ëÝ³·Çİ³İ³Ý ùÝÝáòÃÙ³Ý · ³İñ³İ³İ³Ý ³BË³Ý³ÝùÇ á³Bİá³ÝáòÃÙ³Ý áñ³İÇ ·Ý³-  
 Ñ³Ù³Ý Ýá³³Íáí, ÇÝáá»ë Ý³· á³ñ¹⁄²μ³Ýİ»Ë ¿ áòë³ÝáÒÝ»ñÇ μ³İ³ñ³İ³ÍáòÃÙáòÝÁ  
 Ñ³Ù³Èë³ñ³ÝÇ ëá³ë³ñÍáòÙÇó, Ýñ³Ýó ÷áÈÑ³ñ³μ»ñáòÃÙáòÝÝ»ñÁ ³¹ÛÇÝÇëíñ³óÇ³ÛÇ,  
 ¹³ë³ÈáëÝ»ñÇ, ³BË³İÇóÝ»ñÇ Ñ»İ: İ»ñÈáòÍ»Ë ¿ Ý³· BñÇ³Ý³İ³ñİÝ»ñÇ ³BË³Ý³ÝùÇ  
 ³ÝóÝ»Ëáò á³İñ³ëİİÍáòÃÙ³Ý Ù³İ³ñ¹³İÇ İ»ñ³μ»ñÙ³È ·áñÍáòÝ»ñÇ İ³ñÍÇùÁ:

ÆÝùÝ³»ñÈáòÍáòÃÙ³Ý á³÷áñáBÇáÝ»ñÁ á»İù ¿ μáí³Ý¹³İ»Ý μáòÑÇ Ýá³³İÝ»ñÁ ·  
 ¹⁄²ñ·³óÙ³Ý Ñ»ë³ÝİñÝ»ñÁ »ËÝ»Ëáí BñÇ³Ý³İ³ñİÝ»ñÇ · ·áñÍáòÝ»ñÇ B³Ñ»ñÇó:

»á³ñ³Ù»ÝİÇ ·áñÍáòÝ»áòÃÙ³Ý ³ñ¹ÙáòÝ³İ»íáòÃÙ³Ý Ñ³Ù³ÈÇñ ·Ý³Ñ³ÍáòÙÝ  
 Çñ³İ³Ý³óíáòÙ ¿ »ñ»ù ÑÇÙÝ³İ³Ý áòÖÓáòÃÙáòÝÝ»ñáí Áëİ Ñ»İ·Ù³È óáòóÝÇBÝ»ñÇ.

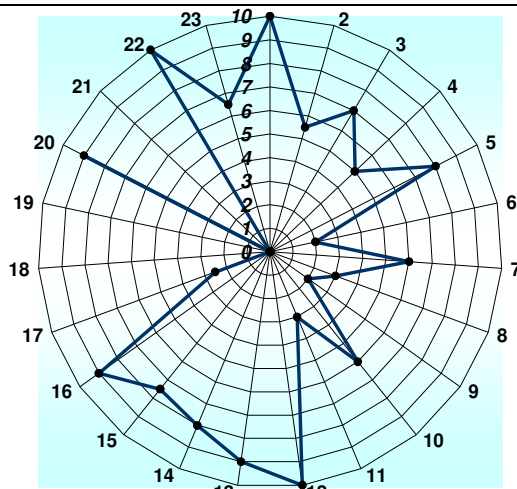
1. Ù³ëÝ³·»İÝ»ñÇ á³İñ³ëİÙ³Ý áñ³İÇ Ñ³Ù³á³ëÈ³ÝáòÃÙáòÝÁ ·áñÍáò İñÁ³İ³Ý  
 á³÷áñáBÇáÝ»ñÇÝ,
2. áòë³ÝáÒÝ»ñÇ Ñ³Ù³ÍáÒÙ³ÝÇ Ù³ëÝ³·Çİ³İ³Ý · ÇÝİ»Ë»İíáò³È ¹⁄²ñ·³óÙ³Ý Ñ³Ù³ñ  
 ³ÝÑñ³Á»Bİ Ý³È³¹ñÙ³ÈÝ»ñÇ (Ý»ñáòÁ, ÇÝÝñ³İ³éáòóİù, ÙÇÇ³³Ùñ )  
 ³ëİ³ÙáòÃÙáòÝ,
3. ¹»á³ñ³Ù»ÝÍáòÙ Ù³ëÝ³·»İÝ»ñÇ á³İñ³ëİÙ³Ý ³ë³ÝóÇİ Ù³İ³ñ¹³İÝ ³â³Ñáíáò  
 ÇÝùÝ³¹⁄²ñ·³óÙ³Ý ³ñ¹ÙáòÝ³İ»İ Ù»Ë³ÝÇ¹⁄²ÛÇ ³ëİ³ÙáòÃÙáòÝ:

ÙBİİÍ áòÖÓáòÃÙáòÝÝ»ñÝ Çñ»Ýó Ñ»ñÃÇÝ μ³Á³ÝÍáòÙ »Ý μ³Ö³¹ñÇáÝ»ñÇ,  
 áñáÝù Ñ³Ù³á³ëÈ³Ý óáòóÝÇBÝ»ñÇ Ñ³Ù³İ³ñ·Ç ÙÇÇáóáí »ÝÁ³ñÍáòÙ »Ý Ù³Ýñ³Ù³ëÝ  
 áòëáòÙÝ³ëÇñáòÃÙ³Ý:

ĐÇÙù ÁÝ¹áòÝ»Ëáí ·Ý³Ñ³Ù³Ý ³ñ¹ÙáòÝùÝ»ñÁ Ùáòñ³ù³ÝáÙáòñ ¹»á³ñ³Ù»Ýİ  
 ÙBİÍáòÙ ¿ Çñ ·áñÍáòÝ»áòÃÙ³Ý ¹⁄²ñ·³óÙ³Ý Ñ»İ³·³ áÈ³ÝÝ»ñÁ · ³ë³Ç³óİ ÈÝ¹ÇñÝ»ñÇ  
 ÉáòÍÙ³Ý ÑÇÙÝ³İ³Ý ·áñÍáòáòÃÙáòÝÝ»ñÁ: ²ë³ÝÓÝ³óÝ»Ëáí ³ë³İ»Ë İ³ñ·áñ  
 á³÷áñáBÇáÝ»ñÁ ¹ñ³Ýó μ³ñ»Ë³Ù³Ý Ýá³³Íáí ÙBİİÍ»Ë »Ý ÙÇ B³ñù ·áñÍÁÝÃ³óÝ»ñ:

Đ³Ù³Ó³ÙÝ μ³¹⁄²Û³ÄÇİ ÈáñÑñ¹³İ³İ³Ý ÁÝİ»ñáòÃÙáòÝÝ»ñÇ İ³¹⁄²Ûİ»ñááòÃÙ³Ý  
 ·áñÍáòÝ»áòÃÙ³Ý ³ñ¹ÙáòÝ³İ»íáòÃÙáòÝÝ ÁÝİÑ³Ýñ³óÝáÒ óáòóÝÇBÝ»ñÇ ù³Ý³ÍÁ á»İù ¿  
 ÈÇÝÇ 25-Çó áá ³İ»ËÇ: ØÇ³Á³Ù³Ý³İ ³ÙμáÒÇ İ³¹⁄²Ûİ»ñááòÃÙ³Ý · Ýñ³ ëíáñ³-  
 μ³Á³ÝáòÙÝ»ñÇ ·áñÍáòÝ»áòÃÙ³Ý İ³ñμ»ñ áòÖÓáòÃÙáòÝÝ»ñÇ ·Ý³Ñ³Ù³Ý Ýá³³Íáí  
 İÇñ³éíáòÙ »Ý μ³¹⁄²Û³ÄÇİ óáòóÝÇBÝ»ñ, áñáÝù ³ÙÝáòÑ»İ· ÈÙμ³ÍáñíáòÙ »Ý · ÁÝİ-  
 Ñ³Ýñ³óÝáÒ ÇÝ¹»ùëÝ»ñÇ ÙÇÇáóáí μÝáòÃ³·ñáòÙ ·áñÍáòÝ»áòÃÙ³Ý ³ñ¹ÙáòÝ³İ»íáòÃÙáò-  
 ÝÁ: İ³¹⁄²Ûİ»ñááòÃÙ³Ý İİÙ³ÈÝ»ñÇ μ³¹⁄²ÙáòÙ ÁÝ¹·ñÍáòÙ »Ý μ³¹⁄²Û³ÄÇİ óáòóÝÇBÝ»ñ,



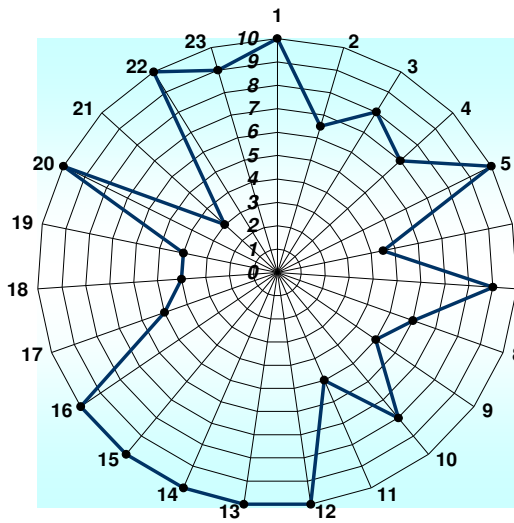


1. Ուսումնական պլանների համապատասխանությունը պետական ստանդարտներին:
2. Պրոֆեսորների և դոցենտների %-ը ՊԴԱ-ի ընդհանուր կազմում:
3. Դասավանդողների՝ պրոֆեսորների և դոցենտների միջին տարիքը:
4. Դասավանդողների գիտական ակտիվությունը:
5. Դասավանդողների մեթոդական ակտիվությունը:
6. ՊԴԱ-ի որակավորման բարձրացումը:
7. Ուսումնական գրականությամբ ապահովվածությունը:
8. Ուսումնական էլեկտրոնային նյութերի առկայությունը:
9. Ինտերնետին միացված համակարգիչների տոկոսը:
10. Ուսումնական գործընթացում օգտագործվող համակարգիչների տոկոսը:
11. Շենքային ապահովումը:
12. Լաբորատոր սարքավորումներով ապահովումը:
13. Ժամանակակից տեխնիկական սարքավորումներով լսարանների ապահովումը:
14. Ուսումնական պրակտիկաների անցկացման կարգի համապատասխանեցումը ընդունված ստանդարտներին:
15. Պրակտիկաների հաստատուն բազաների ապահովումը:
16. Ճանաչված գիտական դպրոցի առկայությունը:
17. Գիտական աշխատանքներում ներգրավված դասախոսների տոկոսը:
18. Գիտական դրամաշնորհները:
19. Պետությունից տրամադրված ֆինանսավորմամբ հետազոտական թեմաները:
20. Ուսանողների միջին առաջադիմությունը:
21. Ուսանողական գիտական հրատարակումները:
22. Ուսանողների/ասպիրանտների մասնակցությունը հետազոտական ծրագրերին:
23. Գործատուների պահանջներին շրջանավարտների գիտելիքներին ունակությունների համապատասխանությունը:

**Ինքնավերլուծության չափանիշի  
միջին նշանակությունը  
միավորներով՝  
5.26**

**Ուսուցման որակի մոնիթորինգի դիագրամը 2010 թ-ին**





1. Ուսումնական պլանների համապատասխանությունը պետական ստանդարտներին:
2. Պրոֆեսորների և դոցենտների %-ը ՊԴԱ-ի ընդհանուր կազմում:
3. Դասավանդողների՝ պրոֆեսորների և դոցենտների միջին տարիքը:
4. Դասավանդողների գիտական ակտիվությունը:
5. Դասավանդողների մեթոդական ակտիվությունը:
6. ՊԴԱ-ի ռրակալման բարձրացումը:
7. Ուսումնական գրականությամբ ապահովվածությունը:
8. Ուսումնական էլեկտրոնային նյութերի առկայությունը:
9. Ինտերնետին միացված համակարգիչների տոկոսը:
10. Ուսումնական գործընթացում օգտագործվող համակարգիչների տոկոսը:
11. Շենքային ապահովումը:
12. Լաբորատոր սարքավորումներով ապահովումը:
13. Ժամանակակից տեխնիկական սարքավորումներով լսարանների ապահովումը:
14. Ուսումնական պրակտիկաների անցկացման կարգի համապատասխանեցումը ընդունված ստանդարտներին:
15. Պրակտիկաների հաստատուն բազաների ապահովումը:
16. Ճանաչված գիտական դպրոցի առկայությունը:
17. Գիտական աշխատանքներում ներգրավված դասախոսների տոկոսը:
18. Գիտական դրամաշնորհները:
19. Պետբյուջետային ֆինանսավորմամբ հետազոտական թեմաները:
20. Ուսանողների միջին առաջադիմությունը:
21. Ուսանողական գիտական հրատարակումները:
22. Ուսանողների/ասպիրանտների մասնակցությունը հետազոտական ծրագրերին:
23. Գործատուների պահանջներին շրջանավարտների գիտելիքներին ունակությունների համապատասխանությունը:

**Ինքնազննության չափանիշի  
միջին նշանակությունը  
միավորներով՝  
7.08**

# **Engaging Students in Peer and Self Assessment without Compromising Quality**

E. Georgiadou, G. Abeysinghe, H. Jahankhani (Middlesex University)

*Academic assessment aims to determine whether the specified learning outcomes (at programme and module level) have been achieved. Assessment needs to safeguard the academic quality standards and must also be objective, consistent, correct, transparent and fair. Engaging student in self and peer assessment engenders professionalism and dynamic participation in learning through critiquing and making value judgements. Therefore it is important to ensure that quality standards are not compromised and the feedback is such that the learning experiences as well as performance of students are enhanced through this process. In this paper we present the use of self and peer assessment within the Department of Business Information Systems at Middlesex University. The results and techniques put forward play a central role in creating an improved learning experience, improved performance and requisite skills for students through reflection, peer feedback and critique. In the context of the Tempus Tacis CDJEP no 27178-2006 “ARMQA” project the lessons learned from applying these methods can help in the development of a Teaching and Learning Strategy in both a top down and a bottom up manner.*

## **Keywords**

Assessment (formative, summative, self), quality standards, learning experience.

## **1. Introduction**

The tide of technological advancement and the desire to achieve European harmonisation are gaining momentum, sweeping aside many boundaries in established or entrenched practices, change and adaptability are inevitable consequences to be addressed by commercial, social and education thinking (Jahankhani & Stephenson, 2002). Academics need to engage in developing and delivering lifelong learning, e-learning and technology based learning. The quality and accessibility of such provision and the way students are assessed have gained a momentum of their own as reported by studies in a number of Universities (Jahankhani et al., 2002; Hatzipanagos et al., 2002).

Assessment is an important factor in the effort to monitor and enhance quality, as described and discussed in, for example, the “Standards and Guidelines” developed by The European Network for Quality Assurance in Higher Education (ENQA, 2008). It is also an important factor for discussion in the on-going Bologna Process (Bologna, 2007) in European higher education, given its relationship to concepts such as learning outcomes, assessment criteria and competences to be acquired (Georgiadou & Palmer, 2007).

At Middlesex University assessment forms an integral part of the ***Enhancing Learning, Teaching and Assessment (ELTA) Strategy*** 2007-2012 (Middlesex, 2008/09). The ELTA Strategy is one of the ways through which the

University delivers its Corporate Plan, and the revised strategy is therefore set in the context of the current plan.

The Strategy reflects specific priorities of the Corporate Plan. In particular the Strategy is expected to support the corporate priorities concerned with *improving the student experience and student success*. The aim of the University's Strategy for Enhancing Learning, Teaching and Assessment is: to ensure a rich, effective and sustainable learning experience for all its students. It promotes student engagement in life-long learning, embraces varied, flexible, innovative and sustainable modes of learning, teaching and assessment, informed by research and celebrates and values the diversity of the academic community. ELTA stipulates that students must be given support and feedback both formative and summative. There is also an extensive list of methods and opportunities for evaluating and improving quality and standards of learning published in each Programme Handbook including:

- Student Boards of Study held during weeks 6–8 of each semester allow formal feedback from student representatives regarding their programme of study and associated modules. Academic staff report on their modules at these Boards. Campus Forums deal with the general facilities affecting the student learning experience.
- Reviews of module delivery via student questionnaires allow feedback of student experience for each module. Questionnaires are analysed by an automated process, with any issues identified, discussed at Boards of Study, Academic Group meetings and the School Quality Committee.
- Module leaders provide reports that record general student performance in each written examination on the university's 24-7 student support Web site (at [www.mdx.ac.uk/24-7/cs](http://www.mdx.ac.uk/24-7/cs)).
- Staffs provide formal reports at Assessment Boards on the operation of modules/programmes that affect assessment.
- External examiners from other Universities moderate all examination questions before assessment takes place. They also moderate coursework briefs for those modules assessed by more than 50% coursework. After assessment, external examiners review a cross-section of assessed student work and attend and contribute to the Assessment Boards. The external examiners submit formal end-of-year reports to the University's Quality Assurance and Audit Service (QAAS) on their observations, making recommendations as appropriate. The School formally responds to these and checks that any actions arising from them are completed.
- School and Subject Annual Monitoring Reports are compiled according to QAAS guidelines to consider the effectiveness of subjects and programmes in achieving their stated aims and intended learning outcomes, and the quality of the student experience.
- Quality of teaching is monitored by peer observation, staff appraisals, training and dissemination of good practice.
- New ideas to improve teaching methods and learning resources are discussed in regular meetings of teaching staff in academic groups.

- Student progression for each module is closely monitored by the School Quality Committee, and reported on by programme and curriculum leaders as part of the annual monitoring process.
- Regular Subject and Programme Validation and Review events are carried out by panels of academics from within the School and from outside the School and University to ensure high academic standards are being maintained and enhanced. Student representatives are invited to such events to enable student views to be given directly to the panels. (The University's "Procedures Handbook" is the source of information on how these procedures combine to provide ongoing quality assurance and enhancement of our programmes and can be found at <http://www.mdx.ac.uk/24-7/cs/index.htm#tutor>).

Modules are normally taught by a series of lectures, supervised laboratory sessions and self directed study. Lectures formally introduce the concepts and principles of the module's topic, pace the work, make it possible to respond to any changes, clarify problems, and demonstrate the use of models and tools and so on. Some guest lectures (by external and internal experts) are incorporated whereby researchers and practitioners present their theories, experiences and views providing insights and helping students to see the application of theory to practice.

*Module aims and level descriptors guide the specification of the Learning Outcomes and assessment criteria. Assessment methods aim to test whether the student achieved the assessment criteria.* Tutorials/seminars are interactive sessions where students engage in problem solving, analysis and reflection. These supervised sessions also provide for individual attention and feedback on a weekly basis.

The assessment strategy aims to help the students gain understanding of the concepts, consolidate their learning and improve their achievements.

## **2. Multiplicity of assessment methods**

A variety of assessment methods and instruments help students consolidate their learning and achieve the programme and module Learning Outcomes. A diverse menu of assessment approaches, flexibility and innovation are integral to good assessment practice. The choice of modes of assessment remains at the discretion of the module team. Assessment can be a combination of reports, essays, projects, portfolios, database/software/statistical activities, research proposals, critical reviews, annotated activity e.g. bibliography or module spec, reflective accounts, case study, laboratory and fieldwork reports, creation of websites, written exams: essays, multiple choice questions, open book, seen questions, practical exams: practical demonstrations, oral presentations, viva voce examinations and so on.

Coursework usually includes both individual and group work. Typically, the group work will account for two thirds of the coursework, and individual work for one third. Group coursework lends itself to peer assessment particularly as some students are reluctant to engage in work that depends on the commitment and performance of others.

## 2.1. Self and Peer Assessment

Self and peer assessment in most cases are combined together. By assessing others students learn to assess themselves. Brown et al. (Brown, Rust and Gibbs, 1994 in Bostock 2000) state, "Peer and self-assessment help students develop the ability to make judgements, a necessary skill for study and professional life. Race (2001) gives a number of reasons as to why students should be included in the assessment process, out of which he states the most powerful reason is deepening student learning experience.

It is important to enable the students to assess the contribution of their team members. According to Juwah (2003) *"Peer assessment is an interactive and dynamic process that involves learners in assessing, critiquing and making value judgment on the quality and standard of work of other learners, and providing feedback to peers to enable them to enhance performance"*.

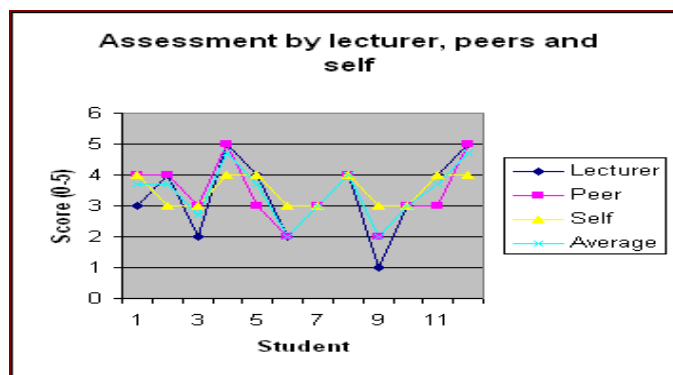
One of the difficulties in group work is the inequality of effort contributed by different group members. Habeshaw et al. (1993) describe two solutions to this problem where mechanisms are built to allocate marks to each student reflecting their contribution to the work. One such mechanism adopted in the group is shown in Appendix A.

Reconciliation of differences and conflicting objectives while conducting trade-offs are cornerstones that require negotiation and communication skills. Presentation, communication and negotiation abilities are equally important to specific domain knowledge in industrial and academic jobs. Academic and training programmes often use group work as a vehicle for knowledge creation and knowledge sharing, and for assessing the level of achievement reached by learners. The learner is required to work with a group in order to solve problems. Experiences in various Universities in the UK, Finland, and Greece have provided insights into issues that lecturers and students must guard against. The overwhelming evidence is that the benefits of group work far outweigh the drawbacks (Bostock 2000; Georgiadou & Berki, 1997; Dalcher & Woodman, 2003; Georgiadou & Siakas, 2003; Georgiadou & Dalcher, 2004).

Individual work involves the student seeking knowledge from the teacher, the internet, books, journals and other sources and answering questions, solving problems posed by the teacher. Group work requires communication, collaboration, cohesion and consensus. The teacher's principal duty is to help create cohesion, interdependence and trust by involving the team members in a virtuous circle of communication and collaboration by reducing complexity, solving conflicts, and removing obstacles the team faces. The aims are to create motivation, commitment and interaction. Teamwork is a human interaction, which creates relationships and group identity that are vital for knowledge sharing and effective team performance. Increased interdependency among team members is required in order to comprehend information required to perform the tasks.

Competitive conflicts develop from differences in personality, motivations, perceptions and power. Competitive conflicts can require the involvement of the teacher and usually are solved through face-to-face interaction. The more interaction and interdependence which naturally occurs between team members,

the greater their commitment to each other and to the team (Hoefling, 2001). Between the individual and the in-group a dependence relationship develops which is both practical and psychological (Hofstede, 2001). Cohesion is the result of the interaction between team members that generate group identity, status and personal satisfaction. It is the creation of the feeling of belonging to the “we” group distinct from the “they” group. A definition of who is part of the in-group and the out-group. The in-group is the major source of one’s identity and the group to which one owes one’s loyalty. The group is something more than the sum of its members. A series of studies carried out over a period of 10 years (Georgiadou et al., 1996; Georgiadou & Berki, 1997; Georgiadou, 2002; Dalcher & Woodman, 2003; Georgiadou & Siakas, 2003; Georgiadou & Dalcher, 2004; Georgiadou, 2005; Georgiadou, Siakas & Berki, 2006) strengthened the belief in the reliability and integrity of peer and self assessment. Fig.1 shows a small extract from a study comparing the scoring of presentations by 12 students. As can be seen from the resulting graph the variability between the Lecturer, Peer and Self assessment averaged over a large number of students scores is negligible.



**Fig. 1** – A comparison of peer, self and lecturer assessment

Peer and self assessment exercises generate an enormous amount of data. More work is needed for automating the capturing and analysis of such data.

### 3. Conclusion

Assessment aims improve *the student experience and to maximise student success*. Ensuring that quality standards and processes are adhered to is imperative. Using a multiplicity of assessment methods and instruments helps develop the knowledge and skills of students. Students respond positively to group work, especially when they are given an opportunity to reflect and improve. The learning process is facilitated and the resulting product/deliverables are of good quality. Engaging in peer review and assessment engenders a professional attitude among students. Equally, self-assessment focuses the student on their strengths and weaknesses. An integration of the self and peer assessment components into the learning process creates an atmosphere of openness, objective criticism and self-criticism useful for the achievement of specified learning aims, especially in the final year of undergraduate studies.

Group projects and group coursework is a vehicle for developing transferable skills which will in future enhance the employability of graduates. As part of group coursework peer assessment has proved to be very effective and reliable. Setting up and implementing peer assessment is a complex task. However, it is increasingly clear that assessment is top priority in a student's agenda so much so that unless something is assessed students do not seem to put any importance into learning. Therefore, assessment has become a topic of strategic importance. Due to large classes, the diversity of the student body, and the industrial expectations of the life long skills from new graduates, academic institutions need to find effective ways of transferring knowledge and skills to students. Peer assessment has been proved to be one tool which can help academics in achieving this end.

The quality of the student experience through good assessment practices helps improve the overall quality of provision and helps change the quality culture of the organisation and of all involved.

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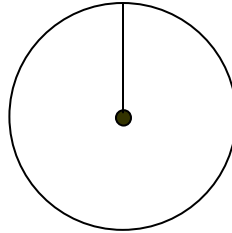
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**Appendix A**  
**Group Evaluation Exercise**

**Name:** \_\_\_\_\_

**Student Number:** \_\_\_\_\_



Imagine the circle above is a pie-chart which represents the members of your coursework group. By now you would have met a number of times regarding the coursework and will have an idea of how much effort each one of you put into the final product.

- Divide the pie into slices - one for each member in your group. Do not forget to include a slice for yourself. The size of each slice should represent each person's contribution to the coursework.
- Label each slice by inserting the individual's name (or initials), or the student number.
- Describe the way in which you divided the pie. For example, if one member has a larger slice than the rest, explain why you did so.
- How did you evaluate yourself in relation to the others in the group?

(Adapted from Organisation Organisational Behaviour, An introductory Text, Andrzej Huczynski and David Buchanan, 4th Edition, Prentice Hall, p339).

**Appendix B**  
**Individual Coursework presentation**  
**(Adapted from McCullen (1997) and Student presentation**  
**evaluation form (2006))**

**Coursework Presentation Evaluation Form**

**Student Name:** \_\_\_\_\_

**Student Number:** \_\_\_\_\_

**Title of the presentation:** \_\_\_\_\_

This presentation is worth 15% of the total mark allocated to your individual coursework.

According to the marking scheme provided the marks are allocated as follows:

Clarity of presentation	10%
Relevance and to the point	10%
Research carried out	10%
Time keeping	10%
Knowledge of the topic	10%
(question answering)	
Total marks:	_____

When evaluating your presentation the following Rubric will be used:

Clarity of presentation 10%

Marks →	2	4	6	8	10	Total
OrganisationOr ganisation	Audience cannot understand presentation because there is no sequence of information.	Audience has difficulty following presentation because student jumps around.	Student presents information in logical sequence which audience can follow.	Student presents information in logical, interesting sequence which audience can follow.	Student presents was very clear. Information is presented in logical, interesting sequence which audience can follow.	
Slides	Difficult to read – the font size is too small. And/or Too much content.	Content Ok but font size too small or vice versa.	Some slides are OK but some difficult to read.	Slides well designed, but too many to follow.	Slides are well designed and well spaced.	
Eye Contact	Student reads all of report with no eye contact.	Student occasionally uses eye contact, but still reads most of report.	Student maintains eye contact most of the time but frequently returns to notes.	Student maintains eye contact with audience, but most of the time looks only at a certain section of the audience. Seldom returning to notes.	Student maintains good eye contact with the entire audience. Presents the material without referring to notes.	
Elocution	Student mumbles, incorrectly pronounces terms, and speaks too quietly for students in the back of class to hear.	Student's voice is low. Student incorrectly pronounces terms. Audience members have difficulty hearing presentation.	Student's voice is clear. Student pronounces most words correctly. Most audience members can hear presentation.	Student uses a clear voice and correct, precise pronunciation of terms so that all audience members can hear presentation.	Excellent presentation, well articulate, and well paced.	

Relevance and to the point 10%

Is the content of the presentation relevant to the topic introduced?

Research carried out 10%

Does the presentation indicate the depth of research carried out?

Time keeping 10%

Is the presentation concluded in time in a coherent manner?

Knowledge of the topic 10%

	2	4	6	8	10	Total
Subject Knowledge	Student does not have grasp of information; student cannot answer questions about subject.	Student is uncomfortable with information and is able to answer only rudimentary questions.	Student is at ease with expected answers to all questions, but fails to elaborate.	Student answers well with good explanations .	Student demonstrates full knowledge (more than required) by answering all class questions with explanations and elaboration.	

**«Տեղեկատվություն»-ը հանդիսանում է ինտեգրացիոն  
մեթոդական խորհուրդի անդամ**  
2. հիմնականում, 2. լեզվ. հանձնարար, Ե. Արմենյան, 2. հիմն. խորհուրդ (ԵՊՀ)

**Student Surveys as Quality Assurance Mean**  
A. Simonyan, A. Grigoryan, H. Zhamharyan, A. Sargsyan  
(Yerevan State University)

*According to the requirements of the Bologna Process the European standards of internal quality assurance in educational institutions pay attention to the participation of students in the process of QA. Starting from 2002 one of the means of inter-university supervision in YSU has been the anonymous written surveys of the performance of the professors and the lecturers. Since 2008 surveys among the YSU graduates have been organized to establish the student satisfaction with the educational programmes.*

**Մեթոդ**

Համալսարանի Գործադիր տնօրենի և Գործադիր տնօրենի հանձնարարությամբ իրականացվում է «Տեղեկատվություն»-ը հանդիսանում է ինտեգրացիոն մեթոդական խորհուրդի անդամ

«Տեղեկատվություն»-ը հանդիսանում է ինտեգրացիոն մեթոդական խորհուրդի անդամ

«Տեղեկատվություն»-ը հանդիսանում է ինտեգրացիոն մեթոդական խորհուրդի անդամ

«Տեղեկատվություն»-ը հանդիսանում է ինտեգրացիոն մեթոդական խորհուրդի անդամ

»iù ò Ì»ÝñáÝóíÍ µÝáóŮÁ Ĩñ»ñ:

### ²ēĬ³ Çñ³Ç×³ĬÁ

§ĬñÁáóĬŮ³Ý Ů³ēÇÝ! ÐÐ ũñ»ÝùÇ ÁÝ!áóÝáóŮÇó · ĨñÁáóĬŮ³Ý · ÇĬáóĬŮ³Ý Ý³-  
Ē³ññáóĬŮ³Ý ũñÇÝ³Ĭ»ĒÇ Ĭ³ÝáÝ³ñ-Ç Ñ³ēĬíáóŮÇó Ñ»íá °áÐ-áóŮ áóē³ÝáóŮĬ³Ý  
Ñ³ñóáóŮÝ»ñÁ »½³ĬÇ µÝáóŮÁ ĬÇÝ ĨñáóŮ · ³Ýó ĬÇÝ Ĭ³óíáóŮ, µ³ó³ē³á»ē, »ĒÝ»Ēáí 13-  
ē³Ēáē³Ĭ³Ý ŮñóáóŮÁÝ»ñÇ ĬÇ×³Ñ³ñáóŮó Çñ³Ç×³ĬÝ»ñÇó: áóē³ÝáóŮáóĬŮ³Ý ĬáóŮÇó  
Ñ³Ů³Ēē³ñ³ÝÇ āñáy»ēāñ³¹³ē³Ēáē³Ĭ³Ý Ĭ³½ŮÇ ¹³ē³Ý¹Ů³Ý āñ³ĬÇ · ³ñ¹ŮáóÝ³Ĭ»íáóĬŮ³Ý ·Ý³-  
Ñ³Ů³Ý, Ñ³ñóŮ³Ý ³Ýóí³óŮ³Ý · ³ñ¹ŮáóÝùÝ»ñÇ ũ-³-āñĬŮ³Ý Ñ³Ů³Ĭ³ñ. ēĬ»ŌĬ»Ēáó Ýā³³Ĭáí  
2002 ĬĬ³ĬÝÇÝ Ůß³Ĭ»Ē Ĭ · °áÐ Ñ³Ů³ā³³ēĒ³Ý Ĭ³ÝáÝ³ñ. · Ñ³ñó³Ĭ»ñĬĬĬ, āñáÝù Ñ³ēĬí»ĒÉ  
»Ý °áÐ ·ÇĬ³Ý ĒáñÑñ¹Ç ÝÇēĬáóŮ: Ůß»Ýù Ý³, āñ ³Ů¹ Ýā³³Ĭáí Ñ³Ů³ā³³ēĒ³Ý ĒáñÑñ¹³íáó-  
ĬŮáóÝÝ»ñ »Ý ³Ýóí³óí»Ē 2002Ĭ. Ů³ŮÇēÇÝ §Visiting Advisors program! Ĩñ³-ñÇ ÑñÇ³-  
Ý³ĬÝ»ñáóŮ °áÐ ³Ůó»ĒĬ §Salzburg seminar! Ñ»ŌÇÝ³Ĭíāñ Ĭ³½Ů³Ĭ»ñáóĬŮ³Ý  
÷āñŌ³.»ĬÝ»ñÇ Ñ»í:

áóē³ÝáóŮÝ»ñÇ ĬáóŮÇó āñáy»ēāñ³¹³ē³Ēáē³Ĭ³Ý Ĭ³½ŮÇ ³Ēē³ÝùÇ āñ³ĬÇ ·Ý³Ñ³Ů³Ý  
°áÐ ³ēÇÇÝ Ĭ³ÝáÝ³ñ-Ĭ ēĬ»ŌĬ»ĒÉ Ē³ñÇ ìñ Ĩñ³Ĭ Ñ³ñóáóŮÝ»ñÝ áó ³Ů÷á÷áóŮÝ»ñÝ  
³Ýóí³óÝ»Ē Ĭ»ÝñáÝóíÍ: Ů³ēĬ»ēĬáóŮ Ĭñ Ñ³ñóáóŮÝ»ñ Ĭ³½Ů³Ĭ»ñá»Ē Ůáóñ³ÝáŮáóñ  
ĬÇē³ŮŮ³Ç ũÝÝ³ñÇ³ÝÇ ³³ñÇó Ñ»íá: Ð³ñó³Ĭ»ñĬĬĬ ēĬ³µÝ³ĬÝ ÑñÇ³ÝáóŮ  
ÑÇß»óÝáóŮ Ĭñ §³ē³ĒáēĬ áóē³ÝáóŮÝ»ñÇ ³āù»ñáí Ñ³ñó³Ĭ»ñĬĬĬ: Ñ³Ů³ēĬí³ ³ē³ÝŌÇÝ  
µ³ĬÝáí, āñĬ»Ō áóē³ÝáóŮ Ĭ³ñáó Ĭñ ·ñíāñ ³ñ³Ñ³Ů³»ĒÉ Çñ Ĭ³ñĬÇŮÁ · ³Ý»ĒÉ  
³ēÇ³ñĬáóĬŮáóÝÝ»ñ:

2002Ĭ. ÑāĬĬ»Ůµ»ñÇÝ °áÐ áóēáóŮÝ³Ů»Ĭá³Ĭ³Ý Ĭ³ñáóĬŮ³Ý · ¹³Ý³Ý»ñÇ Ñ»í  
Ñ³Ů³»ŮŮŮ ³Ýóí³óí»óÇÝ Ñ³ñóáóŮÝ»ñ, āñáÝó Ů³ēÝĬó»óÇÝ µáóŮÇ 4 500 áóē³ÝáóŮÝ»ñ:  
áóē³ÝáóŮÝ»ñ Ů³ēÝĬóáóĬŮáóÝÁ, ĬēĬ ý³ĬáóĒĬ»ĬÝ»ñÇ, Ĭ³ÝíáóŮ Ĭñ 40-86 íāĬáÇ  
ē³ŮŮ³ÝÝ»ñáóŮ:

°áÐ āñáy»ēāñ³¹³ē³Ēáē³Ĭ³Ý Ĭ³½ŮÇ · 2001-2002 áóēáóŮÝ³Ĭ³Ý Ĭ³ñ³ »ñĬñāñ ĬÇē³ŮŮ³ĬÇ  
·Ý³Ñ³Ů³Ý ŮÇÇÇÝ ÝÇßÁ 4,06 ŮÇ³íāñ Ĭñ: ²ñŌ³.³ÝŮÁ Ĩñ³Ý Ĭñ, áóē³ÝáóŮÝ»ñÇó Ñ³Ĭ»ñĬ  
Ñ³ñóáóŮÝ ÁÝ!áóÝ»óÇÝ á·āñáóĬŮ³Ůµ · ũ-³-āñĬ»óÇÝ Ñ»Ĭ³ññāŮ Ñ³ñó»ñÇ ÑáóñÇ  
·ñ³íāñ Ů»ĬÝ³µ³ÝáóĬŮáóÝÝ»ñ Ĭ³Ēáó Çñ»Ýó Çñ³íáóŮŮÁ: Ð³ñóŮ³Ý ³ñ¹ŮáóÝùÝ»ñĬ  
ùÝÝ³ñĬĬ»óÇÝ ³ŮµÇáÝÝ»ñÇ · ý³ĬáóĒĬ»ĬÝ»ñÇ ĒáñÑáóñ¹Ý»ñÇ ÝÇēĬ»ñáóŮ, ³Ů÷á÷áóŮÇÝ  
°áÐ é»Ĭíāñ³Ç ÝÇēĬáóŮ:

áóē³ÝáóŮÝ»ñÇ ĬáóŮÇó áóēáóŮŮ³Ý āñ³ĬÇ · ¹³ē³Ý¹Ů³Ý Ů»Ĭá¹ÇĬ³ŮÇ ·Ý³Ñ³íáóŮÁ  
óáóŮó Ĩ»ó ³Ů¹ Ů»Ĭá¹Ç ³ñ¹ŮáóÝ³Ĭ»íáóĬŮáóÝÁ · ĨŮ³Ē ĒÝĬñÇ ĒáóĬŮ³Ý áóŌŌáóĬŮ³Ůµ  
Ñ³Ů³Ĭ³ñ-Ĭ³ Ůáí»óŮ³Ý, Ñ³Ů³ā³³ēĒ³Ý Ů»Ĭá¹ÇĬ³ŮÇ · Ĩñ³-ñ³ŮÇÝ ³ā³ÑáíŮ³Ý, ēĬóí³  
³ñ¹ŮáóÝùÝ»ñÇ Ĭ»ñĒáóĬáóĬŮ³Ý · Ĩ³Ýó ·āñĬÝ³ĬÝ ĬÇñ³ēŮ³Ý ³ÝÑñ³Ĭ»ÑáóĬŮáóÝÁ:  
²ēÇ³¹ññĬ Ĭā³³ĬÝ»ñÇ Çñ³ĬÝ³óŮ³ÝÁ Ýā³ēĬ»ó ³ó Ñ³ē³ñ³íáóĬŮ³Ý ÇÝēĬÇĬáóŮ Ñ³ŮĬ³Ý  
µ³ĬÝŮáóÝùÇ ĬáóŮÇó §°áÐ áóēáóŮÝ³Ĭ³Ý ·āñĬÁÝĬáóÇ Ĭ³ē³ñŮ³Ý Ñ³Ů³Ĭ³ñ-Ç  
Ĭ³ñ»ĒÉ·āñĬáóŮ. ĨñÁáóĬŮ³Ý āñ³ĬÇ Ĭ»ñ³ĒēĬáóŮ! Ĩñ³-ñÇ ýÇÝ³Ýē³íāñáóŮÁ:

°áÐ áóē³ÝáóŮÝ»ñÇ Ñ³ñóŮ³Ý Ů»Ĭá¹ÇĬ³ŮÇ Ůß³Ů³Ý · Ý»ñ¹ñŮ³Ý Ýā³³Ĭáí Ēñ-  
óáóŮÝ»ñ · ÷á÷áÉáóĬŮáóÝÝ»ñ Ĭ³ñĬ»óÇÝ §áóē³ÝáóŮÝ»ñÇ ĬáóŮÇó āñáy»ēāñ³¹³-  
ē³Ēáē³Ĭ³Ý Ĭ³½ŮÇ Ů³ēÝ³·ÇĬ³Ý · Ů³ÝĬ³ñĬĬ³Ý āñ³ĬÝ»ñÇ Ĭ»ñ³µ»ñŮÉ Ñ³ñóŮ³Ý! °áÐ  
Ĭ³ÝáÝ³ñ-áóŮ · Ñ³Ů³ā³³ēĒ³Ý Ñ³ñó³Ĭ»ñĬĬĬ:

°áÐ Ýāñ Ĭ³ÝáÝ³ñ-Ç Ů»Ç Ñ³ñóáóŮÝ»ñÇ ³ñ¹ŮáóÝùÝ»ñÇ ũµŮ»ĬÇíáóĬŮáóÝÝ ³ā³-  
Ñáí»Ēáó Ýā³³Ĭáí ā³ŮŮ³Ý Ĭñ Ĩñ³Ĭ Ñ³ñóŮ³ÝÁ Ů³ēÝĬóáóŮ áóē³ÝáóŮÝ»ñÇ ÝĬ³½-áóŮÝ  
ù³ÝĬÇ Ĭ»ñ³µ»ñŮÉ. Ñ³ñóáóŮÝ»ñÝ ³Ýóí³óíáóŮ »Ý ĒŮµÇ (ÑáēŮÇ) 2/3-Ç Ý»ñĬ³ŮáóĬŮ³Ý  
¹»āùáóŮ: °Á» ĨŮ³Ē ā³Ñ³ÝÇÁ āĬñ Ĭ³ñíáóŮ, ³ā³ Ñ³ñóŮ³Ý ³Ýóí³óáóŮÁ Ñ»Ĭ³Ů-íáóŮ Ĭñ:  
Ð³ñóŮ³Ý ³ŌĬÝÇáóĬŮáóÝÝ ³ā³Ñáí»Ēáó Ñ³Ů³ñ ³ŮÝ ³Ýóí³óáóŮ ĬÇÝ áóēáóŮÝ³Ĭ³Ý Ĭñ-  
āáóĬŮ³Ý ³Ēē³Ĭ³ÇóÝ»ñÁ:

Ů»ñĬ³ŮáóŮē Ñ³ñó³Ĭ»ñĬĬĬ ÑÇŮÝ³íāñ³ā»ē ÷áĒĬ»Ē Ĭ, ÇÝāÝ ĬÉ ÑÝ³ñ³íāñáó-  
ĬŮáóŮ Ĭ Ĭ³ÉÇē ³ŮµáŌÇáóĬŮ³Ůµ ÁÝ¹-ñĬ»Ēáó ¹³ē³ĒáēÇ Ů³ēÝ³·ÇĬ³Ý, Ů³ÝĬ³ñĬĬ³Ý ·

³ÝÑ³³³Ý Ý³ñáÔáðÃÙáðÝÝ»ñÁ: Ð³ñó³Ã»ñÃÇÍÁ Ñ³Ù³Éñí»É ÿ áðë³ÝáÔÇ Ñ³Ù³ñ Ý³ñ»ñ ¹»Ý³ÝÇ ³ÈÈ³ÝÙÁ ·Ý³Ñ³íÔ Ñ³ñóáí: òáÈí»É ÿ Ñ³ñó³Ã»ñÃÇÍÇ Ý³éáðó³ÍÙÁ · Ó·Á, ÇÝÁÁ Ñ»ß³³ñ»É ÿ ³ÙÝ Éñ³óÝ»Éáð ·ñÍÁÝÁ³óÁ:

°äÐ ·Ç³³Ý ÉánÑñ¹Ç áñáßÙ³Ùµ (15.03.2004Ã.) ÷á÷áÉáðÃÙáðÝÝ»ñ Ù³íó¹»óÇÝ Ñ³ñó³Ý Ý³ÝáÝ³ñ·Ç Ù»Ç: ÐÇÙÝ³³Ý Éñ³óáðÙÝ»ñÁ í»ñ³µ»ñáðÙ ÿÇÝ ùÝÝ³ñÍáðÙÝ»ñÇ Ý³ÝáÝ³ñ·Ç Ù³ÝÁ · Ñ³ñó³Ý ³ñ¹ÙáðÝÙÝ»ñÇ ù·³·ñÍÙ³ÝÁ:

Äë¹ ³Ù¹Ù, Ñ³ñóáðÙÝ»ñÇ ³ñ¹ÙáðÝÙÝ»ñÁ Ùáðñ³Ù³ÝáÙáðñ ÍÇë³ÙÙ³Í á»íù ÿ ùÝÝ³ñÍÁ»Ý ³ÙµÇáÝÝ»ñÇ · Ý³ÍáðÉí»Ý»ñÇ ÉánÑáðñ¹Ý»ñÇ ÝÇë¹»ñáðÙ: øÝÝ³ñÍáðÙÝ»ñÇ ³ñ¹ÙáðÝÙáðÙ ³é³ÇñÍáðÃÙáðÝÝ»ñ · Ñ³ÝÓÝ³ñ³³ÝÝ»ñ »Ý Ùß³ÍáðÙ ¹³ë³ÉáëÝ»ñÇ ·ñÍáðÝ»áðÃÙ³Ý ³ñ¹ÙáðÝ³»íáðÃÙáðÝÁ µ³ñÓñ³óÝ»Éáð áðÔÔáðÃÙ³Ùµ: áðë³ÝáðÝ»ñÇ ·ñ³íñ Ý³ñÍÇÙÝ»ñÁ ùÝÝ³ñÍáðÙ »Ý Ý³ÍáðÉí»Ý»ñÇ ¹»Ý³ÝÝ»ñÇ ÝÇë¹»ñáðÙ: ¹»Ý³ÝÝ»ñÁ á»íù ÿ Ñ³ñóáðÙÝ»ñÇ ³ñ¹ÙáðÝÙÝ»ñÇ ßáðñÇ ùÝÝ³ñÍáðÙÝ»ñ Ý³¹²Ù³Í»ñáÝ Ý³· áðë³ÝáðÝ»ñÇ Ñ»í: Ð³ñóáðÙÝ»ñÇ ³ñ¹ÙáðÝÙÝ»ñÁ 5 í³ñÇ á³ÑíáðÙ »Ý ¹»Ý³ÝÝ»ñáðÙ · áðëáðÙÝ³³Ý í³ñáðÃÙáðÝáðÙ · ó³Ý³ó³Í ï»ë³ÍÇ ÙñóáðÙÁÝ»ñÇ Á³Ù³Ý³Í Ý»ñÍ³Ù³óíáðÙ »Ý ÙñóáðÃ³ÙÇÝ Ñ³ÝÓÝ³ÁáÔáíÝ»ñÇÝ:

ëíáñ· Ý»ñÍ³Ù³óÝáðÙ »Ý ù °äÐ-áðÙ 2002/03-2007/08 áðë³³ñÇÝ»ñÇÝ áðë³ÝáðÝ»ñÇ Ù³ëÝ³ÍáðÃÙ³Ý · áñáÝ»ëáñ³¹ë³Éáë³³Ý Ý³¹²ÙÇ ·Ý³Ñ³Ù³Ý ÙÇÇÇÝ ÙÇÇ³íáñ:

²ÔÔáðë³Í 1.

	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08
Ø³ëÝ³ÍáðÃÙáðÝ (%)	72.7	74.45	74	73.8	73.7	74
ØÇÇÇÝ ÙÇÇ³íáñ	4.22	4.16	4.25	4.35	4.25	4.27

Ð³ßÍÇ ³ëÝ»Éáí Ñ³ñóáðÙÝ»ñÇ Í»ÝíñáÝ³ó³Í ³Ýó³óáðÙÁ· ïÙ³É ³ñ¹ÙáðÝÙÝ»ñÁ ï³ÙáðÙ »Ý °äÐ ¹³ë³Éáë³³Ý Ý³¹²ÙÇ µ³³³ÝÇÝ µ³ñÓñ Ù³³ñ¹³ÍÇ Ù³ëÇÝ:

°äÐ-áðÙ Ùß³Í»É ÿ ¹³ë³Ý¹¹Ù³Ý áñ³ÍÇ · Ù»Áá¹ÇÍ³ÙÇ áðë³ÝáðÝ»ñÇ ÍáðÙÇó ·Ý³Ñ³Ù³Ý ³Ýó³óáðÙÝ ï»ÉÝáÉÁ·Ç³, áñÝ ÁÝ¹·ñÍáðÙ ÿ ÙÇ ùÝÝÇ ·ñÍÁÝÁ³óÝ»ñ. ³é³ñ³Ý»ñÇ ¹³ë³³ñ·Ç Ùß³ÍáðÙ, ¹³ë³Éáë³³Ý Ý»ñáðÃÇ ¹³ë³³ñ·áðÙ, ¹³ë³È³³ÍÝ»ñÇ Ý»ñáðÍáðÙ, ïÙ³ÉÝ»ñÇ µ³¹²ÙÇ ë¹»ÔÍáðÙ, Ñ³ñó³Ã»ñÃÇÍÝ»ñÇ Ùß³ÍáðÙ Ý³È³»ë³Í ³ñáÙ³³ó³Í Ùß³ÍÙ³Ý Ñ³Ù³ñ, ³Ý³ÝáðÝ Ñ³ñó³Ý ³Ýó³óáðÙ, ï»Ô»Í³íáðÃÙ³Ý ³ñáÙ³³ó³Í Ý»ñáðÍáðÙ, ³ñ¹ÙáðÝÙÝ»ñÇ Ùß³ÍáðÙ, ³ñ¹ÙáðÝÙÝ»ñÇ Ù»Ý³µ³ÝáðÃÙáðÝ:

³é³óáðó³ÍÇÝ Ñ³Ù³á³³ëÈ³Ý· Äë¹ ³³¹»ÙÇ³³Ý ÈÙµ»ñÇ, ³ñáÙ³³ó³Í Ó·áí ïá³·ñÍáðÙ »Ý Ñ³ñó³Ã»ñÃÇÍÝ»ñÁ: Ð³ñóáðÙÝ ³Ýó³óáðÙ»Éáð Ñ»íá Ñ³ñó³Ã»ñÃÇÍÝ»ñÁ Íá³íáñíáðÙ · ë¹Ý³íáñíáðÙ »Ý (ë¹»ÔÍáðÙ ÿ Ñ³ñó³Ã»ñÃÇÍÇ Á³ÙÇÝ á³Í»ñÁ): ¶ñ³íáñ Ý³ñÍÇÙÝ»ñÇ ¹»á·áðÙ ·ë Ñ³Ù³³ñ·Ý á³ÑíáðÙ ÿ Ñ³ñó³Ã»ñÃÇÍÝ»ñÇ á³Í»ñÁ µ³ó»Éáð ÑÝ³ñ³íáñáðÃÙáðÝ:

ïÙ³ÉÝ»ñÇ Ý»ñáðÍÙ³Ý · Ùß³ÍÙ³Ý ·ñÍÁÝÁ³óÝ áá¹ÇÙ³É³óÝ»Éáð Ýá³³Íáí °äÐ Ñ³Ù³³ñ·á³ÙÇÝ Í»ÝíñáÝÇ ³ÈÈ³ÍÇóÝ»ñÇ áðÃ»ñáí ë¹»ÔÍ»É ÿ Ñ³íáðÍ Íñ³·ñ³ÙÇÝ á³ÑíáñíáðÙ Á³ÙÇÝ ï»Ô»ÍáðÃÙáðÝÝ»ñÝ ³ñáÙ³³ó³Í ×³Ý³á»Éáð Ñ³Ù³ñ: ïÙ³É Íñ³·ÇñÁ, ³ÈÈ³»Éáí ë¹Ý³íáñ³Í Ñ³ñó³Ã»ñÃÇÍÝ»ñÇ Ñ»í, ×³Ý³áðÙ ÿ Áí»ñÁ · ë¹»ÔÍáðÙ ÿ ·Ý³Ñ³Ù³Ý»ñÇ µ³¹², áñ¹»Ô ï»Ô»ÍáðÃÙáðÝÝ»ñ »Ý á³ÑíáðÙ Ñ³ñó³Ã»ñÃÇÍÇ, ³é³ñ³ÙÇ, ¹³ë³ÉáëÇ, Ñ³ñó³Ã»ñÃÇÍÇ Ñ³ñóÇ · ·Ý³Ñ³Ù³ÝÇ Ù³ëÇÝ: ²ÙëáÇëáí, ³Ùë Íñ³·ÇñÝ ³ñ³·óÝáðÙ ÿ ïÙ³ÉÝ»ñÇ Ý»ñáðÍáðÙÁ (áñÝ ³é³Ç Ó»éúáí ÿñ ³ñíáðÙ), · ï³Ýáí Çë¹ ïÙ³ÉÝ»ñÇ Ùß³ÍÙ³Ý ·ñÍÁÝÁ³óÝ ³¹»ÉÇ ³ñ³. áð ³ñ¹ÙáðÝ³»í ÿ ¹³éÝáðÙ, ÇÝáÝ á³ÑíáñíáðÙ ÿ ·ñÍÁÝÁ³óÇ Á³·ÝóÇÍáðÃÙáðÝÁ · ùµÙ»ÍÇÍáðÃÙáðÝÁ, ÁáðÙÉ ÿ í³ÉÇë Éáðë³÷»É á³³Ñ³³Ý · ÙÇÍáðÙÝ³íáñ ëÈ³ÉÝ»ñÇó, ë¹Ý³É ×ß·ñÇ¹ ³ñ¹ÙáðÝÙÝ»ñ, Í³³ñ»É µ³¹²Ù³»ë³Í Ñ³ß³ñÍÝ»ñ áð Ñ³Ù»Ù³íáðÃÙáðÝÝ»ñ:

Ð³ñóáðÙÝ»ñÇ ÁÝÁ³óáðÙ áðë³ÝáðÝ»ñÇÝ ÑÝ³ñ³íáñáðÃÙáðÝ ÿ ïñíáðÙ ß³ñ³ñ»Éáð Çñ»Ýó Ý³ñÍÇÙÝ»ñÁ, Ù»Ý³µ³ÝáðÃÙáðÝÝ»ñÁ, ó³ÝÍáðÃÙáðÝÝ»ñÁ: ²Ù¹

İñİÇùÝ»ñÁ İ½ÚáoÙ »Ý Ñ³ñóáoÙÝ»ñÇ µ³Öİ³óáoóÇā Ù³éÁ: ²Ù÷á÷áoÙÝ»ñÁ óáoÙó »Ý İÉÇē, áñ Ñ³ñóÙ³Ý Ù³ēÝ³İÇóÝ»ñÇ Ùáİ³íáñ³á»ē 1/3-Á ù-İ³·áñÍáoÙ ĺ İñİÇùÝ»ñÁ ·ñ³íáñ ³ñ-İ³Ñ³Ùİ»Éáo ÑÝ³ñ³íáñáoĀÚáoÝÁ: Úáoñ³ñ³ÝáÚáoñ İÇē³ÙÙ³İÇ ³ñ¹ÚáoÝùÝ»ñÇ ³Ù÷á÷áoÙÇó Ñ»íá İñİÇùÝ»ñÝ ÁÝ¹Ñ³Ýñ³óíáoÙ »Ý é»İíáñ³İÇ Ñ³Ù³ñ, Çēİ ğ³ÍáoÉİ»İÝ»ñáoÙ ùÝÝ³ñÍíáoÙ »Ý ¹»İ³Ý³İÇ Ù³İ³ñ¹Íáí: áðē³ÝáÖÝ»ñÇ ·ñ³éáoÙÝ»ñÁ µ³½Ú³µÝáoŪÁ »Ý. İ»ñ³µ»ñáoÙ »Ý ÇÝāā»ē áñáy»ēáñ³¹³ēÉáēİ³Ý İ³½ÚÇÝ, ³ŪÝā»ē ĺÉ ³ŪµáÖÇ áðēáoÙÝ³İ³Ý ·áñÍÁÝÁ³óÇÝ: Áİ³ñİ»Ýù Ñ³×³É³İÇ Ñ³Ý¹Çāáo ÑÇÙÝ³İ³Ý Á»Ū³Ý»ñÁ.

- áðēáoÙÝ³İ³Ý ·áñÍÁÝÁ³ó,
- ¹³ē³Éáēİ³Ý İ³½Ū, ³ŪµÇáÝÝ»ñ,
- ¹»İ³Ý³İÇ ·áñÍáoÝ»áoĀÚáoÝ,
- áðēÉáñÑñ¹Ç ³BÉ³³Ýù,
- ·ñ³¹ñ³ÝÇ ³BÉ³³Ýù,
- İÝİ»ē³İ³Ý ÁÝ¹Ñ³Ýáoñ Ñ³ñó»ñ,
- İñİÇùÝ»ñ Ñ³ñóáoÙÝ»ñÇ í»ñ³µ»ñŪ³É:

ŪB»Ýù, áñ áðē³ÝáÖÝ»ñÇ ¹ÇíáÖáoĀÚáoÝÝ»ñÝ áð ³é³ç³ñİÝ»ñÁ ùÝÝ³ñÍíáoÙ »Ý °áĐ é»İíáñ³áoÙ » ý³ÍáoÉİ»İÝ»ñáoÙ: ñ³Ýù ĺ³ā»ē ū·ÝáoÙ »Ý áðēáoÙÝ³İ³Ý ·áñÍÁÝÁ³óÇ İ³½Ūİ³»ñáŪ³ÝÁ » Ñ³Ý¹Çē³ÝáoÙ »Ý í»ñ³ÑēİŪ³Ý ³ñ¹ÚáoÝ³İ»İ Ū»É³ÝÇ½Ū µáoÑÇ İ³ñá³İ³½ŪÇ Ñ³Ù³ñ:

°ñ³ÝÇ ā»İ³İ³Ý Ñ³Ù³Éē³ñ³ÝáoÙ áðē³ÝáÖÝ»ñÇ İáÖŪÇó áñáy»ēáñ³¹³ēÉáēİ³Ý İ³½ŪÇ ·áñÍáoÝ»áoĀŪ³Ý ³ñ¹ÚáoÝ³İ»íáoĀŪ³Ý ·Ý³Ñ³Ū³Ý Ñ³ñóáoÙÝ»ñÇ ūµ-Ū»İİÇíáoĀÚáoÝÝ ³ā³Ñáí»Éáo Ñ³Ù³ñ ŪÇ B³ñù ù³ŪÉ»ñ »Ý Ó»éÝ³ñÍíáoÙ: Ū³É » ³é³ç Ñ³ñóáoÙÝ»ñÇ ūµŪ»İİÇíáoĀŪ³Ý ³ā³ÑáíŪ³Ý ·áñÍáoÝ»ñÇó Ū»İÁ ¹ñ³Ýó İ»ÝİñáÝ³óİ³İ ³Ýóİ³óáoÙÝ ĺ: ³óÇ ³Ū¹, İ³ñ·áñ ĺ Ý³· áðē³ÝáÖÝ»ñÇ Ū³ēÝ³ÍáoáoĀŪ³Ý ē³ÑŪ³Ýİ³İ Ýİ³½³·áoÙÝ ù³Ý³İÇ ā³Ñá³ÝáoŪÁ, ÇÝāÁ ÁáoŪÉ ĺ İÉÇē ēİ³Ý³É áðē³ÝáÖÝ»ñÇ Ū»İ³Ū³ē-ÝáoĀŪ³Ý İñİÇùÁ:

Đ³ñóáoÙÝ»ñÇ ūµŪ»İİÇíáoĀŪ³Ý Ū³ēÇÝ İ³ñáÖ »Ý İİ³Ū»É Ý³· Ñ³Ū³Éē³ñ³ÝáoÙ ÝáoŪÝ³İÇā ÈÝ¹ÇñÝ»ñÇÝ Ý¹Çñİ³İ éáoÇáÉá·Ç³İ³Ý ³ŪÉ Ñ»İ³½áíáoĀÚáoÝÝ»ñÇ ³ñ¹-ŪáoÝùÝ»ñÁ: ²Ū¹āÇēÇ ŪÇ Ñ»İ³½áíáoĀÚáoÝ Çñ³İ³Ý³óİ»É ĺ °áĐ éáoÇáÉá·Ç³ŪÇ ³ŪµÇá-ÝÇ İáÖŪÇó: 2005Ā. ÷»İñİ³ñ-Ū³ñİ ³ŪÇēÝ»ñÇÝ °áĐ é»İíáñ³İÇ ā³İ»ñáí éáoÇáÉá·Ç³ŪÇ ³ŪµÇáÝÁ İ³³ñ»É ĺ Ñ»İ³½áíáoĀÚáoÝÝ»ñ §°ñ·³ÝÇ ā»İ³İ³Ý Ñ³Ū³Éē³ñ³ÝÇ ÇŪÇÇÁ. Ñ³Ū³óù Ý»ñēÇóİ: Éáñ³·ñáí: Đ»İ³½áíáoĀÚáoÝÝ»ñÇ Ýā³İ³Ý ĺñ ā³ñ½»É áðēáoÙÝ³İ³Ý ·áñÍÁ-ÝÁ³óÇÝ ³éÝáíáÖ ÈÝ¹ÇñÝ»ñÁ, áðē³ÝáÖ-¹³ē³Éáē ÷áÉÑ³ñ³µ»ñáoĀÚáoÝÝ»ñÁ, áðē³ÝáÖÝ»ñÇÝ Ñáo¹áoŪ ÑÇÙÝ³Ñ³ñó»ñÁ, ÍáéáoáoÇ³ŪÇ İ³ñİ³İÍáoĀŪ³Ý ³ēİÇ×³ÝÁ » ³ŪÉÝ:

ØB³İİ»É ĺ Ñ»İ³½áíáoĀÚáoÝÝ»ñÇ Ū»Āá¹µ³ÝáoĀÚáoÝÁ » ³Ýóİ³óŪ³Ý ÁÝÁ³óİ³ñ-Á: ú-İ³·áñÍí»É »Ý İŪ³ÉÝ»ñÇ Ñ³İ³ùŪ³Ý Ñ»İ³Ū³É Ū»Āá¹Ý»ñÁ.

- Ñ³ñó³½ñáoŪóÝ»ñ °áĐ ¹³ē³ÉáēÝ»ñÇ » Bñç³Ý³İ³ñİÝ»ñÇ Ñ»İ (áñáÝó ÁíáoŪ İ³Ý Ý³· ³ēāÇñ³ÝİÝ»ñ),
- ýáÍáðē ÈŪµ»ñ áðē³ÝáÖÝ»ñÇ Ñ»İ,
- Ñ³ñóĀ»ñĀÇİÝ»ñÇ ŪÇÇáoáí Ñ³ñóáoŪ áðē³ÝáÖÝ»ñÇ Ñ»İ:

ÁÝ¹Ñ³Ýáoñ ³ēŪ³Ūµ, é»İíáñ³İÇ İ³½Ū³İ»ñáİ Ñ³ñóáoÙÝ»ñÇ » éáoÇáÉá·Ç³ŪÇ ³ŪµÇáÝÇ Ñ»İ³½áíáoĀÚáoÝÝ»ñÇ ³ŪµáÖÇ³İ³Ý ³Ū÷á÷: ā³İ»ñÁ ·ñ»Ā» ÝáoŪÝÝ ĺ: áðē³-ÝáÖÝ»ñÁ İñİÇÝ ³Ý¹ñ³¹³ēÝáoÙ »Ý İñĀ³İ³Ý Ñ³Ū³İñ·ÇÝ, áðēáoÙÝ³İ³Ý ·áñÍÁÝÁ³óÇÝ, áðē³ÝáÖ-¹³ē³Éáē ÷áÉÑ³ñ³µ»ñáoĀÚáoÝÝ»ñÇÝ, áðē³ÝáÖ³İ³Ý İŪ³ÝùÇÝ, ·ñ³¹ñ³ÝÇ ³BÉ³³ÝùÇÝ, Éē³ñ³ÝŪÇÝ » B»Ýù³ŪÇÝ ā³ŪŪ³ÝÝ»ñÇÝ, ē³ÝÇİ³ñ³ÑÇÇ»ÝÇİ íÇ×³İÇÝ: Ą ¹»ā, Ñ»İ³ñùÇñ ĺ, áñ ÑÇÙÝ³ÈÝ¹ÇñÝ»ñÇÝ ÈÇēİ ùÝÝ³¹³³µñ Ūáİ»Ý³Éáí Ñ³Ý¹»ñÓ Ñ³ñóŪ³Ý Ū³ēÝ³İÇóÝ»ñÇ 77%-Á ÝáoŪ ĺ, áñ İñİÇÝ µáoÑ ÁÝ¹áoÝİ»Éáo ÑÝ³ñ³íáñáoĀŪ³Ý ¹»áoáoŪ ¹³ñÓŪ³É ÍÁÝİñ»ñ Ñ³Ū³Éē³ñ³ÝÁ:

Đ³ñİ ĺ ÝB»É, áñ áðē³ÝáÖÝ»ñÁ Ñ³İ³ÝáoĀŪ³Ý »Ý ³ñĀ³Ý³óñ»É °áĐ-áoŪ Ñ³ñóáoŪ-

Ý»ñ · Ñ»i³/2áíáõÃÛáoÝÝ»ñ İ³ñ»Éáõ Ö»İ³ñáõÃÛ³Ý ç³Ýù»ñÁ` Ýß»Éáí, áñ ¹ñ³Ýù ÑÝ³ñ³íáñáõÃÛáoÝ »Ý ÁÝÓ»éáõÛ ³ñ³Ñ³Ûi»Éáõ Çñ»Ýó Û³Ñá·áõÃÛáoÝÝ»ñÁ, ¹Á·á·ÑáõÃÛáoÝÝ»ñÁ, ³é³ç³ñİÝ»ñÁ, · Çñ»Ýó Ó³ÛÝÁ Éë»ÉÇ »Ý ¹³ÓÝáõÛ °äÖ Ö»İ³ñáõ·ÃÛ³ÝÁ:

áë³ÑÛ³Ý³÷³İ»Éáí áðë³ÝáÖÝ»ñÇ İáÖÛÇó áñáy»éáñ³¹³ë³Éáë³İ³Ý İ³¹/²ÛÇ ·áñÍáõÝ»áõÃÛ³Ý ³ñ¹ÛáoÝ³i»íáõÃÛ³Ý ·Ý³Ñ³iÛ³Ý Ñ³ñóáõÛÝ»ñáí 2008Á·Çó °äÖ·áõÛ İ³¹/²Ûİ»ñáí»óÇÝ Ñ³ñóáõÛÝ»ñ ßñç³Ý³i³ñiÝ»ñÇ ßñç³ÝáõÛ İñÁ³İ³Ý İñ³·ñ»ñÇó áðéáõÛÝ³éáõÃÛ³Ý µ³i³ñ³ñ³íáõÃÛ³Ý í»ñ³µ»ñÛ³É: ²Û¹ Ýá³i³Íáí Ûß³İ»ó Ñ³Û³á³ë³É³Ý Ñ³ñ·ó³Á»ñÁ, áñÁ µ³óÇ ÁÝ¹Ñ³Ýáðñ ïÛ³ÉÝ»ñÇó Ý»ñ³éáõÛ ĸ Ñ»İ·Û³É 5 µ³ÁÇÝÝÝ»ñÁ·µáõÑÇ · Û³ëÝ³·ÇíáõÃÛ³Ý ÁÝiñáõÃÛ³ÝÁ Ýá³ëíáÖ ·áñÍáÝÝ»ñ, áðë³ÝáÖÝ»ñÇ µ³i³·ñ³ñ³íáõÃÛáoÝÁ İñÁ³İ³Ý İñ³·ñ»ñÇ µáí³Ý¹³íáõÃÛáoÝÇó, áðéáõóÛ³Ý Û»Áá·¹³ÝáõÃÛáoÝÇó · áðéáõÛÝ³İ³Ý ·áñÍÁÝÁ³óÇ İ³¹/²Ûİ»ñááõÛÇó, Ñ³Û³Éë³ñ³ÝÇ éá³ë³ñ³íáõÛÇó, ³Û¹ ÁíáõÛ i³ñá³İ³¹/²ÛÇ, ¹³ë³ÉáëÝ»ñÇ, ³ßÉ³³İÇóÝ»ñÇ · áðë³ÝáÖÝ»ñÇ Ñ»i÷áËÑ³ñ³µ»ñáõÃÛáoÝÝ»ñÇó, ÇÝáá»ë Ý³· Ñ³Û³Éë³ñ³ÝÇ í»ñ³µ»ñÛ³É Ñ³ÝñáõÃÛ³ÝÁ ïñ³Û³ñíáÖ i»Ö»İ³ííáõÃÛ³Ý ³ñÁ³Ý³Ñ³i³íáõÃÛáoÝÇó:

Ð³ñóáõÛÁ Çñ³İ³Ý³óí»ó ÑáoÝÇë·ÑáoÉÇë ³ÛÇëÝ»ñÇÝ, áñÇÝ Û³ëÝ³İó»óÇÝ µ³İ³·É³iñÇ³İÇ · Û³·Çëiñ³íáõñ³ÛÇ Ûáí 2000 ßñç³Ý³i³ñiÝ»ñ: Û³É³i»éíáõÛ ĸ Ñ»İ³·³ÛáoÛ ³ñ¹ÛáoÝùÝ»ñÇ ³Û÷á÷áõÛ · í»ñÉáõÍáõÃÛáoÝ, áñÁ ÝáõÛÝá»ë İÝá³ëİÇ Ñ»İ³·³ ³ßÉ³³ÝùÇ ³ñ¹ÛáoÝ³i»íáõÃÛ³ÝÁ:

### º/2ñ³İ³óáõÃÛáoÝÝ»ñ

³ë³i³Ý¹Û³Ý áñ³İÇ · ³ñ¹ÛáoÝ³i»íáõÃÛ³Ý í»ñ³µ»ñÛ³É áðë³ÝáÖÝ³İ³Ý Ñ³ñóáõÛÝ»ñÇ Ñ³Û³İ³ñ·Á °äÖ·áõÛ İ³ñ»ÉÇ ĸ Ñ³Û³ñ»É İ³Û³ó³İ: ²ÛÝ Ýá³ëíáõÛ ĸ áðë³ÝáÖÝ»ñÇ Û³ëÝ³İóáõÃÛ³ÝÁ áñ³İÇ ³á³ÑáíÛ³Ý Ý»ñùÇÝ Ñ³Û³İ³ñ·ÇÝ, ÇÝáÝ ĸÉ Ý»ñµáõÑ³İ³Ý ³ñ¹ÛáoÝ³i»i í»ñ³ÑëİÛ³Ý ÛÇçáõÝ»ñÇó ĸ: áðë³ÝáÖÝ»ñÁ Û³ëÝ³İó»Éáí Ñ³ñóáõÛÝ»ñÇÝ ³İÝİ³ÉáõÛ »Ý ¹ñ³İ³Ý ÷á÷áÉáõÃÛáoÝÝ»ñ i»ëÝ»É Ñ³Û³Éë³ñ³ÝáõÛ, óÝİ³ÝáõÛ »Ý ³ç³İó»É Çñ»Ýó Ñáo¹/2áÖ ÈÝ¹ÇñÝ»ñÇ ÉáõİÛ³ÝÁ: ²ÝÑñ³Á»ßi ĸ ¹/2ñ·³óÝ»É áðë³ÝáÖÝ³İ³Ý Ñ³ñóáõÛÝ»ñÇ Ñ³Û³İ³ñ·Á, µ³ñÓñ³óÝ»É áðë³ÝáÖÝ»ñÇ ß³Ñ³·ñ·é³íáõÃÛáoÝÁ áñ³İÇ µ³ñ»É³iÛ³Ý Ñ³ñóáõÛ, ³i»ÉÇ ³ñ¹ÛáoÝ³i»i ¹³ÓÝ»É ³ñ¹ÛáoÝùÝ»ñÇ İÇñ³éáõÛÁ, ùÝÝ³ñİáõÛÁ ý³íáõÉi»iÝ»ñáõÛ · áðë³ÝáÖÝ»ñÇ ßñç³ÝáõÛ:



# ՀՀ Ներքին Պատկերասրահի Մեջ Ներդրում Կատարող Մագիստրոսների Պատրաստման Պրոցեսի Կազմակերպության Մասին

Հ. Մանուկյան, Գ. Կոստյան, Ն. Հովսեփյան, Ա. Մանուկյան, Ա. Մարտիրոսյան,  
Հ. Մանուկյան, Գ. Կոստյան, Ն. Հովսեփյան (ԵՊՀ)

## The System of Internal Quality Assurance in the Preparation of University Graduates

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(Yerevan State University of Architecture and Construction)

*The problem of internal quality assurance in preparation of specialists in higher education takes on special significance and it is of an essential importance especially in the context of the Bologna Process. Yerevan State University of Architecture and Construction proceeding from ISO requirements and European educational standards and taking into account the results of work performed in the framework of project TEMPUS-TACIS, the experience accumulated by State Engineering University of Armenia and Yerevan State University as well as a number of other institutions of higher education advancing toward European Higher Education Area has established such a system of internal quality assurance which enables through internal self-analysis to:*

- *determine the quality of preparation of future specialists - current knowledge level of students, degree of their ability and skillfulness;*
- *redesign and upgrade methodical and physical facilities;*
- *direct further reforms and tendencies of advancement by monitoring and control of assessment results;*
- *compare the results with those obtained by other institutions of higher education and European standards;*
- *develop necessary mechanisms for comprehensive professional preparedness and intellectual progress, evaluate their efficiency.*

Ներքին Պատկերասրահի մեջ Ներդրում Կատարող  
Մագիստրոսների Պատրաստման  
Պրոցեսի Կազմակերպության  
Մասին

Մանուկյան Հ., Կոստյան Գ., Հովսեփյան Ն., Մանուկյան Ա., Մարտիրոսյան Ա.,  
Մանուկյան Հ. (ԵՊՀ)

Հ. Մանուկյան, Գ. Կոստյան, Ն. Հովսեփյան, Ա. Մանուկյան, Ա. Մարտիրոսյան,  
Հ. Մանուկյան, Գ. Կոստյան, Ն. Հովսեփյան (ԵՊՀ)

ñ³ëïÙ³Ý áñ³İÇ Ý»ñùÇÝ ³à³ÑáíáoÙÁ ëï³ÝáoÙ ì á³÷³¹²Ýó İ³ñ»án · İ»Ýë³İ³Ýáñ»Ý ĖÇëï ³ÝÑñ³Á»ßï Ýß³Ý³İáoĀŮáoÝ:

°ñ»³ÝÇ Ō³ñ³ñ³à»íáoĀŮ³Ý · ßÇÝ³ñ³ñáoĀŮ³Ý á»ï³İ³Ý Ñ³Ù³Ėë³ñ³ÝáoÙ, »ÉÝ»Éáí ØÇç³¹².³ÙÇÝ ëï³Ý¹³ñ³Ý»ñÇ İ³¹²Ù³İ»ñáoĀŮ³Ý áñ³İÇ ·Ý³Ñ³İÙ³Ý · »íñáá³İ³Ý á³÷³ÝÇßÝ»ñÇ á³Ñ³ÝçÝ»ñÇó · ÑÇÙù ÁÝ¹áoÝ»Éáí Tempus-Tacis İñ³.ñ»ñÇ ë³ÑÙ³ÝÝ»ñáoÙ İ³³ñİİ ³ßĖ³³ÝùÝ»ñÇ ³ñ¹ÙáoÝùÝ»ñÁ, Ð³Ù³ëï³ÝÇ á»ï³İ³Ý ×³ñ³ñ³.Ç³İ³Ý Ñ³Ù³Ėë³ñ³ÝÇ (ääĖÇİ»ĖÝÇİ) · °ñ»³ÝÇ á»ï³İ³Ý Ñ³Ù³Ėë³ñ³ÝÇ, ÇÝää»ë Ý³· ÛÇ ß³ñù ³ÙĖ μáoÑ»ñÇ ÷áñŌÁ İÇñ³éáoÙ ì Û³ëÝ³.»İÝ»ñÇ á³ñ³ëïÙ³Ý áñ³İÇ Ý»ñùÇÝ ³à³ÑáíÙ³Ý ³ÙÝÁÇçÇ Ñ³Ù³İ³ñ, áñÁ ÑÝ³ñ³íáñáoĀŮáoÝ ì İ³ĖÇë áóëáoóÙ³Ý ÁÝÁ³óÇİ áóëáoóÙÝ³çÇñÙ³Ý ÑÇÙ³Ý İñ³, áóëáoóÙÝ³İ³Ý ·áñÍÁÝÁ³óÇ ó³Ýİ³óİ á³ÑÇÝ.

- áñáb»Ė ³à³.³ Û³ëÝ³.»İÝ»ñÇ á³ñ³ëïÙ³Ý áñ³ÍÁ`
  - ✓ ÛÝ³ÙáoÝ ·Çİ»ĖÇùÝ»ñÇ á³ß³ñÁ,
  - ✓ Ó»éù μ»ñ³İ İ³ñáoáoĀŮáoÝÝ»ñÇ ³ëïÇ×³ÝÁ,
  - ✓ ÑŮİáoĀŮáoÝÝ»ñÇ áóÝ³İáoĀŮáoÝÁ,
- Ñ³Ù³İ³ñ»É ³ÙÝ ³ÙĖ μáoÑ»ñÇ · »íñáá³İ³Ý á³÷³ÝÇßÝ»ñÇ Ñ»İ,
- í»ñ³Ý³Ù»É · ³ñ¹Ç³İ³Ý³óÝ»É áóëáoóÙÝ³Ù»Āá¹³Ý · ÝÙáoĀ³İ»ĖÝÇİ³İ³Ý μ³¹²Ý,
- μ³ó³Ñ³Ůİ»É Ñ³Ù³İáoŮ³ÝÇ Û³ëÝ³.Ç³İ³Ý á³ñ³ëïáoĀŮ³Ý · ÇÝİ»É»İáo³Ė ¹²ñ.³óÙ³Ý Ñ³Ù³ñ ³ÝÑñ³Á»ßï Ý³Ė³¹ñÙ³ĖÝ»ñÇ · Û»Ė³ÝÇ¹²ÙÝ»ñÇ ³Ėİ³ÙáoĀŮáoÝÁ (·Ç³İ»İ³¹²áİ³İ³Ý ³ßĖ³³ÝùÝ»ñ, ³ñ³İ³ÇÝ · ÛÇç³¹².³ÙÇÝ İ³à»ñ, ß³ñÁáoÝáoĀŮáoÝ · éáoÇ³Ė³İ³Ý áóŌŌİ³İáoĀŮáoÝ), ·Ý³Ñ³İ»É ¹ñ³Ýó ³ñ¹ÙáoÝ³-í»íáoĀŮáoÝÁ,
- ·Ý³Ñ³İÙ³Ý İİŮ³ĖÝ»ñÇ ³ñ¹ÙáoÝùÝ»ñÇ ÛáÝÇĀáñÇÝ·áí · í»ñ³ÑëİŮ³Ùμ áóŌ»Ýß»É Ñ»İ³.³ μ³ñ»÷áĖáoÙÝ»ñÇ · ³é³ÇÁÝÁ³óÇ ÛÇİáoÙÝ»ñÁ:

²ÙëÁÇçáí, μ³ñŌñ³·áoŮÝ İñÁáoĀŮ³Ùμ Û³ëÝ³.»İÇ áñ³İÇ ³à³ÑáíÙ³Ý á³³ë-Ė³Ý³íáoĀŮáoÝÝ ³ÙμáŌçáíÇÝ İ»Ō³÷áĖíáoÙ ì μ³ñŌñ³·áoŮÝ áóëáoóÙÝ³İ³Ý Ñ³ë-İ³íáoĀŮáoÝ ·, áñ³İÇ ³à³ÑáíÙ³Ý ³ÝóŮ³ĖÇ á³ëÇİ ³ñ³İ³ÇÝ í»ñ³ÑëİáoáoĀŮ³Ý İñ³·Á ÷áĖ³ñÇÝíáoÙ ì áñ³İÇ ³à³ÑáíÙ³Ý Ý»ñùÇÝ ÇÝùÝ³.»ñÉáoÍáoĀŮ³Ùμ · ÇÝùÝ³.Ý³Ñ³İÙ³Ùμ:

³ñŌñ³·áoŮÝ İñÁáoĀŮ³Ùμ İ³ñ»ñÇ Û³ëÝ³.Ç³İ³Ý á³ñ³ëïİáoĀŮ³Ý Û³İ³ñ¹³ÍÁ ÑÇÙÝ³İ³ÝáoÙ Ō³íáñíáoÙ ì Ñ³Ù³Ėë³ñ³Ý³İ³Ý ³ÙμÇáÝÝ»ñáoÙ, áóëİÇ · ³à³.³ Û³ëÝ³.»İÝ»ñÇ á³ñ³ëïÙ³Ý áñ³İÇ ³à³ÑáíáoÙÁ ·ĖĖ³íáñ³à»ë á³ÙÙ³Ý³íáñİİ ì ³ÙμÇáÝÇ ·áñÍáoÝ»áoĀŮ³Ý ³é³ÇÝ³ÙÇÝ áóŌŌáoĀŮáoÝÝ»ñÇ ³ñ¹ÙáoÝùÝ»ñáí, ÇÝää»ë Ý³· ³ÙμÇáÝáoÙ μ³ñ»Ýá³ëï ÛÇç³³İŮñÇ· ėİ»Ōİ³·áñİ³İ³Ý · ³éáoÇ Ûñó³İó³ÙÇÝ ÛÁÝáĖáñİÇ, éá-óÇ³Ė³İ³Ý ³ñ¹³ñáoĀŮ³Ý, Ññ³á³ñ³İ³ÙÝáoĀŮ³Ý · Á³÷³ÝóÇİáoĀŮ³Ý ³Ėİ³ÙáoĀŮ³Ùμ:

ëíáñ·, Áëİ ³ÙμÇáÝÇ ·áñÍáoÝ»áoĀŮ³Ý ³é³ÇÝ³ÙÇÝ ÑÇÝ· áóŌŌáoĀŮáoÝÝ»ñÇ (Ýİ.2), μ»ñíáoŮ »Ý Û³ëÝ³.»İÝ»ñÇ á³ñ³ëïÙ³Ý áñ³İÇ Ý»ñùÇÝ ³à³ÑáíÙ³Ý İñ³ áóŌŌ³-İÇáñ»Ý ³¹²áo ÛÇ ß³ñù ÑÇÙÝ³İ³Ý óáoó³ÝÇßÝ»ñ (ÁÝ¹Ñ³Ýáoñ ù³Ý³ÍÁ` 200):

²é³ÇÇÝ áóŌŌáoĀŮáoÝ (Ýİ. 3): áóëáoóÙÝ³İ³Ý ³ßĖ³³ÝùÝ»ñ· ÁÝ¹·ñÍáoÙ ì 106 óáo-ó³ÝÇß: ²Ů¹ ÁíáoŮ.

- ·Ç³İ³Ý, İ»ë³İ³Ý, Û³ëÝ³.Ç³İ³Ý · Û»Āá¹³Ý μ³ñŌñ Û³İ³ñ¹³Íáí áóëáoóÙÝ³İ³Ý á³ñ³áŮáoÝùÝ»ñÇ ³Ýóİ³óáoÙ,
- áóëáoóÙÝ³İ³Ý, ³ñ³¹ñ³İ³Ý · Ý³Ė³¹ÇáĖáŮ³ÙÇÝ áñ³İÇİ³İ³Ý»ñÇ İ³¹²Ù³İ»ñáoŮ · Ō»İ³İ³ñáoŮ,
- Íáoñë³ÙÇÝ ³ßĖ³³ÝùÝ»ñÇ · Ý³Ė³·Í»ñÇ, ³ñ³İ³İ³Ý ³ßĖ³³ÝùÝ»ñÇ, ÇÝää»ë Ý³· ÇÝùÝáoñáoŮÝ · ³ÝÑ³İ³İ³Ý ³ßĖ³³ÝùÝ»ñÇ Ō»İ³İ³ñáoŮ,
- ÁÝÁ³óÇİ, İÇç³ÙŮİ³İ³ÙÇÝ, Íáoñë³ÙÇÝ · ³ñ³İ³İ³Ý ėíáo·ñùÝ»ñÇ áó ùÝÝáo-ĀŮáoÝÝ»ñÇ ³ñ¹ÙáoÝùÝ»ñÇ ùÝÝ³ñÍáoÙÝ»ñÇ · í»ñÉáoÍáoĀŮáoÝÝ»ñÇ ³Ýó-

İ̇3óáòÙ,

- 13éÁÝĀ3ó3ŪÇÝ İ̇ñ3.ñ»ñÇ Ùß3İ̇áòÙ, í»ñ3Ý3ŪáòÙ ·· 3ñ1Ç3İ̇3Ý3óáòÙ,
- áòëáòÙÝ3İ̇3Ý 13ë3.ñù»ñÇ, Ó»éÝ3ñİ̇Ý»ñÇ, áòëáòÙÝ3Ū»Āá13İ̇3Ý ·ñ3İ̇3ÝáòĀŪ3Ý ·· 13ë3ĒáëáòĀŪáòÝÝ»ñÇ ĺĒ»İ̇ñáÝ3ŪÇÝ İ̇ñμ»ñ3İ̇Ý»ñÇ İ̇31/2ŪáòÙ, í»ñ3Ý3ŪáòÙ ·· İ̇»Ō31ñáòÙ Ñ3Ū3Ēë3ñ3ÝÇ İ̇3ŪáòÙ,
- É3μáñ3íáñÇ3Ý»ñÇ ·· Ù3éÝ3.Çİ̇3İ̇3Ý Ēë3ñ3ÝÝ»ñÇ ëİ̇»Ōİ̇áòÙ, Ā3Ū3Ý3İ̇3İ̇Ç6 ë3ñù3íáñáòŪÝ»ñáí ·· İ̇»ĒÝÇİ̇3Ūáí 1ñ3Ý6 Ñ3.»óİ̇İ̇áòĀŪ3Ý 3ă3ÑáíáòÙ,
- 13ë3ĒáëÝ»ñÇ áòëáòÙÝ3.Çİ̇3İ̇3Ý 3ĒĒ3İ̇3ÝùÝ»ñÇ İ̇3ñ»İ̇3Ý Ñ3Ēİ̇»İ̇íáòĀŪáòÝÝ»ñÇ ùÝÝ3ñİ̇áòÙ,
- É3İ̇3.áòŪÝ 13ë3ĒáëÝ»ñÇ 3ĒĒ3İ̇3Ýù3ŪÇÝ ÷áñÓÇ í»ñÉáòİ̇áòĀŪáòÝ ·· ÁÝ1Ñ3Ý-ñ3óáòÙ,
- áòëáòóŪ3Ý Ā3Ū3Ý3İ̇3İ̇Ç6 İ̇»ĒÝáÉá.Ç3Ý»ñÇ İ̇Çñ3éáòÙ,
- ÙÇÇ3ŪμÇáÝ3ŪÇÝ İ̇3ă»ñÇ 1/2ñ.3óáòÙ:

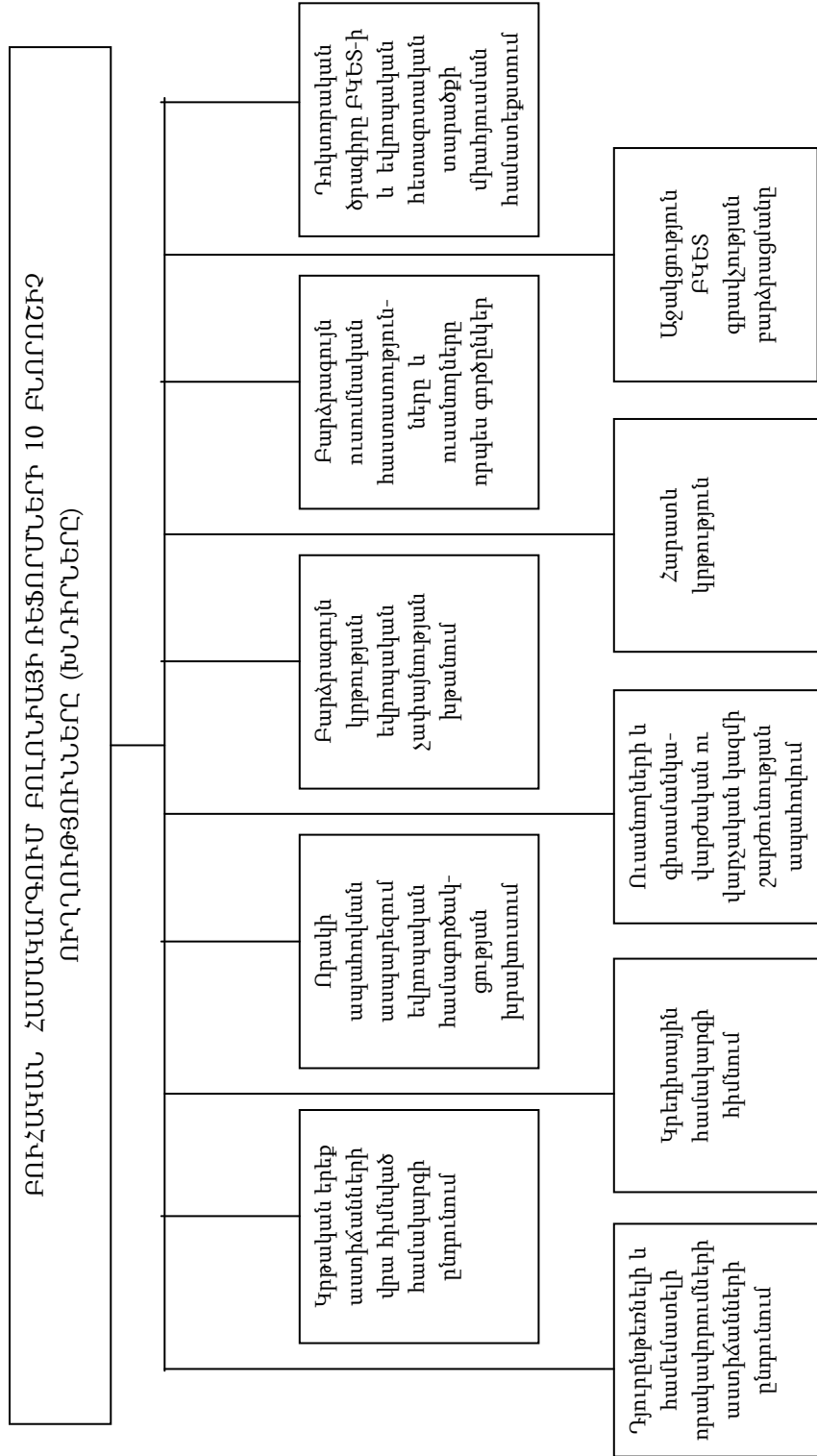
*°ñİ̇ñáñ1 áòŌŌáòĀŪáòÝ (Ýİ̇. 4):* äñáy»ëáñ313ë3Ēáë3İ̇3Ý 3ÝÓÝ3İ̇31/2Ū` ÁÝ1.ñİ̇áòÙ ĺ 26 óáòó3ÝÇß: 2Ū1 ĀíáòÙ.

- â3ŪŪ3Ý3.ñ3ŪÇÝ ·· Ñ3Ū3İ̇»ŌáòĀŪ3Ūμ 3ĒĒ3İ̇áŌÝ»ñÇ Ñ3ñ3μ»ñ3İ̇óáòĀŪ3Ý ũäİ̇ÇŪ3Ē3óáòÙ,
- 3ÝÓÝ3İ̇31/2ŪÇ áñ3İ̇3İ̇3Ý μ3ĒĒ3İ̇İ̇áòĀŪ3Ý μ3ñ»É3íáòÙ,
- áñ3İ̇íáñŪ3Ý μ3ñŌñ3óŪ3Ý ·áñÍÁÝĀ3óÝ»ñÇ â3ñμ»ñ3μ3ñ 3Ýóİ̇3óáòÙ` Ñ3Ū3Ó3ŪÝ ë3ÑŪ3Ýİ̇İ̇ Ā3Ū3Ý3İ̇3óáòŪóÇ,
- İ̇3ñÇù3ŪÇÝ ũäİ̇ÇŪ3Ē μ3ĒĒ3İ̇İ̇áòĀŪ3Ý 3ă3ÑáíáòÙ,
- ·Çİ̇3Ū3Ýİ̇İ̇3ñĀ3İ̇3Ý İ̇31ñ»ñÇ â3İ̇ñ3ëİ̇áòÙ:

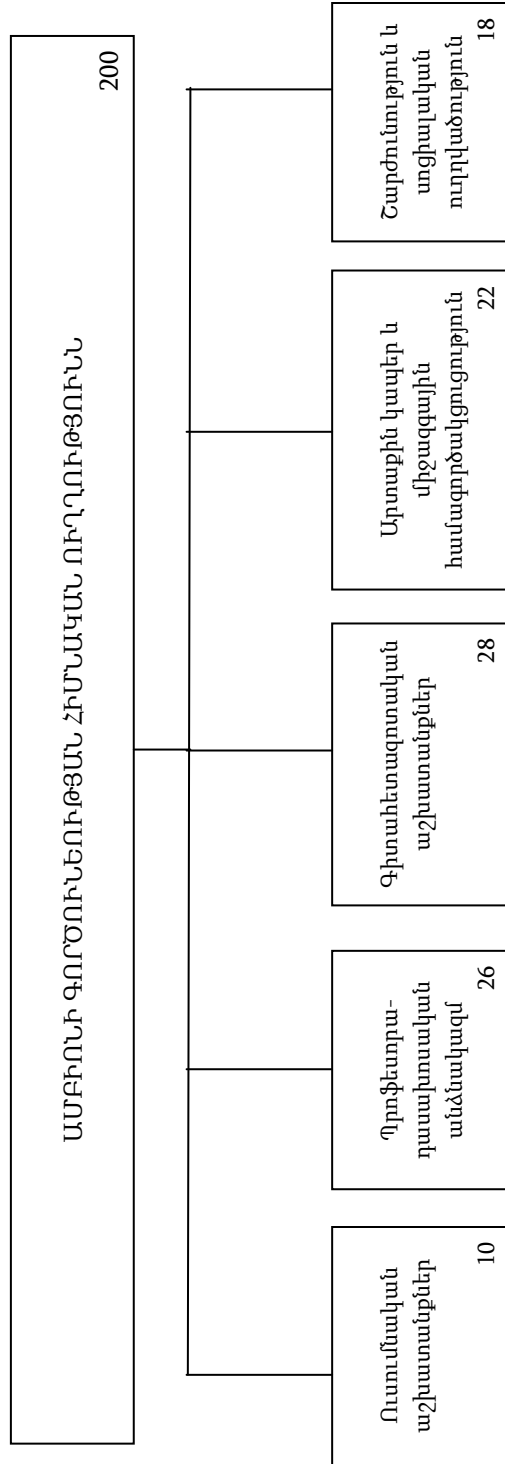
*°ññáñ1 áòŌŌáòĀŪáòÝ (Ýİ̇. 5):* ¶Çİ̇3Ñ»İ̇31/2áí3İ̇3Ý 3ĒĒ3İ̇3ÝùÝ»ñ` ÁÝ1.ñİ̇áòÙ ĺ 28 óáòó3ÝÇß: 2Ū1 ĀíáòÙ.

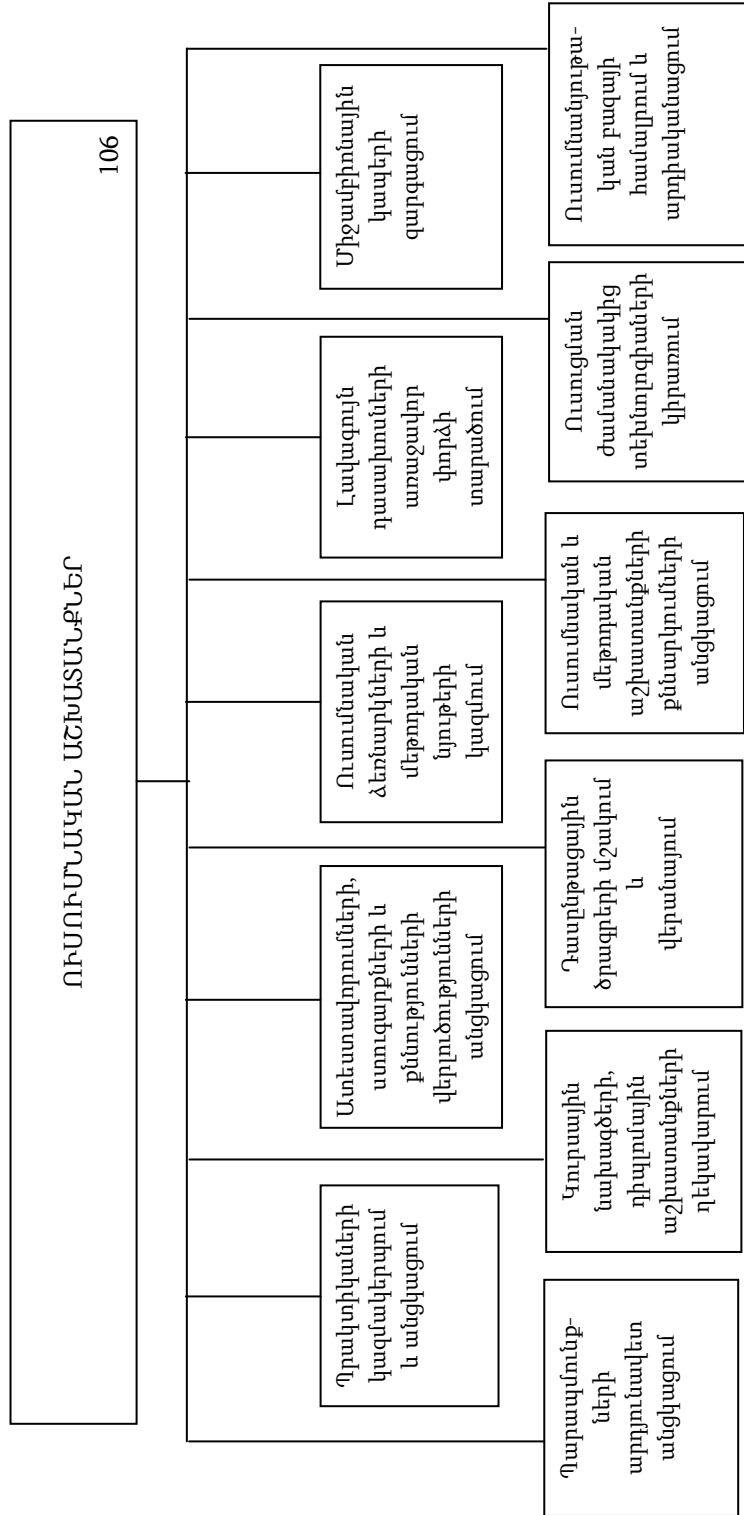
- ·Çİ̇3Ñ»İ̇31/2áí3İ̇3Ý 3ĒĒ3İ̇3ÝùÝ»ñÇ Ō»İ̇3İ̇ñáòÙ,
- ·Çİ̇3Ñ»İ̇31/2áí3İ̇3Ý 3ĒĒ3İ̇3ÝùÝ»ñáòÙ 13ë3ĒáëÝ»ñÇ, 3ëäÇñ3Ýİ̇Ý»ñÇ ·· áòë3ÝáŌÝ»ñÇ Ē3ŪÝ Ý»ñ.ñ3íáòÙ,
- 3İ̇3ñİ̇İ̇İ̇ ·Çİ̇3Ñ»İ̇31/2áí3İ̇3Ý 3ĒĒ3İ̇3ÝùÝ»ñÇ Ññ3İ̇3İ̇áòÙ, 3ñ1ŪáòÝùÝ»ñÇ Ý»ñİ̇ñáòÙ,
- ·Çİ̇3Ū3Ýİ̇İ̇3ñĀ3İ̇3Ý ·· ·Çİ̇3İ̇3Ý İ̇31ñ»ñÇ â3İ̇ñ3ëİ̇áòÙ,
- ·Çİ̇3İ̇3Ý Ñá1İ̇İ̇Ý»ñÇ, Ā»İ̇Ý3İ̇áò3İ̇3Ý ·· 1áİ̇íáñ3İ̇3Ý Ā»1/2»ñÇ â3İ̇ñ3ëİ̇áòÙ, ùÝÝ3ñİ̇áòÙÝ»ñÇ 3Ýóİ̇3óáòÙ,
- ÙÇÇ31/2.3ŪÇÝ áò ÙÇÇμáòÑ3İ̇3Ý ·Çİ̇3ĀáŌáíÝ»ñÇÝ 13ë3ĒáëÝ»ñÇ, 3ëäÇñ3Ýİ̇Ý»ñÇ ·· áòë3ÝáŌÝ»ñÇ 3İ̇Çİ̇ Ū3ëÝ3İ̇óáòĀŪ3Ý Çñ3İ̇3Ý3óáòÙ,
- ·Çİ̇3Ñ»İ̇31/2áí3İ̇3Ý Ñ3Ū3İ̇»Ō ·áñÍáòÝ»áòĀŪ3Ý Çñ3İ̇3Ý3óáòÙ,
- ·Çİ̇3Ñ»İ̇31/2áí3İ̇3Ý 3ĒĒ3İ̇3ÝùÝ»ñÇ İ̇3İ̇3ñŪ3Ý μ31/2ŪÇ ëİ̇»Ōİ̇áòÙ:

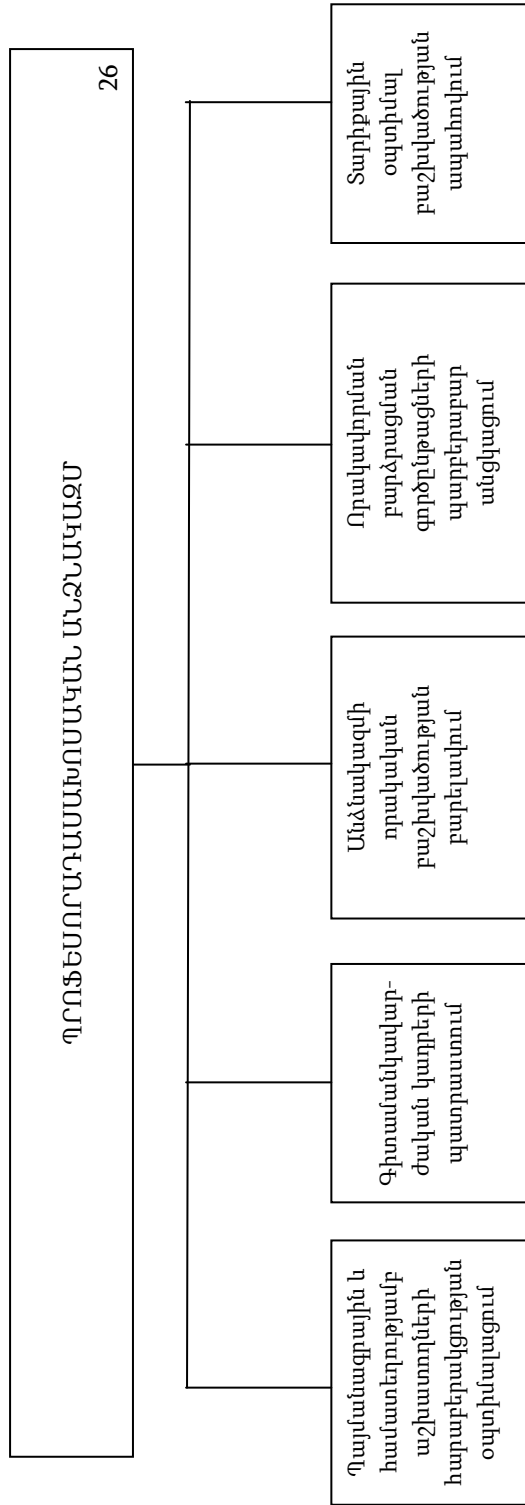
Նկ. 1

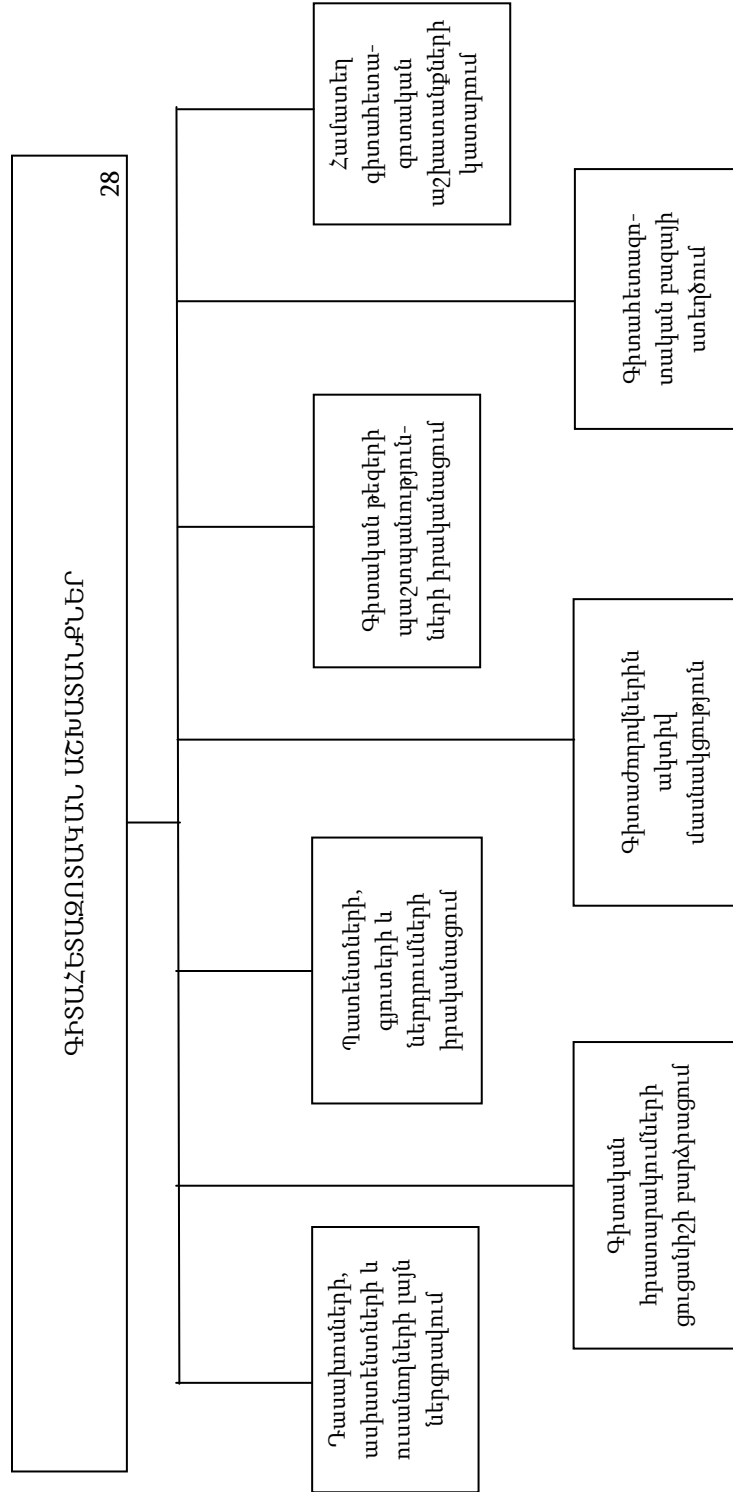


Նկ. 2

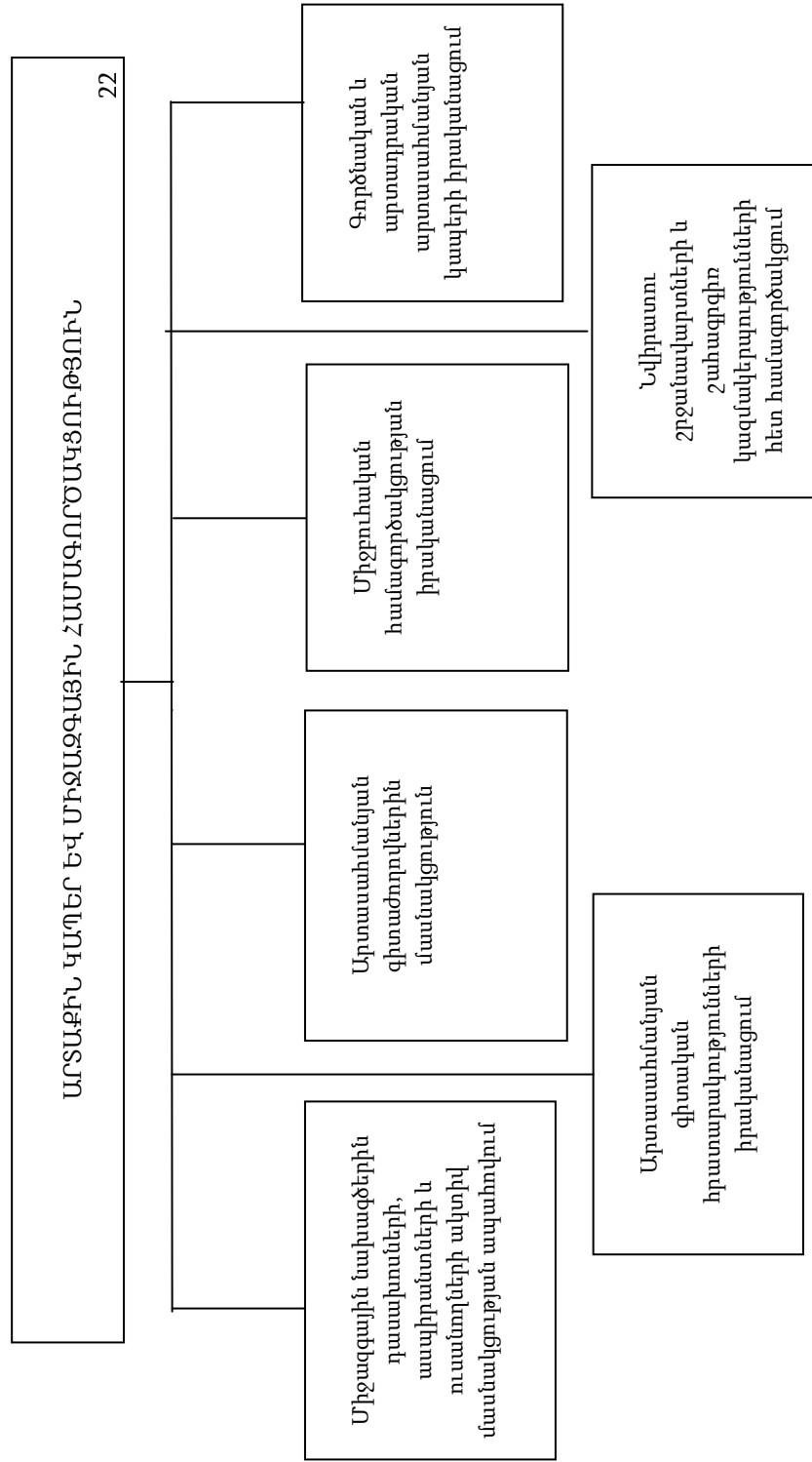


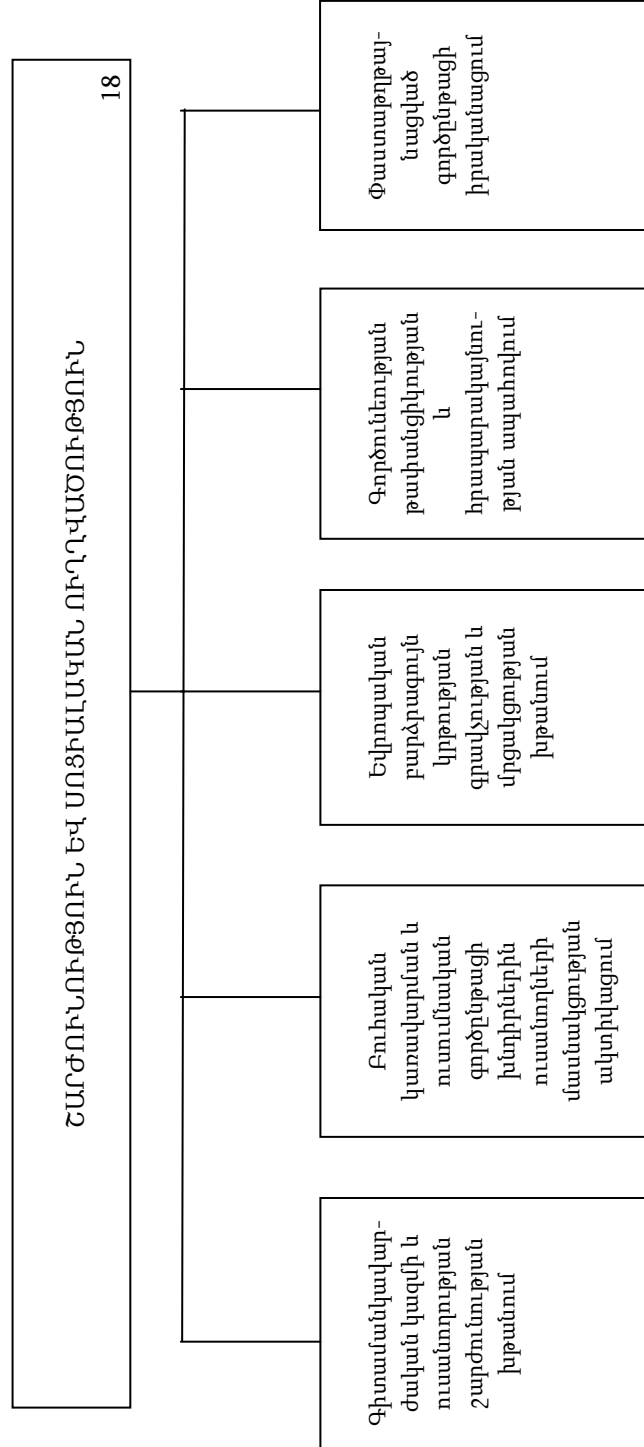












ááññáñ<sup>1</sup> áðÕÕáðÃÛáðÝ (ÝĬ. 6): ²ñ³ùÇÝ Ĩ³á»ñ · ÛÇÇ³¹/²·³ÛÇÝ Ñ³Û³·áñĬ³Ĭóáð-  
ÃÛáðÝ· ÁÝ¹·ñĬáðÛ ħ 22 óáðó³ÝÇB: ²Û¹ ÁĬáðÛ.

- ÛÇÇ³¹/²·³ÛÇÝ Ý³Ē³.Ĭ»ñÇÝ ¹³ë³ĒáëÝ»ñÇ, ³ëáÇñ³ÝĬÝ»ñÇ · áðë³ÝáðÝ»ñÇ ³ĬĬÇĬ  
Û³ëÝ³ĬóáðÃÛ³Ý ³á³ÑáĬáðÛ,
- ³ñ³ë³ÑÛ³ÝÛ³Ý ·Ç³Ĭ³Ý Ññ³ñ³ĬáðÛÝ»ñÇ Çñ³Ĭ³Ý³óáðÛ,
- ³ñ³ë³ÑÛ³ÝÛ³Ý ·Ç³ÁáðÁrÝ»ñÇÝ Û³ëÝ³ĬóáðÃÛáðÝ,
- ÛÇÇ³áðÑ³Ĭ³Ý Ñ³Û³·áñĬ³ĬóáðÃÛ³Ý Çñ³Ĭ³Ý³óáðÛ,
- ÝĬÇñ³Ĭáð BñÇ³Ý³ñ³Ý»ñÇ · B³Ñ³·ñ·Çé Ĩ³¹/²Û³Ĭ»ñááðÃÛáðÝÝ»ñÇ Ñ»Ĭ Ñ³-  
Û³·áñĬ³ĬóáðÛ,
- ·áñĬÝ³Ĭ³Ý · ³ñ³¹ñ³Ĭ³Ý ³ñ³ë³ÑÛ³ÝÛ³Ý Ĩ³á»ñÇ Çñ³Ĭ³Ý³óáðÛ:

ÐÇÝ·»ñáñ<sup>1</sup> áðÕÕáðÃÛáðÝ (ÝĬ. 7): Ð³ñÁáðÝáðÃÛáðÝ · ëáóÇ³Ē³Ý áðÕÕĬ³Ĭáð-  
ÃÛáðÝ· ÁÝ¹·ñĬáðÛ ħ 18 óáðó³ÝÇB: ²Û¹ ÁĬáðÛ.

- ·Ç³Û³ÝĬ³ñ³ñ³Ĭ³Ý Ĩ³¹/²ÛÇ · áðë³ÝáðÃÛ³Ý B³ñÁáðÝáðÃÛ³Ý Ē³ÝáðÛ,
- µáðÑ³Ĭ³Ý Ĩ³ë³ñ³Û³Ý · áðëáðÛÝ³Ĭ³Ý ·áñĬÁÝÃ³óÇ ĒÝ¹ÇñÝ»ñÇÝ áðë³ÝáðÝ»ñÇ  
Û³ëÝ³ĬóáðÃÛ³Ý ³ëĬÇ×³ÝÇ µ³ñÓñ³óáðÛ,
- »Ĭñáá³Ĭ³Ý µ³ñÓñ³·áðÛÝ ĨñÃáðÃÛ³Ý ·ñ³ĬáðÃÛ³Ý · Ûñó³ĬóáðÃÛ³Ý Ē³ÝáðÛ,
- ·áñĬáðÝ»áðÃÛ³Ý Ã³÷³ÝóÇĬáðÃÛ³Ý · Ññ³á³ñ³Ĭ³ÛÝáðÃÛ³Ý ³á³ÑáĬáðÛ,
- ÷³ëĬ³ÃÕÃ³ÛÝ³óĬĬ ·áñĬÁÝÃ³óÇ Çñ³Ĭ³Ý³óáðÛ:

ÛĬ³ñ³·ñĬĬ Ñ³Û³Ĭ³ñ·Ç ÛÇÇ³áóáĬ °ñ³ÝÇ Õ³ñ³ñ³á»ĬáðÃÛ³Ý · BÇÝ³ñ³ñáðÃÛ³Ý  
Ñ³Û³Ēë³ñ³ÝÇ Ĭ³ëÝÛ»Ĭ³µÇáÝÝ»ñáðÛ 2008Á. ³áñÇĒ-ÑáðĒÇë³ ÛÇÇ³Ý»ñÇÝ Çñ³Ĭ³Ý³óĬ»Ē  
ħ Ý»ñùÇÝ ³áð¹ÇĬ: ²ÛÝ ÁáðÛĒ ħ Ĭ»Ē ³ñ¹/²»Ē³µÇáÝÝ»ñÇ áðÃ»Õ · ÁáðÛĒ ĬáðÛ»ñÁ,  
Ûáðñ³ù³ÝáÛáðñ³µÇáÝÇ Ñ³Û³ñ ÛB³Ĭ»Ē ³áð¹ÇĬ ÁÝÃ³óáðÛ µ³ó³Ñ³ÛĬĬ  
Ã»ñáðÃÛáðÝÝ»ñÇ Ĭ»ñ³óÛ³Ý ÛÇÇ³áó³éáðÛÝ»ñÇ áĒ³Ý, áðÕ»ÝB»Ē µ³ñ»Ē³ĬáðÛÝ»ñÇ ·»-  
ñ³Ĭ³ ĒÝ¹ÇñÝ»ñÁ · ³ëĬÇ×³Ý³µ³ñ á³ñ³ëĬ»Ē áñ³ĬÇ ³ñ³ùÇÝ ·Ý³Ñ³Û³Ý ·áñĬÁÝÃ³óÇÝ:

Û»ñùÇÝ ³áð¹ÇĬÇ ³ñ¹ÛáðÝùÝ»ñÁ Ĭ»Õ³ñĬĬ »Ý Ñ³Û³Ēë³ñ³ÝÇ Ĩ³ÛáðÛ:

## Internal Quality Assurance: Are We Ready?

*The core issues of Quality Assurance in the European Higher Education Area (EHEA) such as assessment of educational programmes, development and introduction of internal QA systems, as well as the methodological aspects of their utilization are observed in the light of existing Institutional Quality Culture which is considered as a main indicator for the quality of educational programmes.*

- a. *Organisational culture based on administrative prescriptions and total control;*
- b. *Inflexible approach to the educational process;*
- c. *Deficiency of accountability and transparency in the process of decision-making;*
- d. *Orientation towards superficial structural changes;*
- e. *Lack of incentives for quality enhancement among academic staff and traditional orientation towards getting directives from “uppers”;*
- f. *Low level of faculty/department autonomy ;*
- g. *Lack of understanding among students of their own role in educational process and absence of independent student bodies;*

- a. *Decentralization of university governance and delegation of authorities to the faculties/departments;*
- b. *Liberalisation of educational structures and services and promotion of competitiveness;*
- c. *Concentration of the existing intellectual and material resources to create special pilot programmes and structures with the aim to assure their advanced development and future networking;*
- d. *Sustaining young academics with opportunities to be involved in the process of university governance.*

*Modernization of the university is a challenging process. It is extremely important to narrow the gaps between autonomy and responsibility/accountability, academic culture and modern governance models, as well as between traditional thinking and adaptability to innovation. These issues should be the primary tasks in the agenda of the senior university administrators.*

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ÉáoÍáoÙÝ»ñÁ£

Ø³ëÝ³.Ç³³Ý ³ÙÝÁÇëÇ µ³½Ù³»líán Ñ³Ù³³ñ., ÇÝááÇëÇÝ Á³Ù³Ý³³Çó Ñ³Ù³Éë³ñ³ÝÝ ¿, Ù»Í Í»ÝíñÁÝÇó Í³ë³³ñ»Éáo Ó-íáoÚÁ ëí»ÓÍáoÙ ¿ ÙÇ Çñ³Ç×Í, áñÇ ³ñ¹ÚáoÝúáoÙ ³Ý³ñ¹ÚáoÝ³»í Í»ñááí ÑëÍ³Ù³³Ý Í³ñá³ÝÝ, ýÇÝ³Ýë³³Ý » Ù³ëÝ³.Ç³³Ý é»éáoñë ¿ Í³ÝíáoÙ£ Í³ë³³ñ³Ý Ñ³Ù³³ñ-áoÙ »ñ³Í³ÚáoÙ ¿ Í³ñá³ñ³ñ³-Ññ³Ñ³Ý.³ÙÇÝ Úá¹»ÉÁ£ Í³ñá³³Ý Í»ÝíñÁÝÁ Ó-íáoÙ ¿ íá³É í»ñ³ÑëÍ³ÝÁ Çñ Ý»ñ³ÚáoÁÚáoÝÝ ³á-Ñáí»Éáí Ñ³Ù³³ñ-Ç µáÉáñ ùÓ³ÍÝ»ñáoÚÁ ÙÇÇ³Ùí»Éáí ³Ý.³Ù Ù³ëÝ³.Ç³³Ý µÝáoÚÁÇ ÈÝ¹ÇñÝ»ñÇ ÉáoÍ³ÝÁ£ ²Ù¹ á³ÙÙ³ÝÝ»ñáoÙ Ù³ëÝ³.Ç³³Ý á³ñ³ëíáoÁÚáoÝ Çñ³ÝÝ³ÝáÓ Í³éáoÚóÝ»ñÁ (ý³ÍáoÈí»íÝ»ñÁ, µ³ÁÇÝÝ»ñÁ) áá ÙÇ³ÙÝ ùÁí³í á»Ý Çñ³ÝÝ ÇÝúÝ³³ñáoÁÚ³µ » ÉÇ³½áñáoÁÚáoÝÝ»ñáí, ³ÙÉ ÁÝ¹Ñ³Í³é³ÍÁª ááoÝ»Ý Ý³É³»ëÝáÓ³ÝÝáoÁÚáoÝ óáoó³µ»ñ»Éáo áñ¿ ÉÁ³Ý£ Í³ë³³ñ³Ý Ñ³Ù³³ñ-áoÙ ³ë³Ç³ó»É ¿ µáíÝ¹³ÙÇÝ È³ëÝ³÷áÁ, áñÁ Éáoñç ÉááÁÝ¹áí ¿ Ñ³Ý¹Çë³ÝáoÙ ÍñÁ³³Ý Ñ³Ù³³ñ-Ç Ý»ñ¹-³BY³Í Ýáñ³óÙ³Ý ×³Ý³áñÑÇÝ£

áoéáoÙÝ³³Ý ·ánÍÁÝÁ³óÇ Í³ë³³ñ³Ý áóÓÓáoÁÚ³µ Í³íáoÙ ¿ ÍáBí ýÇë³É³ÙÇÝ ù³Ó³³ÝÝáoÁÚáoÝ, µ³ó³Í³ÚáoÙ ¿ áñáo»ë³ÙÇÝ Úáí»óáoÚÁ£ Í³ë³³ñ³Ý ùµÙ»Í »Ý Ñ³Ý¹Çë³ÝáoÙ ÍñÁ³³Ý ·ánÍÁÝÁ³óáoÙ Ý»ñ-ñ³í³í éáoµÙ»ÍÝ»ñÁª ¹³ÉáëÝ»ñÁ, áóé³ÝáÓÝ»ñÁ, ³ÙÉ áá Áª µáoÝ ÇÝúÁª ÍñÁ³³Ý ·ánÍÁÝÁ³óÁ£ áñá»ë Ñ»³Ýúª ÍñÁ³³Ý ·ánÍÁÝÁ³óÇÝ Ý»ñ³Ù³óíáÓ á³Ñ³ÝÇÝ»ñÁ Ñ³BíÇ á»Ý ³éÝáoÙ í»ñÇÇÝÇë Çñ³³Ý ÑÝ³ñ³íá-ñáoÁÚáoÝÝ»ñÁ, áóëíÇ áñáo»ëÇ ÑÝ³ñ³íáñáoÁÚáoÝÝ»ñÁ » Ý»ñ³Ù³óíáÓ á³Ñ³ÝÇÝ»ñÁ ÙíÝáoÙ »Ý Ñ³Í³éáoÁÚ³Ý Ù»Ç » áñáo»ëÇ »ý»ÍÝ»ñÇ á³÷Á ëíéáoÙ ¿ ³×»Éª áñ³Ý ÈÇëí »Ý áá Çñ³í»ë³³Ý á³Ñ³ÝÇÝ»ñÁ, ³ÙÝùÝ B³ ¿ Éá³ÝÁ£ ²ñ¹ÚáoÝùÝ»ñÁ µ³ñ»É³í»Éáo Ñ³Ù³ñ ³ÝÑñ³Á»Bí ¿ Ý³È » ³é³ µ³ñ»É³í»É áñáo»ëÇ ÑÝ³ñ³íáñáoÁÚáoÝÝ»ñÁ, áñÇó Ñ»íá ÙÇ³ÙÝ ³é³Ç³ñ»É áñáo»ëÇ Ýáñ ÑÝ³ñ³íáñáoÁÚáoÝÝ»ñÇÝ Ñ³Ù³á³ë³ÝáÓ Ýáñ á³Ñ³ÝÇÝ»ñ£

Ð³Bí»íáÓ³ÝÝáoÁÚ³Ý ·áÍÁÝÁ³óÝ»ñáoÙ »ñ³Í³ÚáoÙ ¿ Ó³³Ý-íÇ×³³.ñ³³Ý ÍáoÉíáóñ³Ý » áñáBáoÙÝ»ñÇ Í³ÓóÙ³Ý Á³÷ÝóÇÍáoÁÚ³Ý á³Í³éÁ£ ÈÇëí ³ëíÇ×³Ý³³ñ-í³ Í³ë³³ñ³Ý Í³éáoó³íùÇ á³ÙÙ³ÝÝ»ñáoÙ ¹³ë³Éáë³³Ý » áóé³ÝáÓ³Ý Í³½ÚÁ áÇ Ý»ñ-ñ³íáoÙ Í³³ñíáÓ ÷á÷áÉáoÁÚáoÝÝ»ñÇ ÁÝÁ³óùÇÝ, ÍñÁ³³Ý Ñ³Ù³³ñ-Ç ½³ñ-óó³Ý Ñ³Ù³ñ ëÍ½µáoÝù³ÙÇÝ, é³½Ù³³ñ³³Ý ÝB³ÝÍáoÁÚáoÝ áóÝ»óáo áñáBáoÙÝ»ñÁ Í³ÓíáoÙ »Ý Ý»Ó Bñç³ÝÍáoÙ » ÙÇí³Í »Ý ·ÉÉ³íáñ³á»ë ³Ù¹ áóÓÓáoÁÚ³µ Ñ³Ù³Éë³ñ³ÝáoÙ Í³³ñíáÓ ù³ÙÉ»ñÁ §í»ñ³¹³ëÇÝ¹ ½»Íáoó»Éáo Ñ³Ù³ñ Ñ³Ù³á³ë³ë³Ýáñ»Ý §÷³Á»Á³íáñ»Éáoí ÈÝ¹ÇñÁ ÉáoÍ»ÉáoÝ£ ²Ù¹ ³ÙÝÁ ³ÝÉáoé³÷»ÉÇáñ»Ý ÇÝýáñÙ³óÇáÝ ³éáoÚáí ³Ó×³íáoÙ ¿ ³³¹»ÙÇ³-Í³Ý ÙÇÇ³³ÙñÁ, ³Ùñ³áÝáoÙ ¿ ³³¹»ÙÇ³³Ý Ñ³ÝñáoÁÚ³Ý ³³Ý¹³³Ý ¹³Ó³Í ÇÝ»ñ¹ Çñ-ùáñáBáoÚÁ, ÍáÓÙÝáñáBáoÚÁ §í»ñ³Çó¹ Ññ³Ñ³Ý·Ý»ñ éá³ë»ÉáoÝ£ Í³Óíá»ÉÇù áñáBáoÙ-Ý»ñÇ B³Ñ³-ñ-Çë ùÝÝ³ñÍáoÙÝ»ñ á»Ý Ý³É³Ó»éÝíáoÙ Í³Ù ¿É ¹ñ³Ýú ÍñáoÙ »Ý ýáñÙ³É ÁÝÁ³ó³³ñ-³ÙÇÝ µÝáoÚÁ£ ²í»Éáñ¹ ¿, ë³³ÙÝ, ÝB»É, áñ ÍáÓÙÝáñáBáoÚÁ ¹ªÇ Ýáñ ³ñ-Á»ùÝ»ñ á»íù ¿ ÍÇë»Ý Í³½Ù³Í»ñáoÁÚ³Ý µáÉáñ ³BÉ³³ÍÇóÝ»ñÁ£ ³ ÝB³ÝÍáoÙ ¿, áñ »ñ³-Í³ÚáoÁÚáoÝÝ»ñÁ ÷á÷áÉ»Éáo áñáBáoÚÁ áÇ Í³ñ»ÉÇ ÁÝíáoÝ»É ÙÇ³ÙÝ Ñ³Ù³Éë³ñ³ÝÇ Ó»Í³³ñáoÁÚ³Ý í»ñÇÝ Ù³Í³ñ¹ÍáoÙ£ Úáñ »ñ³Í³ÚáoÁÚáoÝÝ»ñÁ á»íù ¿ ¹ñ¹Ý ÈÙµ³ÙÇÝ ùÝÝ³ñÍ³ÙÝ áá Áª áñá»ë »Ó»ÉáoÁÚáoÝ, ³ÙÉ ÁÝ¹Ú»ÝÁ áñá»ë ùÝÝ³ñÍ³ÙÝ ÈÝ¹Çñ£ ³ Í³ñá³³½ÚÁ á»íù ¿ á³ñ³ëí ÉÇÝÇ, áñ í»ñÇÝ³³Ý Ó³Í»ñáoÙÝ»ñÁ Í³ñáÓ »Ý áñ¿ ÁÝ¹Ñ³Ýáóñ µ³Ý ááoÝ»Ý³É ³ÙÝ µ³ÝÇ Ñ»í, ÇÝá Ý³É³á»ë »ÝÁ³¹íáoÙ ¿ñ£ ØÇ³Í Ýñ³ á³Ñ³ÝÇÁ á»íù ¿ ÉÇÝÇ ³ÙÝ, áñ ÍáÉ»Í³ÇÍ ÍáÓÙÇó ÁÝíáoÝ³³ ³ñÁ»ùÝ»ñ ÁÝíáoÝÝáoÙ »Ý ùñ»ÝùÇ µÝáoÚÁ » á»íù ¿ ³Ýí»ñ³á³Náñ»Ý á³Ná³Ýí»Ý£ °Áª Ý³ñ³-ñ³Í ëÍ½µáoÝùÝ»ñÁ á»Ý á³Ná³Ýí»É, ³á³ Ó»Í³³ñáoÁÚ³Ý ÍáÓÙÇó Ñëá³³Í Ýáñ ³ñÁ»ùÝ»ñÁ á»Ý ÁÝíáoÝíÇ ³BÉ³³ÍÇóÝ»ñÇ ÍáÓÙÇó, Ñ»í³á»ëª ÍñÁ³³Ý áñ³Í³Í³ÚáoÙ á»Ý ÍÇñ³éíÇ Í³Ù ÍÇñ³éí»Ý ýáñÙ³É ³éáoÚáí, ÇÝáÝ ¿É, Áëí ¿áoÁÚ³Ý, í»ÓÇ ¿ áóÝ»ÝáoÙ£

áoé³ÝáÓÝ»ñÇ Úáí µ³ó³Í³ÚáoÙ »Ý áñ³Í³É ÍñÁáoÁÚáoÝ ëí³Ý³Éáo Ñ³ë³ñ³³Ý ÉÁ³ÝÝ»ñÁ » Ó³Í ¿ ÍñÁ³³Ý ·ánÍÁÝÁ³óáoÙ ë»÷³³Ý ¹ªñÁ ·Ç³Íó»Éáo ³ëíÇ×³ÝÁ£ ²ÍÝÑ³Ùí

̇, ẽ³İ³ÜÝ, ăñ ĩñĀ³İ³Ý μ³ñ»÷ăĒăôÜÝ»ñÇ Ñ³ćăŌ · ³ñ¹ŪăôÝ³İ»i ÁÝĀ³ôüÇ Ñ³Ü³ñ ăñă»ē  
 ·ĒĒ³íăñ (· ăñăß ÇÜ³ẽíăí Ý³Ē³ă³ÜÜ³Ý Ñ³Ý¹Çẽ³ăôŌ) ·ăñĪăÝ Ñ³Ý¹»ē ̇ ·ĒÇẽ  
 ăôẽ³ÝăŌăôĀÜ³Ýă ăñă»ē ÁÝ¹Ñ³Ýăôñ ẽăôÇ³Ē³İ³Ý Ñ³ ăôÝ»ôăŌ Ē³İÇ Ĩ³½Ü³íăñăôŪĂē  
 ăôẽ³ÝăŌăôĀÜ³Ýă ăñă»ē »ñÇİ³ẽ³ñ¹ăôĀÜ³Ý ÇÝİ»Ē»Īăô³Ē μÝăôŪĂÇ Ýă³İ³íăñăôĀÜăôÝ-  
 Ý»ñăí ŪÇ³íăñİ³İ ·, Ñ»İ³ă»ē, ³ẽ³Ç³İ³ñ Ñ³İ³İÇ ẽăôÇ³Ē³İ³Ý ýăñŪ³ĒÇ½ăôÇ³Ý, ă»iü ̇ Ū»Īă»ē  
 Ýă³ẽİÇ μ³ñ»÷ăĒăôÜÝ»ñÇ ÁÝĀ³ôüĂ §Ý»ñü·ÇŌ; ĒĀ³Ý»Ēăô · Çñ³İ³Ý μăíİ³Ý¹İăôĀÜ³μ  
 μ»ēÝ»Ēăô, Ñ³ẽ³ñ¹ăôĀÜ³Ý Ū»Ç ÇÝăíăôÇăÝ ŪßİăôŪĂ Ĩ³ñ¹Ē»Ēăô ·, Ç í»ñćă,  
 Ñ³ẽ³ñ¹ăôĀÜ³Ý ¹»ŪăĪñ³ăôăôŪĂ · ù³Ō³ùăôÇ³İ³Ý Ñ³ẽ³ñ¹ăôĀÜ³Ý ÇÝẽİÇíăôİÝ»ñÇ í»ñÇÝ³-  
 Ĩ³Ý Ĩ³ŪăôăôŪĂ ă³ăÑăí»Ēăô ·ăñĪăôŪē ³ ĀăôŪĒ Ĩ³ Ý³· Ñ»ßİ³İÇăñ»Ý μ³ñŌñ³ôÝ»Ē Ĩ  
 Ñ³Ü³İ³ñ·Ç ·ñ³ăăôĀÜăôÝĂĀ Ā³Ü³Ý³İ³İÇŌ Ū³íăñ · Ñă·ăñ ă³Ñ³ÝÇÝ»ñÇÝ Ñ³Ü³ă³ẽĒ³Ý  
 ŪĂÝăĒăñ Ġ³íăñ»Ēăí μăôñÑ³İ³Ý ŪÇÇ³İ³ŪñăôŪē ŪÜ³Ý ŪĂÝăĒăñİÇ Ġ³íăñăôŪĂ  
 »ÝĀ³íăôŪ ̇ ÁÝ¹Ñ³Ýăôñ ă³İ»ŪÇ³İ³Ý ŪÇÇ³İ³ŪñÇ ăẽİ³ŪăôĀÜăôÝ, ăñİ»Ō Çñ³İ³ÝăôŪ  
 Ī·ăñİÇ Ā³Ü³Ý³İ³İÇŌ ăĒĒñÑÇ Ñ³ẽ³ñ¹İ³İÝ Ĩ³ăôôİ³İüÝ»ñÇÝ μÝăñăß Ñ³ñ³-  
 μ»ñăôĀÜăôÝÝ»ñÇ Ñ³Ü³İ³ñ·Ă · ĠŌ³íăñİÇ Ū³ñ¹ăô · Ū³ẽÝ³·»İÇ ³ÝÑ³İ³ÝăôĀÜăôÝĂē ²Ū¹  
 ă³ñ³·³ŪăôŪ Ĩ³ă³ÑăíÇ Ñ³Ü³Ē³ẽ³ñ³ÝÇ Ñ³Ü³ă³÷ Ñ³Ü³ĒñăôŪĂ ³İÇİ·Çİ³İñĀ³İ³Ý ¹ÇñüăñăßăôŪ  
 ăôÝ»ôăŌ »ñÇİ³ẽ³ñ¹ Ū³ẽÝ³·»İÝ»ñăí, ĨñĀ³İ³Ý Ñ³Ü³İ³ñ·ăôŪ ăñ¹Ý Çẽİ ăĒĒñăô »ñÇİ³ẽ³ñ¹  
 Ū³ẽÝ³·»İÝ»ñÝ ăİÇíăñ»Ý Ý»ñ·ñ³İ³İ ĨĒÇÝ»Ý Ñ³Ü³Ē³ẽ³ñ³Ýİ³Ý Ĩ³ẽ³ñŪ³Ý ·ăñĪ-  
 ÁÝĀ³ôÝ»ñăôŪ, Çẽİ ăôẽ³ÝăŌŌ³İ³Ý Ĩ³½Ū³Ī»ñăăôĀÜăôÝÝ»ñĂ Ā»ñ·ē Ĩ³İ³ñ»Ý ĒÇÝ»Ē  
 ăñÑ»ẽİ³İÇÝ Ĩ³ăôŪŌÝ»ñ, ăñăÝŪ Ĩ³ẽ³ŪăôŪ »Ý ăñă»ē §ăÇÝăíÝÇİ³İ³Ý; ă³ă·³ŪÇÝ Çñ»ÝŌ  
 Ý³Ē³ă³ñ³ẽİăŌ »ñÇİ³ẽ³ñ¹Ý»ñÇ ¹³μÝăôē

¹»ñĂ ùÝÝ³ñİ³İ ĒÝ¹ÇñÝ»ñÇ Ñ³Ū³İ»ùẽİăôŪ ăñ³İÇ ă³ăÑăíŪ³ÝĂ Ýă³ẽİăŌ ŪÇÇ³İ³Ūñ  
 ẽİ»ŌĪ»Ēăô ăôŌŌăôĀÜ³μ ăẽ³ÇÝ³Ñ»ñĂ Ĩ³İ³ñİ»ĒÇù ù³ŪĒ»ñÝ »Ý©

- ĨñĀ³İ³Ý ·ăñĪĂÝĀ³ŌÇ Ĩ³ẽ³ñŪ³Ý ă³ăİ»ÝİñăÝ³ăôŪ · Ñ³Ū³Ē³ẽ³ñ³ÝÇ Ĩ³ăñ³İ³Ý  
 Ĩ³ăôŪŌÝ»ñÇ ăô ý³ĪăôĒİ»İÝ»ñÇ ŪÇÇ· Ĩ³ẽ³ñŪ³Ý ·ăñĪ³ăôŪĂÝ»ñÇ ăñ¹ŪăôÝ³İ»i  
 í»ñ³μĒĒăôŪ, ³ŪÝ ̇ă ý³ĪăôĒİ»İÝ»ñÇ Çñ³İ³ăôĀÜăôÝÝ»ñÇ ÁÝ¹Ē³ŪÝăôŪ  
 Ñ³Ū³Ē³ẽ³ñ³Ýİ³Ý Ĩ³ẽ³ñŪ³Ý í»ñÇÝ ùŌ³İÇ Ñ³Ū³İ³ñ·ăŌ · ăôŌŌăñ¹ăŌ ¹»ñÇ ăôĂ-  
 Ō³ŌŪ³Ý Ñ»i Ū»Īİ»Ō,
- ĨñĀ³İ³Ý Ĩ³ăŪăôĀÜăôÝÝ»ñÇ Ý»ñüÇÝ ÑăôĪ³ŪÇ ă½ă³İ³ÝăôŪ · ŪñŌ³Ō³ŪÇÝ  
 ¹³İÇ Ġ³íăñăôŪ, ĨñĀ³İ³Ý ăñăô»ēÇ Ýİ³Ū³μ ÑăíÝ³íăñă³İ³Ý Ūăí»ôăôŪÝ»ñÇ  
 μ³Ō³ăôŪ,
- ·ăñĪăŌ Ñ³Ū³İ³ñ·ÇÝ ½ăô·³Ñ»ē ÷ăñŌ³ñ³ñ³İ³Ý Ñ³ñĀ³İÝ»ñÇ ẽİ»ŌĪăôŪ, ăñİ»Ō  
 ³ÝÑñ³Ă»ßİ ̇ Ĩ»ÝİñăÝ³ôÝ»Ē ăẽİ³ ÇÝİ»Ē»Īăô³Ē · ÝŪăôĀ³İ³Ý ē»ăăŌñēĂ,  
 ă³ăÑăí»Ēăí Ĩ³ÝŌ ăẽ³ÇÝŌÇİ ăñ³İ³İ³Ý ½ăñ·³ăôŪĂ · Ñ»İ³·³ Ō³ÝŌíăñăôŪĂ,
- »ñÇİ³ẽ³ñ¹ Ū³ẽÝ³·»İÝ»ñÇÝ Ĩ³ẽ³ñŪ³Ý (³Ū¹ ĀíăôŪ · ăñ³İÇ Ĩ³ẽ³ñŪ³Ý)  
 ·ăñĪĂÝĀ³ŌÇÝ»ñÇÝ Ý»ñ·ñ³İ»Ēăô Ñ³Ū³ñ ÇÝẽİÇíăôŌÇăÝ³Ē ÑÝ³ñíă-  
 ñăôĀÜăôÝÝ»ñÇ ẽİ»ŌĪăôŪē

Đ³Ū³Ē³ẽ³ñ³ÝÇ ăñ¹Ç³İ³ÝăôŪĂ · Ā³Ū³Ý³İ³İÇŌ ăñ³İ³İ³Ý ă³÷³ÝÇßÝ»ñÇÝ  
 Ñ³Ū³ă³ẽ³Ē³Ý»ôăôŪĂ ĒñĂÇÝ ăô μ³½Ū³μ»ē ·ăñĪĂÝĀ³Ō ̇ē ²Ūē ă³ñ³·³ŪăôŪ ĒÇẽİ Ĩ³ñ·ăñ ̇  
 ÇÝŪÝ³İ³ñăôĀÜ³Ý · ă³ẽ³Ē³Ý³İăôĀÜ³Ý, ă³İ»ŪÇ³İ³Ý ŪßİăôŪĂÇ · Ĩ³ẽ³ñŪ³Ý Ā³Ū³Ý³İ³İÇŌ  
 Ūăí»ĒÝ»ñÇ ĨÇñ³ēŪ³Ý, ÇÝăă»ē Ý³· ă³ÝăôŪĂÇ · ÝăñăôŪĂÝ»ñÇÝ Ñ³ñŪ³ñİ»Ēăô ŪÇÇ· ăẽ³-  
 Ç³Ōİ Ē½Ū³Ý Ĩñ×³ăôŪĂĀ ĒÝ¹Çñ, ăñĂ ă»iü ̇ ·ĒĒ³íăñÇ Ñ³Ū³Ē³ẽ³ñ³ÝÇ Ō»İ³İ³ăôĀÜ³Ý  
 ăĒĒñ³ÝŪ³ŪÇÝ ùñ³İ³ñ·Ăē

ĨñĪăôŪ »Ū, ³ÝİÇ×»ĒÇ ̇, ăñ Ū»ÝŪ Ĩ³Ý·Ý³İ »ÝŪ ŪßİăôĀ³ŪÇÝ ĒăôñÇ İ»Ō³İ³ñĂÇ  
 ³ÝÑñ³Ă»ßİăôĀÜ³Ý ăẽÇ·ē ẽ³İ³ŪÝ ă»iü ̇ Ýİ³İ»Ē, ăñ ŪßİăôĀ³ŪÇÝ Ñ»Ý³ñ³ÝÝ»ñÇ  
 Ġ³íăñăôŪĂ ă»iü ̇ ÁÝĀ³Ý³ Ĩ³ăôôİ³İüŪÇÝ í»ñ³÷ăĒăôŪÝ»ñÇÝ ½ăô·ĂÝĀ³Ō, · ăñü³Ý  
 Ū»ÝŪ ăôß³ŌÝ»ÝŪ Ñ³ñĂăôŪÝ ³Ū¹ ăôŌŌăôĀÜ³μ, ³ŪÝŪ³Ý Ū»Ī ̇ Ĩ³Ý·Ă, ăñ μ³ñ»-  
 ÷ăĒăôŪÝ»ñÇ ăôŌŌăôĀÜ³μ ·ăñĪ³İñăŌ Ū»ñ Ç³ÝŪ»ñĂ ă»Ý ăẽ³İÇ Ō³ÝİĒÇ ăñ¹ŪăôÝŪ-  
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# **The Role of Evaluation in Quality Assurance Instruments of Universities. Problems and Perspectives**

A. Mignone (Università degli Studi di Genova)

*Quality assurance and the continuous improvement of the University's educational programs are fundamental to the mission of Universities. This policy aims to establish conditions for evaluating the quality and viability of all programs, and for monitoring and ensuring systematic improvement of the University's programs and courses.*

*In Europe, increased attention has been paid to the consequences and quality evaluation in the past years. One result of the Bologna Process is the diffusion of evaluation in Universities. Where national evaluation systems have developed it is particularly necessary to go beyond a study of methods and uses and to start discussing the effects of evaluation.*

*This study focuses on the impact of evaluation in the quality assurance of the University organisation using a systemic approach, with particular attention to the effects of evaluation at an institutional and organisational level. The impact of evaluation is divided into three areas: organisational learning, resource development and power management. In conclusion, the important role of quality culture and organisational bodies on the determination of the impact of evaluation is investigated.*

In one sense evaluation is about understanding and reflecting on a particular set of activities. There is no single definition of evaluation, but a useful starting point is: "The process of making judgements about the worth (costs and benefits) of something." As human beings, we naturally ask about how useful and how valuable our activities are. We can think of evaluation as a process of considerably sharpening this natural activity of checking on our ongoing work. A more formal definition is to think of evaluation as providing information to make decisions about the product or process.

We go on to stress that evaluation is not equivalent to research, although it employs research techniques as a means of generating the necessary information, and uses similar criteria to the reliability and validity to judge the quality of the evidence and evaluation tends to be broader than research, as it usually requires information about a range of situations, products and processes. However, the main difference between evaluation and research is that evaluation also involves making judgements about value of what is being evaluated. Evaluation in an education setting is the process whereby we seek evidence that the learning experiences we have designed for students are effective. Probably, we evaluate educational activities for two overlapping reasons:

- to obtain information that can inform the ongoing design and development process (often referred to as formative evaluation);
- to decide whether an innovation is worth retaining (often referred to as performance evaluation).

These forms of evaluation often melt together, and each can be difficult to undertake properly.

A variety of evaluation frameworks have been developed, but we pick out four frameworks which have been extensively quoted in many European countries. We develop an alternative evaluation framework. The evaluation focuses on three main themes: context, interaction and outcomes. Several methods of data collection are used, including questionnaires (to the start of the course, postal or on-line), interviews with staff and students, post-course questionnaires, and logs of computer usage. The table below summarises these points:

	<b>Context</b>	<b>Interactions</b>	<b>Outcomes</b>
<b>Rationale</b>	Past evaluations and literature suggests that context must be considered	Need to look at interactions in order to focus on the learning process	Learning, qualification outcomes and affective outcomes (changes of perception or attitude) must be considered when assessing effectiveness
<b>Data</b>	Course designers' aims, policy documents and meeting records	Records of student interactions, student diaries and on-line logs	Measures of learning, changes in attitudes and perceptions
<b>Methods</b>	Interviews with course designers, analysis of policy documents	Observation, diaries questionnaires, video/audio and computer tools	Interviews, tests and questionnaires

Evaluation differs in particular from research in that it is heavily oriented towards a specific output or endpoint and in particular to addressing the needs of the identified stakeholders of the evaluation. This contextualisation of evaluation is important in shaping the focus of and the methodologies used in the evaluation process. The evaluation process consists of three main phases: planning and contextualising the evaluation; data collection and the analysis and presentation of findings to stakeholders. The plan stage helps to define and scope an evaluation. This includes identification of the intended audience for the evaluation (stakeholder analysis) and definition of the core evaluation questions. It also consists of consideration of defining the complexity of the proposed evaluation, giving particular attention to associated time and resource (both human and financial) implications. The next stage is definition of the key evaluation questions which are to be addressed and mapping of these to stakeholder interests. From this appropriate data collection and analysis are chosen, for which a wide variety of research instruments and methods can be used. The final stage is communication of the findings of the evaluation to stakeholders (university staff, students and their families, external economic and social environment, and so on).

Program evaluation and improvement processes are an integral part of academic planning. As part of good teaching practice, the University requires individual academics and teaching teams to review the content and focus of their

courses, reflect on their teaching through feedback from students and other stakeholders, and make appropriate revisions as required. Specially, it is important to analyse courses and modules in relation to learning outcomes connected to labour market. In this sense, we can improve policies oriented to pursue the objective defined by EU in Qualification Framework Project.

The University recognises that the resources available to develop and sustain programs may affect their quality. For this reason the University will evaluate the viability of its programs so that available resources are used to maximum effect. The University will set conditions for the continuing development and maintenance of program quality and require the use of a range of data sources to evaluate issues of quality and viability.

Definitions of terms used in this policy.

Evaluation of quality refers to:

- (a) the systematic consideration of stakeholder views and benchmarking activities about the quality of programs and the courses that comprise them; and,
- (b) the aggregation, analysis and interpretation of students' feedback about their perceptions of the quality of their courses of study to inform judgements about the quality of programs which incorporate those courses.

Evaluation of viability refers to a report on the viability of programs provided by Planning and Assurance Services of University and based on performance against agreed indicators, together with the Administrative Offices' response to this report, taking into account all relevant contextual factors.

### **Policy**

1. The University will undertake evaluation of the quality of its programs and courses using student and stakeholder feedback, with benchmarking against best practice.
  - 1.1. All courses will be evaluated in some way each time they are taught.
  - 1.2. The University will monitor the quality performance of each program annually.
  - 1.3. The University will undertake a comprehensive evaluation of at least 20% of all programs each year.
2. The University will undertake an annual evaluation of the viability of all programs against agreed indicators.
3. The scheduling of reviews and reporting of outcomes will form part of the University's annual planning and review process.
4. Responsibility for implementing the arrangements outlined in this Policy rests primarily with the Divisions.

### **Procedures**

#### *1. Course Evaluation*

1.1. While the procedures that follow deal specifically with requirements associated with program evaluation it is a requirement that every course is evaluated in some form each time it is offered. For courses not associated with the nominated program review described in the remainder of these procedures, this

may take a variety of forms (for example, evaluation of a component of the course, assessment requirements, dedicated support services or facilities, stakeholder input such as peer review).

## *2. Program Evaluation Reporting*

Program evaluation will be reported according to two University-wide performs which together provide the framework for the systematic evaluation of programs. The evaluation processes and reporting are to be managed in Divisions by the relevant Program Directors.

### *2.1. Annual Program Report*

The performance of all programs will be monitored annually according to agreed criteria.

### *2.2. Program Evaluation Report*

Each year Academic Boards will identify a sample of at least 20 per cent of their programs for evaluation of quality, with the sample so managed as to ensure that all programs are evaluated at least once in every 5 years. The programs nominated by a Division, for evaluation will be listed in the Divisional Plan in the year of the evaluative activity. Where double degrees across Divisions are reviewed, both Divisions will agree on the scheduling.

## *3. Evaluation of Quality*

3.1. The University requires that program evaluation involve: the collection and analysis of data from external stakeholders; the collection and analysis of student evaluation data; curriculum review and, the conduct of benchmarking exercises.

3.2. Program Directors will be responsible for establishing mechanisms to gather and analyse responses from relevant external stakeholders (for example, professional associations, employer groups, accrediting bodies).

3.3. Student evaluation of a program will be achieved by aggregating data from the results of the Course Evaluation Questionnaire for the core courses that comprise the major strands of the program as listed in the University “Manifesto” and as incorporated in the Academic Offer Information System. Interpretation of the University Manifesto when determining core courses and major strands for the purpose of program evaluation will be the responsibility of the relevant Program Director.

3.4. In programs nominated for evaluation the Program Director will be responsible for:

(a) ensuring that all core courses in that program use the Course Evaluation Questionnaire either online, or through third party administration and data entry of an identical pen and paper instrument, in order to ensure confidentiality of student responses, and that data from courses are aggregated, analysed and interpreted in accordance with guidelines provided by the Academic authorities;

(b) engaging staff who teach courses in the program in the analysis and interpretation of program data, including reporting on program outcomes against national benchmarks;

(c) reporting on the program evaluation and the recommended changes arising from the evaluation to the Faculty Board.

#### *4. Process for the consideration of quality*

4.1. Annual Program Reviews and Program Evaluation Reports will follow a format provided by the Academic authorities.

4.2. Annual Program Reviews will be considered by Faculty Boards and others nominated by the relevant Academic board.

4.3. A summary of each Program Evaluation Report including the action plan for improvements will be reported to the Administrative and Academic Boards.

4.4. The University Annual Review will include a list of programs identified as performing below expectations as measured by a sort of Graduate Course Experience Questionnaire.

4.5. Any amendments to programs and courses resulting from the process detailed in this policy will comply with the Coursework Program Approvals Manual.

4.6. A short summary of changes arising from the evaluation will be placed on the Course Home-page (or equivalent) so that students are informed of the value attached to evaluative information which they have provided.

#### *5. Evaluation of viability*

5.1. The procedures for the evaluation of viability of programs are to be managed by Planning and Assurance Services, Divisions and Program Directors.

5.2. Evaluation of viability will be undertaken for all programs every year and employ a number of viability indicators determined by Academic Board on the recommendation of the Rector.

5.3. There will be separate viability rankings for undergraduate and postgraduate programs and for onshore and offshore programs arising from the application of different indicators, relevant to each category of program.

5.4. Planning and Assurance Services will be responsible for providing viability reports, which will rank programs across four quartiles and will be based on the agreed viability indicators.

5.5. Program Directors will be required to provide interpretative information on programs ranked in the fourth quartile. This will contain information additional to the report based on the viability indicators and may include any recently conducted quality evaluation.

#### *6. Process for the consideration of viability*

6.1. Program Directors' reports on programs in the fourth quartile will be the subject of special analysis by the relevant Academic Board before being forwarded to Senior Management Group for discussion at the annual Review meeting.

6.2. The Rector will report annually to Academic Board on the results of the viability reports and actions taken by each Division in response to the evaluation of its programs.

#### *7. Role of Planning and Assurance Services*

7.1. Planning and Assurance Services will undertake audits of compliance with this policy.

### **Concluding remarks**

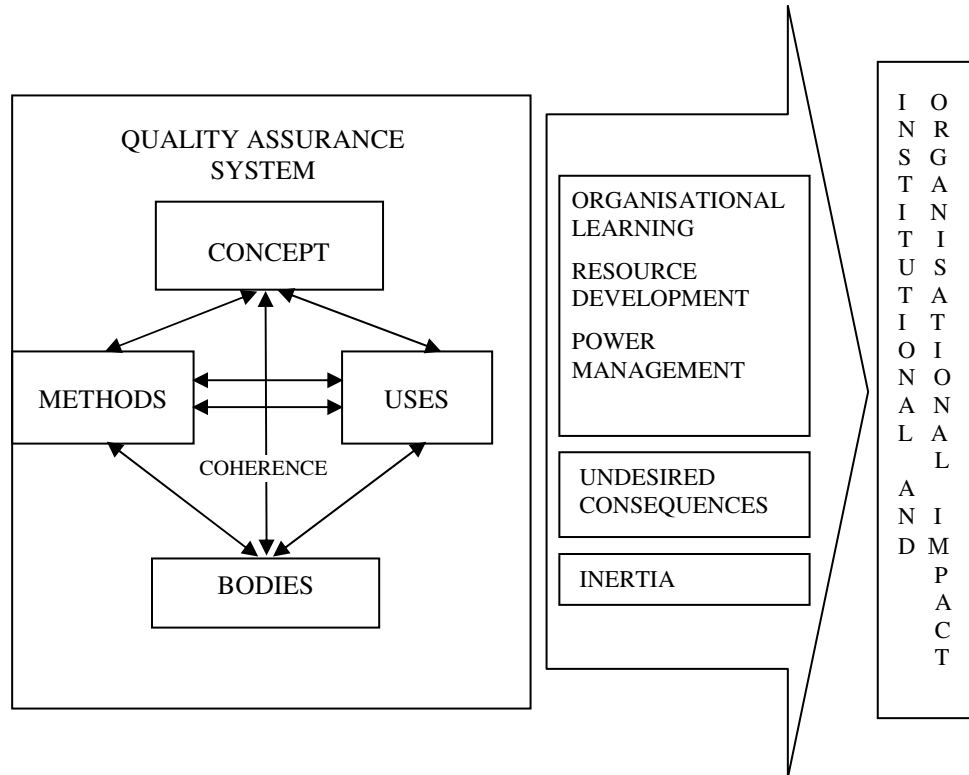
The institutionalisation of evaluation through evaluation exercises and changes in systems and methods shows the need to understand its effects and consequences. The issue is interesting in many countries which are in the early stages of the diffusion of evaluation and is keen to know the consequences of assessment procedures when choosing a system. Questions like “How effective are these measures?” regarding the contribution of evaluation systems to the improvement of quality are becoming more frequent. However, there is a real gap in the knowledge and understanding of the effects of evaluation. There is a growing literature on approaches and methods of quality assessment at both institutional and national levels, very little of it addresses the effects of quality assessment on the educational and organisational process of higher education. The time when evaluation was blindly accepted without ascertaining its real impact seems to be coming to an end. It is by examining the true impact of evaluation in the universities that the question can be answered. The issue shifts from an idealistic level, influenced by a priori opinions and values, to the real state of affairs.

We aim to analyse the institutional and organisational impact of evaluation in universities paying attention to its impact on teaching and research. To fulfil this aim, we use the results of many inquiries developed on European universities. We search to: put forward a theoretical framework for analysing evaluation system; present a framework for reviewing the evaluation impact in universities; show the evidence and comment on determinants of the impact of evaluation.

In order to achieve a critical examination of the evaluation system in universities, a consolidated analytical scheme, based on a systemic approach, has been adopted. A complete understanding of evaluation requires awareness of its complexity and its various components. The paper is based on a systemic examination of the following five factors: a) the evaluation concept, that is the explanation or official statement regarding evaluation; b) evaluation methods (the specific instruments and techniques that give substance to assessment exercise; c) the bodies responsible for evaluation, how they are made up and their relationship to the institutional and organisational structure; d) the real use made of evaluation output (evaluation results are used in three ways: cognitive, as a stimulus, to give awards); e) the coherence of the system as a whole, that is the degree of connection and homogeneity between these factors. These are five elements for understanding the structure of the evaluation system and its impact on the university institution.

This scheme shows the impact by dividing it into the three categories that were developed in the studies of organisational change: the impact on organisational learning, development of resources and power management. To complete the examination of evaluation impact two other categories must be taken into account: undesired consequences and inertia, which hinders and reduces the effect of evaluation. So, the research which are been made on the evaluation impact are based on: organisational learning, which includes the capacity to further knowledge; development of resources; power management (systems for the governance of power in the university's institutions); undesired consequences; inertia.

This is the theoretical framework:



A comparison between the evaluation systems used in some European universities shows that:

- Evaluation has a great impact on the institutional and organisational running of the universities. Decisions on evaluation must take into account their importance in terms of strategy;
- The scheme used for recording the impact of evaluation appears to be a useful instruments for gathering and comparing the effects of evaluation;
- There is a relationship between the characteristics of the evaluation system and evaluation impact;
- The specific characteristics of the universities where assessment is carried out also affect the institutional and organisational impact of evaluation.

Overall, the impact of evaluation is not automatic but is only comprehensible as a function of the characteristics of the evaluation systems and the universities that use them. Data collected show how players in the evaluation system tend to emphasise the importance of the instruments, procedures and stages of evaluation in which they have been directly involved or are more in agreement with, even comparing them with other evaluation exercises in which they have not been involved. The degree of involvement and approval of organisational actors determines whether evaluation will have an impact or not. The more the academics are involved in the evaluation process, follow its development, appreciate its

contribution and share in it, the greater the impact will be. Examinations of the effects of evaluation shows that the more evaluation is assimilated by the organisation and cultural needs are taken into account the fewer elements of inertia and effects in organisational learning there are. Conversely, there is greater impact on the power system and resource development. If evaluation is alien to organisational culture then the diffusion will be extremely slow and its impact will have to be considered in relation to organisational learning rather than to the development of resources and the power system.

Taking an empirical approach with an exploratory aim it is possible to pinpoint certain recurrent factors that are fundamental for understanding the effects of evaluation in the universities. A strategic analysis of evaluation processes in the light of quality culture emphasises the following points: importance of peer review; difference between teaching and research; importance of time factors; risk of degeneration of evaluation. But, we think that evaluation in itself is neutral, and makes it possible to achieve important and knowingly oriented organisational impact as well as spark off processes of organisational change in the sense of improvement. Degenerative phenomena are risks that can be dealt with as long as opportune countermeasures are activated and the exercise is conducted with the necessary awareness and attention on the part of government and management bodies.







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# **Strategic Management for Improving the Educational System of Armenia**

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K. Siakas (Alexander Technological Educational Institute of Thessaloniki)

## ***Abstract***

*In this paper we explore not only the theoretical base of the educational system in Armenia, but also practical and strategic management of the educational system. By considering educational systems in other countries, as well as experience and best practice, we try to extract useful aspects for further implementation in the Armenian educational system in order to bring in new innovative ideas and to contribute in the creation of a more efficient and sustainable educational system for Armenia. This paper includes a comparison of features between the educational systems of five European countries and Armenia.*

## **Introduction**

Historical background and basic aims of improving the Armenian educational system: Educational institutions both in Armenia and in European countries have a very old history. “Education has always been prioritised in Armenia - in a country, which has 1600 years old history of literacy. From the very beginning, the school has been the basis of the nation's political and cultural survival and the incentive for national progress. The current education network has been established during the short existence of the first Republic in Armenia in (1918 –1920). It has further developed during the years of Soviet Power (1920 – 1990). Education in Armenia has traditionally been highly rated. Today as well, the most important national issue is considered the maintenance and development of education system, insuring its compatibility in the international environment. This can be proved by the laws and decrees issued after declaring independence.”

It was in 1948 that the Universal Declaration of Human Rights affirmed compulsory education at the primary level as a human right worldwide (General Assembly, 1948). Today Armenia and most of the European countries have compulsory education at the primary stage often also extending to the secondary education.

The Armenian educational system has been extensively changed after the collapse of the Soviet Union (1991) and since then many reforms concerning the Armenian educational system have been undertaken in order to develop it further and take significant steps towards full integration into European structures, most notably with the accession to the Council of Europe. As an important part of this process the higher education system in Armenia is currently undergoing a comprehensive reform. One of the reform's main aims is the harmonization with the European Higher Education Standards and the Bologna Process. Armenia signed the Bologna Declaration in Bergen in May, 2005 and according to the

objectives of the Bologna Process has to introduce a quality assurance system in the higher education sector HEIs.

The overarching objective of this Tempus project (ARMQA: Internal Quality Assurance for Armenian HEIs) is to bring university management culture and practice in Armenia in accordance to the internationally recognized standards, address university management process in general and in particular the issue of internal quality assurance (IQA), allowing the creation of the IQA system, its constant monitoring and further enhancement aimed at providing quality education. (JEP-27178-2006 ARMQA: Internal Quality Assurance for Armenian).

Today there is a State Program of Education Development for 2008-2015 in Armenia, which has the following main aims:

- Achievement of higher quality education;
- Improvement of international collaboration;
- Creation and development of a sustainable modern educational system.

There are also several strategic approaches to education for the development of the Armenian educational system (State Program of Education Development for 2008-2015):

- The creation of favourable conditions, e.g. laws, free competition regarding study services, etc.;
- Equal state financing for each institution;
- Assessment in order to find out the strongest and the best components of the whole educational system (best practice) and to try to spread them.

Also many organisations provide support to the Armenian Educational System. For example the World Bank supported a project (2004) that aimed to make the school curriculum more suitable for the Armenian economy and society and to improve the way students are tested. The project also provided infrastructure and training for effective use in the classroom. Also improvement in education management and efficiency was supported. The Education Quality and Relevance project has four main components:

1. National Curriculum and Assessment System;
2. Educational Technologies in Schools. Necessary infrastructure for integration of ICT into general education including help to teachers and students to apply modern teaching and learning methods;
3. Teacher Professional Development enabling teachers to understand and implement the new curriculum and assessment techniques in the classroom. Training on the new curriculum and assessment tools organized by the CER, facilitated by international technical assistance. A pilot of school-based professional development was implemented through grants to approximately 60 schools ('School Centres');
4. System Management and Efficiency. Under this component a package of benefits available to the teachers made redundant as a result of the Government's rationalization program. Benefits include counselling, training, business services, relocation expenses, and additional

redundancy payments.

### **A comparison of features between the educational systems of five European countries and Armenia**

In order to create and develop a sustainable modern educational system in Armenia it is important to understand the differences between the educational system in Armenia and educational systems in other countries. Our study aims to compare the educational system of Armenia with the Educational system of European countries. There is considerable variation and complexity within Europe itself; however, in general there is convergence towards length and breadth of provision. In table 1 we provide the structure of the respective educational systems in Armenia and in Europe.

From table 1 we conclude that the structure of the Armenian educational system is very close to the most European countries' educational systems structures. The difference is in “the post-secondary non-tertiary” level, which is absent from the Armenian educational system. This will be discussed in more detail in the paragraph “Missing Part of the Armenian educational System”.

**Table 1:** Structures of the Educational Systems of Armenia and EU countries

ARMENIA	EU COUNTRIES
1. Pre-primary education	1.Pre-primary education
2. Compulsory education* <ul style="list-style-type: none"><li>• Primary education 1-4 classes (4 years)</li><li>• Lower secondary general 5-9 classes (5 years)</li><li>• Upper secondary general 10-12 classes (3 years)</li></ul>	2. Primary education
3. Upper secondary schools of vocational type	3. Lower secondary general
4. Higher / tertiary education	4. Upper secondary general
	5. Upper secondary vocational
* General education is compulsory until 16 years old (Law about Education, asset 18, 7)	6. Post-secondary non-tertiary
	7. Tertiary education

### **Comparison of Age Limits of Education in European Countries and Armenia**

Table 2 we provide a comparison of age limits of education in Armenia and in five European countries. The particular European countries (Austria, Finland, Germany, Greece and Italy) are chosen as the educational systems of these countries are considered highly developed. Finland, for example achieved the top

ranks in reading proficiency and in mathematics and science in the 2000 PISA study and its aftermath (Pisa, 2006).

**Table 2:** Comparison of Age Limits of Education in European Countries and Armenia

LEVEL OF EDUCATION (in years old)						
	COUNTRY	Pre-primary education	Compulsory education	Post-compulsory secondary education	Initial vocational training	Higher education
	<b>Austria</b>	3 - 6	Prim. edu. 6-10 Sec. edu. 10 - 14	15 - 18	-	18 and up
	<b>Germany</b>	3 - 6	6 - 10 10 - 16	16 - 19	3 years	18 and up
	<b>Finland</b>	under 3s and 3 - 6	7 - 16	16 - 2	min 15 and up	19 and up
	<b>Italy</b>	3 - 6	6 - 11 11-14	13.5 - 19	min 15 and up (to 29)	19 and up
	<b>Greece</b>	4 – 6	6 - 12	12 - 15	15 - 18	18 and up
	<b>Armenia</b>	2 or 3 - 6	6 - 18	-	-	18 and up

In table 2 we can see that in Armenia the age limits are approximately similar to the age limits in the European countries used in this study at all the levels of education. The only difference is that compulsory education in Armenia is from 6-18 as one group, divided into three internal groupings.

### Financing of education

Table 3 provides information on whether there is a tuition fee or not at different levels of education.

**Table 3:** Tuition fees at the levels of educations (EURYDICE, 2008)

LEVEL OF EDUCATION (Tuition fee – yes/no)						
1	COUNTRY	Pre-primary education	Compulsory education	Post-compulsory secondary education	Initial vocational training	Higher education
2	<b>Austria</b>	Yes/no	No	No	-	Yes/no
3	<b>Germany</b>	Yes	No	No	No	No
4	<b>Finland</b>	No	No	No	No	No
5	<b>Italy</b>	No	No	Yes	Yes	Yes

6	Greece	No	No	No	Yes/no	No
7	Armenia	Yes	No	Yes	-	Yes/no

As we see from the comparison table there are tuition fees in Armenia almost at all the levels of the educational system. This is one the weakest points of the Armenian educational system.

### **Educational Reform Implementation Steps**

Usually schools incorporate or enact an externally developed reform design. An externally developed school reform design is a model for school improvement that is developed by an outside design team. This team generally conceives the reform design; develops the principles, implementation strategy, and materials that accompany the reform; and sometimes provide training and support that enable local schools to prepare educators to implement the reform.

There are many system reforms in education, but one of the newest ones of system reforms and one that, we think, is going to take place in schools reforms is David Hopkins's system reform.

The context of system reforms according to Hopkins (2008) includes the following:

- School improvement today should be centred on personalized learning;
- Successful schools are identified as those which start at the centre with student learning and move outwards strategic policies rather than begin with the policies and move inward;
- Three main challenges as follows:
  - Maintaining a social justice agenda;
  - Improving teaching quality and classroom practice;
  - Commitment to sustained systemic change.

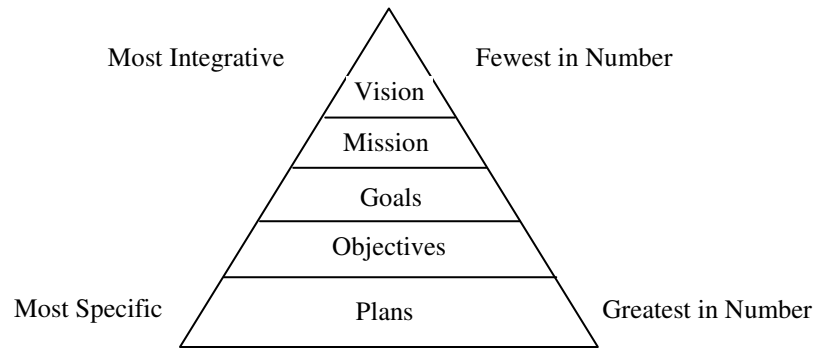
As we see Hopkins's reform is student-centred and not school or strategy centred, which is very important nowadays. The reason for this is that if reform begins with the strategy and as a result students' learning is dismissed, then the reform will not give the results that it has to give or for what it is going to be done. This reform offers and includes the most important aspects for schools today – maintenance of social justice agenda, improvement of teaching quality and classroom practice and systemic change.

It can be argued that Hopkins advocates a blending of top-down and bottom –up approaches, attempting to understand the aspirations and needs of the various stakeholders involved at each level. The relationship of strategic intent and detailed implementation plans and the various aspirations and expected benefits as well as the stakeholders involved at each level are depicted in Fig.1.

The vision refers to mental images of the future, which become tangible in the form of mission statements. The mission statements define the primary purpose and articulate the responsibilities to its stakeholders. In educational systems the stakeholders are primary the students, their parents, teachers, and the society as a whole. Goals are attempts to improve performance by making mission statements more concrete. Objectives represent the operational definitions of goals in more precise terms and describe what needs to be accomplished in order to reach the



goals. Plans are developed usually by managers to help accomplish higher-level intentions.



**Figure 1:** *Hierarchy of Strategic Intent (Siakas et. al., 2005)*

As we see from the hierarchy of strategic intent it has the form of a triangle, but it doesn't mean that the only direction of moving is downward. We can move during the realization of strategy in two ways – upwards and downwards, which opens wide opportunities. Hopkins (2008) considers it to be some kind of deduction and induction and states that “*it is better to start at the centre and move outwards strategic policies rather than begin with the policies and move inward*”.

### **Missing Part of the Armenian educational System**

Our observation of the comparison between the Armenian and European educational systems showed, among other things that in the Armenian educational system there is no developed initial vocational training yet.

Initial vocational training is education and training, which aims to equip people with skills and competences that can be used on the labor market (Tissot 2004). Initial vocational training or apprenticeship training provides professional competence and appropriate knowledge by trainee work, promotes regional competitiveness and welfare and also develops skill according to needs of population, local business and industry.

Vocational training is not based on aged groups and it is not higher education. It provides an opportunity to study for those who have not had the opportunity or the wish to enter higher or specialized education.

In most European countries the minimum age for attending vocational training is approximately 13-14 years and there is no maximum age. In initial vocational training students proceed according to the individual learning programme drawn up on the basis of the requirements of the competence-based qualification. The qualification consists of functional modules relevant to the occupational proficiency. The training mainly emphasis the job learning and the integration of practical and theoretical instruction.

Approximately 70-80% of the time used for learning takes place in the training workplace. The student works and learns in the working environment, where the student's training is entrusted to the responsible on the job instructor.

As now Armenia trying to integrate to the Bologna Process and use all its

statements to have a sustainable and modern educational system, it is very important to follow the items which are accepted by the Ministers responsible for Higher Education, one of which for example says, that: *"Consistent with the principle of institutional autonomy, the primary responsibility for quality assurance in higher education lies with each institution itself and this provides the basis for real accountability of the academic system within the national quality framework."* ("Realising the European Higher Education Area" 2003).

This is one of the most important points of quality assurance for Armenia, as in general Armenians consider that the Ministry of Education and Science have to do everything for developing the quality for institutes and universities, and the educational system in whole. However, there are many other important statements in the frame of Bologna Process as well, that have to be included in Armenian educational system, in order to develop and make it modern.

### **Conclusion and Future Challenges**

The comparison of the structures of the European and the Armenian educational systems showed that the structure of the Armenian educational system is not very far from the European educational system. As Armenia is a signatory to the Bologna processes it is anticipated that a national strategy for the creation of a sustainable modern and quality assured educational system is needed.

In addition, other European initiatives for the development of Lifelong Learning (Lifelong Learning, 2008) need to be incorporated in the structures and provision in Armenia.

One of the weakest points of the Armenian educational system is that at all levels (except compulsory education) there are tuition fees. The educational system of Armenia would gain added value in future if introducing initial vocational training, as it is something very important and a very attractive component of the educational system.

Projects like ARMQA (JEP-27178-2006) are looking into issues of Internal Quality Assurance for Higher Education institutions. Similar work needs to be carried out for the primary and secondary educational sectors.

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