QUIS - Quality, Interoperability and Standards in e-learning

2004-3538/001-001 ELE - ELEB14

QUIS quality assurance system

Authored by the QUIS team.
Contact authors:
László Komáromi
András Bardócz Tódor
Sarolta Zárda
(komaromil@szamalk.hu)

SZÁMALK Education and Information Technology Ltd.
Budapest, Hungary

*e*Learning
Designing Tomorrow's Education

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QUIS

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CONTENT

I. INTRODUCTION

The activities in the **QUIS project** will be directed towards Quality in e-learning, Interoperability and reusability of e-learning material and development of Standards. The project will also look at cost beffectiveness in e-learning.

Quality in e-learning is important to be able to exchange both learning materials and learning practices across HEI's in Europe. To establish joint study programs it is essential that cooperating institutions accept each others Quality Assurance Systems (QAS).

The work is organised in stages / workpackages (WP). The WP's on **quality in e-learning** (WP2 and WP3) identifies all relevant sources and results from previous or ongoing projects and disseminate these on the QUIS web site. After in-dept studies of the most important sources, QUIS will synthesis and develop the area further both related to QAS for establishing joint study programmes as well as for guidance on how to set up net-based education across language and cultural barriers. This report is the deliverable of Work package 3 of the QUIS project.

II. QUALITY AND THE BOLOGNA PROCESS PREVIOUS RESULTS ABOUT

In June 1999, 29 European ministers in charge of higher education met in Bologna to lay the basis for establishing a European Higher Education Area by 2010 and promoting the European system of higher education world-wide. In the **Bologna Declaration**, the ministers affirmed their intention to:

- adopt a system of easily readable and comparable degrees
- adopt a system with two main cycles (undergraduate/graduate)
- establish a system of credits (such as ECTS)
- promote mobility by overcoming obstacles
- promote European co-operation in quality assurance
- promote European dimensions in higher education

Convinced that the establishment of the European Higher Education Area would require constant support, supervision and adaptation to continuously evolving needs, the ministers decided to meet again in two years time.

Two years after the Bologna Declaration, the ministers in charge of higher education of 33 European signatory countries met in Prague in May 2001 to follow up the Bologna Process and to set directions and priorities for the following years.

In the Prague Communiqué the ministers

- reaffirmed their commitment to the objectives of the Bologna Declaration
- appreciated the active involvement of the European University Association (EUA) and the National Unions of Students in Europe (ESIB)
- took note of the constructive assistance of the European Commission
- made comments on the further process with regard to the different objectives of the Bologna Declaration
- emphasised as important elements of the European Higher Education Area:
  - o lifelong learning
  - o involvement of students
  - o enhancing the attractiveness and competitiveness of the European Higher Education Area to other parts of the world (including the aspect of trans-national education)

The ministers decided that the next follow-up meeting of the Bologna Process should take place in 2003 in Berlin to review the progress and to set directions and priorities for the next stages of the process towards the European Higher Education Area.

When ministers met again in Berlin in September 2003, they defined *three intermediate priorities for the next two years:* quality assurance, the two-cycle degree system and recognition of degrees and periods of studies. In the Berlin Communiqué , specific goals were set for each of these action lines.

Quality assurance

Ministers stressed the need to develop mutually shared criteria and methodologies and agreed that by 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

The two-cycle system

Ministers asked for the development of an overarching framework of qualifications for the European Higher Education Area. Within such frameworks, degrees should have different defined outcomes. First and second cycle degrees should have different orientations and various profiles in order to accommodate a diversity of individual, academic and labour market needs.

Ministers underlined the importance of the Lisbon Recognition Convention, which should be ratified by all countries participating in the Bologna Process. Every student graduating as from 2005 should receive the Diploma Supplement automatically and free of charge.

Ministers also considered it necessary to go beyond the present focus on two main cycles of higher education to include the doctoral level as the third cycle in the Bologna Process and to promote closer links between the **European Higher Education Area** (EHEA) and the European Research Area (ERA). This added a tenth action line to the Bologna Process:

Ministers charged the Follow-up Group with organising a stocktaking process in time for their summit in 2005 and undertaking to prepare detailed reports on the progress and implementation of the intermediate priorities set for the period.

Two years later in May 2005 the European Ministers Responsible for Higher Education met again in Bergen and reviewed the progress and implementation of the intermediate priorities set for the past two years. The ministers agreed that a substantial progress has been made from Berlin to Bergen. This is reflected in the General Report of the Bologna Follow-Up, presented at the Ministerial Conference. The ministers also received a special report on Bologna Process Stocktaking. These reports were the basis for the drafting of the Bergen Communiqué.

The Communiqué reflects the development from Berlin to Bergen:

Taking stock:

Priority has been given to developing:

- a three-cycle degree system in each participating country,
- national *quality assurance systems* cooperating in a Europe-wide network,
- mutual recognition between participating countries of degrees and study periods.

The Communiqué reflects the development from Berlin to Bergen:

Degree system

- o Adoption of a three-cycle degree system
- o Adoption of generic descriptors for each cycle (based on learning outcomes (LO) and competences)
- o Elaborate national frameworks for qualifications compatible with the overarching framework for qualifications in EHEA.

- **First cycle qualification**
  - o knowledge and understanding in a field of study that builds upon their general secondary education
  - o can apply their knowledge and understanding
  - o gather and interpret relevant data
  - o can communicate information
  - o have developed those learning skills necessary to continue to undertake further study with a high degree of autonomy

- **Second cycle qualifications**
  - o knowledge and understanding founded upon and extends and enhances Bachelor's level
  - o can apply their knowledge and understanding, and problem solving abilities in new or unfamiliar environments
  - o ability to integrate knowledge and handle complexity, and formulate judgements
  - o can communicate their conclusions and rationale underpinning these, to specialist and non-specialist audiences clearly
  - o have the learning skill to continue to study largely self-directed or autonomous

- **Third cycle qualifications**
  - o systematic understanding of a field and mastery of the skills and methods of research
  - o ability to conceive, design, implement and adapt a substantial process of research with scholarly integrity
  - o original research that extends the frontier of knowledge some of which merits national or international refereed publication
  - o capable of critical analysis, evaluation and synthesis of new and complex ideas
  - o communicate with their peers, the larger scholarly community and with society in general
  - o promote technological, social or cultural advancement in a knowledge based society

Quality assurance

- Adopt standards and guidelines for Quality Assurance in European Higher Education Area

Recognition of degrees and study periods

- 36 of 45 countries ratified the Lisbon Recognition Convention
- Call upon national authorities to recognise Joint degrees
- Develop national action plans to improve the quality of the recoognition process.

Further challenges

- Higher education and research
  - PhD level qualifications to be fully aligned with the EHEA overarching framework for qualifications
  - Emphasis on interdisciplinary training and transferable skills, meeting the needs of a wider employment market.
- Mobility
  - Mobility of students and staff a key objective
  - Commitment to facilitate grants and loans to make intra EHEA mobility a reality
  - Urge institutions and students to make full use of mobility programmes, advocationg full recognition of stud periods abroad within such programmes

Taking stock on progress for 2007

- Implementation of standards and guidelines for quality assurance
- Implementation of national frameworks for qualifications
- The awarding and recognition of joint degrees, including at the PhD level
- Creating opportunities for flexible learning paths in higher education, including procedures for the recognition of prior learning

The new realities
- Students are prepared for an international/global labour market
- Mobile students aiming at faraway destinations
- Growing number of higher education providers increased competition
- Trends:
  - USA intends to increase study-abroad exchange agreements
  - Europe intends to increase number of incoming non-degree students (e.g. through the Erasmus Mundus programme).

Preparing for 2010

- to establish a European Higher Education Area based on the principles of quality and transparency.
- The European Higher Education Area is structured around three cycles, where each level has

- the function of preparing the student for the labour market, for further competence building and for active citizenship.
- To endorse the follow-up structure set up in Berlin, with the inclusion of the Education
  International (EI) Pan-European Structure, the European Association for Quality Assurance in Higher Education (ENQA), and the Union of Industrial and Employers' Confederations of Europe (UNICE) as new consultative members of the Follow-up Group.

Regional collaboration - Challenges

The Bologna Process offers opportunities and threats to a regional cooperation in higher education.
- The Bologna Process removes barriers and intends to create a European Higher Education Area
  o Some of the basic foundations for regional cooperation are now extended to the whole European region,
  o which can make regional cooperation less relevant on one side…
  o On the other hand it opens up for strengthened regional cooperation within Europe.
- The Nordic attitude: An opportunity has emerged for profiling the Nordic cooperation in higher education as an exemplary (best practice) cooperation form in Europe.

At a broader level, there are a number of common barriers that continue to affect the achievement of the objectives of online providers:

- inequality of access by students to the technology itself;

- the temptation by funding agencies to underfund online learning with the result that providers are forced to withdraw the human intervention in their programmes;

- the challenge confronting academic staff in our tertiary institutions to adopt new approaches to teaching with technologies they may be unfamiliar with;

- the threat facing many academics that their formerly integrated role of course developer, teacher and assessor will be distributed across a team of specialists, and the resistance academic demonstrate to this threat.

Dimensions of quality that are particularly sensitive in e-learning

Institutions and quality agencies need to be aware of the pitfalls of online learning as well as the promises. In *The Business of Borderless Education* a series of 'hotspots' to which quality agencies need to pay particular attention are identified.

These include:

- standards of online information and library resources;
- verification of student identity;
- the use of part-time contract staff as opposed to full-time tenured staff
- subcontracting of administrative and ICT functions to separate commercial companies;

- corporate management prevailing over academic governance;
- no or little research being undertaken by teaching staff;
- de-coupling of research and teaching/course development;
- limited range of courses;
- trans-border coverage;
- discrepancies between measures of attendance and face-to-face modes.

These are all areas to which quality assurance systems and quality auditors should pay special attention. It would be premature to suggest 'standard' solutions to these challenges.

Institutional requirements for guidance/training/ in developing QA systems and delivering quality outcomes

Most institutions are committed to delivering at least some of their educational services online within the next very few years. For many conventional institutions, virtual delivery introduces quality challenges that they have never encountered before. These could relate, for example, to intellectual property and copyright; to access by students and teachers to hardware and networks; to the advice and guidance of far-flung students about course selection; to 'version control' of course material through the period of study; and to the security and privacy of communications systems, to name just a very small selection.

Teachers, course development teams, and institutions throughout the country will need to identify and address these challenges. There is a real need to provide them with authoritative advice and guidance as they go about planning, developing delivering and assessing their virtual programmes. Most institutions are too small to provide comprehensive training for their staff, and may also find it difficult to develop adequate quality standards. This would be a case where a single agency could be given the mandate for coordinating the training and quality assurance efforts of the tertiary sector. The aim of such a unit should be to identify the dimensions of quality assurance in virtual education, to propose indicative standards and measures, and to showcase best practice from around the sector. The primary mode of communication and service delivery should be online. Such an agency might be funded through a combination of central funding and institutional purchase of services.

Quality standards for e-learning

There are arguments for and against introducing a set of quality standards specific to virtual education for providers. In favour of the proposition, it could be argued that virtual education is such a new phenomenon that all stakeholders require greater assurance of its quality than might be delivered by existing medium-neutral standards and system. It could also be argued that, as virtual education has opened up a global educational market, international students will be looking to compare virtual providers with one another, rather than finding any assurance in a comparison of institutional providers within a particular nation or jurisdiction.

Quality Assurance Systems and e-learning

There is a great variety of quality assurance systems in Europe. The European Ministers of education signed a common declaration in Bologna in 1999. among the others, they wanted to develop a European collaboration by establishing a common credit transfer system, a common

degree system in order to breed European collaboration on quality assurance and recognition of competence.

The Council of the European Union has its resolution of July 2001 invited the member states to foster the European dimension of joint development of ICT mediated and ICT complimented curricula in higher education, by encuraging common approaches in higher education certification models and quality assurance.

According to that stated in the **Bologna Declaration**, strategic objectives for the creation of a European Space are based on principles like:

- The promotion of European co-operation to guarantee the quality of Higher Education through the development of networks, joint projects, specific support bodies, etc. in order to define comparable criteria and methodologies.
- The adoption of a compatible credits system that fosters mobility.
- Boosting the European dimensions that are necessary in education.

Promoting the mobility of students, teachers and administrative staff of European universities and other Higher Education institutions.

The present situation

In Europe, some countries have established QA guidelines for their institutions. The different models and approaches institutions and states have for HE assessment and QA and the *incompatibility* among them. The **lack of a generally accepted QA system** in Europe for traditional mode of delivery. The lack of consensus of what constitutes Quality in e-learning mode of delivery and to what degree if any it is differentiates from the traditional programs. The lack of a generally accepted QA system in Europe for joint programs, i.e. developed by more than one institution.

The Quality Assurance Agency for Higher Education (QAA)
lists the guidelines on QA of DL programs as follows:

- System design
- Establishment of Academic Standards and Quality in Program design,
- Approval and Review Process
- Assurance of Quality and Standards in the management of Program delivery
- Student Development and Support
- Student Communication and Representation
- Student Assessment

The Open and Distance Learning Quality Council (ODLQC)
categorizes the criteria for QA (and possibly accreditation) as follows:

- Course Objectives and Outcomes
- Course Contents
- Publicity and Recruitment
- Admission Procedures

- Learning Support
- Open Learning Centres
- Learner Welfare
- Provider Organisation
- Joint Provision
- Accreditation

At European level, there are no specific attempts to define QA criteria and measures for e-learning.
We could mention the effort of EUA on:

- Accreditation schemes for Higher Education in Europe
- Survey on Master Degrees and Joint Degrees in Europe

Institute for Higher Educational Policy (IHEP) lists the following key benchmarks for the quality e-learning :

- Institutional Support
- Course development
- Teaching / Learning
- Course Structure
- Student Support
- Faculty Support
- Evaluation and Assessment

The most significant parts and elements within the mENU quality assurance system, which are identified as follows:

- Administration
- Study Programmes
- Courses
- Staff
- Students

III. QUALITY IN HEI

The area of Quality of learning results implies analysing, the whole learning process, starting from learning needs up to delivery. There is a need to compare different existing models and standards.

Quality systems are built on already existing models or on self-developed quality principles. Those quality models that are use in universities are based on, for example, **ISO 9001:2000** standard, **EFQM model** or EQUIS model. Balance Score Card criteria have also been used as a basis for quality control.

In view of the international quality management work, some e-learning criteria have been developed in e-learning. Often quoted learning criteria are, factors relating to the educational programme, organisation, curricula, learning and teaching, infrastructure and student service, and evaluation methods. Quality management and criteria is shifting from planning and teaching onto learning results and student oriented quality management. Shift from a provider focus to a learner focus to accommodate the institution's clients.

We can look at quality as flawlessness, exceptionality, appropriateness, cost effectiveness. The possible stakeholders in quality measurement are students, teachers, administration, and online teaching facilities (part of the infrastructure). The roles of the teacher and student change in an online environment, thus demanding new skills both from the teacher and the student.

Quality management of e-learning can serve as a catalyst of the overall quality as well as an innovator of new quality methods. The development of quality thinking is crucial in the quality of web-based methods. The quality assurance of the e-learning has to be part of the strategic management system. The goal of the quality management system is to help educational institutions and its stakeholders improve their performance and continuously review their teaching, online learning materials and pedagogical and technical support services, as well as strengthening quality consciousness in all functions of the institution.

The implementation of **ECTS** system will facilitate a new type of students and of student mobility; students will be able pick up courses and training programmes here and there according to their specific objectives and criteria. The opportunity to attend courses in a different linguistic environment without the cost of physical mobility will also attract students.

In this context it is of major importance that European universities can enter the competitive education market through a quality approach and guarantee that their e-learning services are conform to an explicit quality standard. For academic and administrative staff it will be important to relay upon the quality of the ODL services proposed by other institutions to validities courses followed there by their own students.

Quality is a value judgement interpreted by students, educators, employers, stakeholders, government representatives etc. Quality should be planned, guided and controlled by the management of the educational institute.

The situation of quality management of education differs from county to country. We have to make comparison evaluation of national and international methods.

The outcome will be a continuous improvement in quality to satisfy customers and to give a contribution to the quality of DE in society.

Whatever methods are used to improve quality, they will only be effective if the desire to continually improve quality is fully embraced as a fundamental business philosophy. This should bring about an improvement in quality to the benefit of students, business performance of the institute and to society at large.

The concept of quality

Conceptions of quality can be grouped into several categories, e.g.

- *Quality as excellence.* The traditional academic view which hold as a goal to strive to the best. This concept of quality is held implicity by mainly academics as well as policy-makers.
- *Quality as fitness for purpose.* There is no general quality. An operational quality must always be specific: quality of something for specific purpose. For instance a study programme may be good at preparing developres but not teachers to work in practice.
- *Quality as customer satisfaction.* Quality is focused on customer needs.
- *Quality as zero errors.*
- *Quality as transformation.* The focus is firmly on students, the goal of empowering students withspecific knowledge, skills.
- *Quality as enchancement.* Achieving quality isessential to the academic ethos and that it is the academic themselves who know best what the maximum quality is at any point of time.
- *Quality as threshold.* Quality means to set certain norms and critera. It is objective certifiable and uniform, but is cannot be adapted to changing circumstances.

CLASSIFICATION

A variety of QA approaches have been developed for various purposes and different perspectives. In order to compare QA approaches, it is necessary to identify a classification scheme, determining the scope, purpose, and method of each approach.

- **Lifecycle Model** focus on different phases on a product, beginning with planning to the termination of a product's use. (e.g. ISO 9000). Production and service processes follow a certain lifecycle, starting with the very first idea ending with the termination of a product.

The **product lifecycle models** can be divided into following **phases:**

- o Analysis
- o Design
- o Development
- o Testing
- o Implementation/Realisation
- o Usage
- o Evaluation
- o Improvement
- o Termination

The phases cover general phases or software development. The sub-phases are dependent on the domain of the product.

- **Functional Model** cover different functional areas of educational activities, ranging from administrative issues to the design of learning units. This approach focuses on functional areas in the design process.

QA approaches

- *product oriented*

- *process oriented*

This can be achieved by the *following methods:*

- Quality guidelines
- Accreditation systems
- Staff education
- Employment and experts
- Membership of associations
- Competitive pressures
- Refund guarantees to students
- International standards

Two major aspects of quality are:

- quality management
- quality assurance.

Quality management and quality assurance differ basically in hat while quality management is an internal matter of each organisation, the essence of quality assurance is external evaluation based on convention.

Leading questions

- What are the basic principles
- Quality requirement of DE (e-learning, blended learning)
- Quality concepts and approaches in Europe and the globalising word
- Who are the key actors
- Decide the e-learning course development cycle, the element of the process
- What are the major aspects of quality management and quality assurance
- What are the quality assurance standards and methods in the e-learning
- How can we benefit from introduction of quality assurance system
- Steps toward the introduction of a Quality systems
- Economical projections of quality assurance
- Market and product quality
- Positioning e-learning standards, learning objects and specifications to improve quality
- Quality as a tool for institutional innovation and development in e-learning
- Quality assurance by accreditation
- Evaluation and assessment framework and methods for enhancing quality

Target groups

(the QA approach focused on):

- Managers
- Developers (ODL designer, content eypert, multimedia designer, software technician, graphic designer e.t.c.)
- Teachers
- Learners
- Administrative staff

Approach to quality control from general to specific

Quality
philosophy

General, not sector
specific approaches:
ISO, TQM, Quality models

Sector specific approaches:
QS 9000, GMP,
COMENIUS 2000, KMD, etc.

Practices of certain organisations: methods for self-evaluation
and measurement, contorling of main process,
quality circles, problem-solving teams, etc.
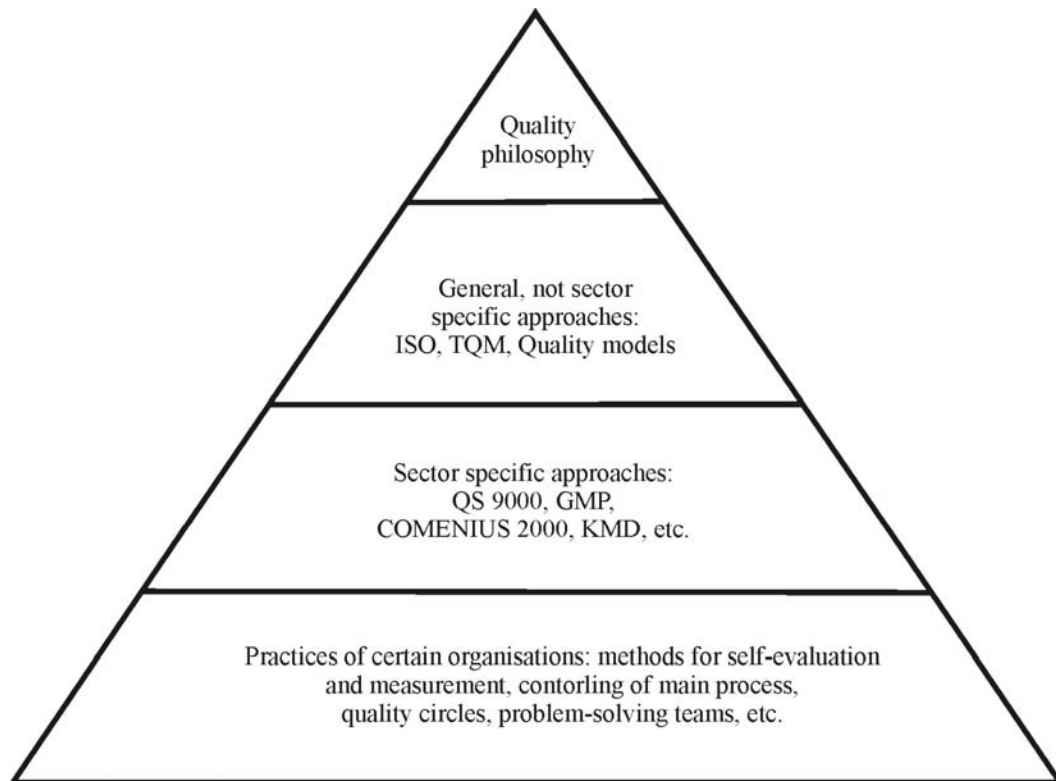
IV. QAS FOR JOINT STUDY PROGRAMMES AND NET-BASED INTER-NATIONAL EDUCATION

QUALITY SYSTEM REQUIREMENTS

It is important that a quality management system is developed to suit the culture of an institution and, more importantly, that it should be accepted by all staff in both teaching and support roles, including part-time and subcontract staff.

Within education and training the aim of a quality management system is to ensure that the provision of service is both consistent and continually improving.

The implementation of a quality system is a continuous commitment to customer satisfaction. Implementation requires the commitment, involvement and training of all personnel. Once implemented, the system needs to be maintained and updated to ensure the service is consistently delivered and opportunities for improvement are identified and acted upon.
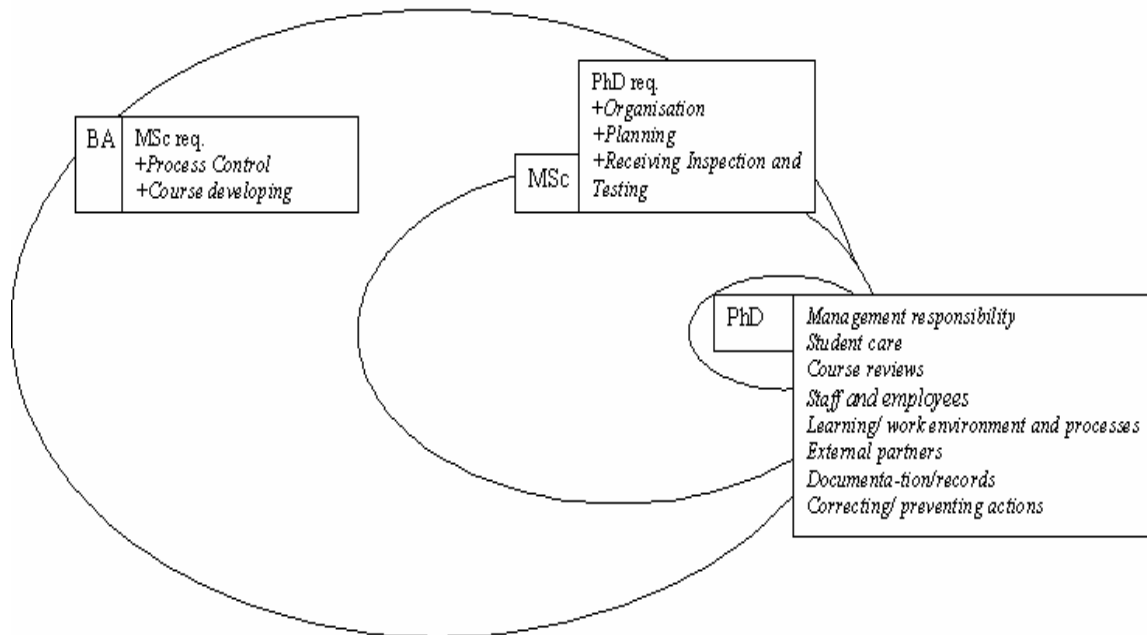
All aspects of staffing should be part of the quality system. Safety aspects should also be included, where relevant.

It is recognised that there are philosophical and practical differences between education and training. These real differences should not impact upon quality management systems to any significant degree and therefore no differentiation is made between the two in this document. Quality management in the provision of education and training must also include administrative and support services which contribute to the effectiveness of the institution as a whole and should be considered as part of the service.

Taking in account the differences between the three Bologna level, it is suggested to differ the quality activities to three level as well.

Specific activities are taken at PhD level. There are a few students dealing with a lot of different tasks. That's why in that level really difficult to standardize the quality activities. So the QA in PhD level covers less then ten QA areas. At the MSc level there are more students and the subjects are much more exactly pre described. So the QA activities cover some more fields. Of course in this level we have to apply the PhD level QA activities as well. The widest field of activities is used at the BA level, where the most of the students are. This level is similar to a big factory, so the QA in this level are used in the widest concern. At this level all of the requirements are applicable.

So we have to use all of requirements at BA level, less requirements are important at MSc level while at PhD level only a minimum core-requirements are necessary to use as student care, learning environment and so on. There are inverse connection between "Bologna levels" and QA levels.

QUIS

Quality activities in HE/e-L on the basis of degree system

| BA | MSc req.
+Process Control
+Course developing |

| PhD req.
+Organisation
+Planning
+Receiving Inspection and
Testing |

| MSc |

| PhD | Management responsibility
Student care
Course reviews
Staff and employees
Learning/ work environment and processes
External partners
Documenta-tion/records
Correcting/ preventing actions |

QUALITY SYSTEM REQUIREMENTS THAT USED IN ALL LEVELS

Correcting/ preventing actions

Annual plans will consider the effect of any changes in business conditions, objectives or targets relating to student satisfaction, the quality of processes, products and services. Appropriate actions necessary to prevent problems will be included in the plan. Where a problem arises, action may be taken to rectify the problem and prevent recurrence. This action will depend on the seriousness of the problem and the risk to which the business is exposed.

Course reviews

Regular reviews of the plans will be undertaken by the management. Records of the reviews will be maintained. The reviews will compare results with targets to provide a basis for improving student satisfaction, business success and management/process methods.

Documentation/records

Documentation student maintenance and the archiving procedures:
Management will be aware and have access to the relevant regulatory documents. Documents given out to students and other external parties will, as a minimum, contain all normal contact details.
In addition to the annual plan, management will assess what records need to be kept to minimise exposure to risk, for example contract documents, personnel records, etc. Management will decide on the period for which these records are held.

External (Out of University) partners

External partners and services are to be selected on the basis of quality of learning process, reliability of service (including timely delivery) and cost.
Purchase orders written, as agreed between the business and the particular partner. Adequate information will be provided when ordering to ensure delivery in accordance with requirements.
Any partner shortcomings that arise should be considered during the business reviews.

Learning/ work environment and processes

The management will provide a suitable and sate working environment. Equipment necessary for the production of products and services will be provided and properly maintained in accordance with regulatory requirements and the manufacturers' instructions.

Regulatory requirements and instructions related to the operation of equipment ore to be readily available to the relevant people. Persons using the equipment are to have had appropriate training.

Methods or processes will be in place to provide the student with what management and the student expect.

Storage facilities will be provided which protect materials and products from deterioration or damage. Products with a defined shelf life will be controlled and removed from stock and disposed of when date-expired.

Management responsibility

The management will maintain annual plans which:
- define the management's policy related to the provision of products and services meeting students' needs and expectations
- identify regulatory or sector requirements which ore to be met in the provision of products and services
- identify financial and activity performance targets and the maintenance of physical and human resource needed to achieve the targets
- identify minimum training requirements for people involved in management, student contact, processing and verifying

Staff

All people employed in the business will be provided with written contracts. Hours of work and remuneration are to be, as a minimum, in accordance with national and local requirements. .'

All employees will understand their responsibilities and how they should achieve the required results.

Student care

The management's policy for meeting students' needs and 'expectations are to be publicly displayed or otherwise communicated to employees and students.

Only products, services and conditions will be offered that can be provided in full. When accepting orders from students, the methods used will ensure that the students' exact requirements ore known and that the products or services can be supplied in accordance with those requirements.

There will be an effective communication system for dealing with student complaints and opportunities provided for students to make favourable comments. Student satisfaction will be assessed at the time of the business review.

Where responsibility of students' property is assumed, due core is to be taken to protect the property from damage or loss.

QUALITY SYSTEM REQUIREMENTS THAT USED ONLY IN MSc AND BA LEVELS

Management responsibility

The quality policy communicates the commitment to quality both internally and externally and should be authorised by senior management. It should state specific objectives towards quality to which the university, college or training organisations committed and be relevant to the expectations and needs of customers/clients.

Organisation

Within an education or training organisation all staff including part-time lecturers, teachers and trainers, support staff and subcontract staff will have an effect on the quality of the service.
Management review should take place at defined intervals to ensure the quality system is being implemented effectively, is being maintained in accordance with the quality policy.
The quality system should include the control of all functions/factors/activities which can affect the quality of service.

Planning

Quality planning is carried out to ensure the quality policy and objectives.
The responsibility and authority of all staff engaged in curriculum/course/programme design should be clearly defined and include course and programme teams as well as individuals, such as course directors, programme managers, individual lecturers or tutors.
The design of the course or programme should be reviewed during the design and development process to evaluate the design requirements and the capability of the design to meet those requirements. The design review can be conducted at any stage of the design process but should be planned and carried out by staff with appropriate knowledge and skills to customer/client needs.

Receiving Inspection and Testing

This should include the consideration of incoming students/trainees by comparison with programme entry criteria and acceptance of prior learning. The existence of

"open doors" policy need not negate the requirement to establish the needs of incoming pupils/students/trainees. Knowledge of these needs could well affect the structure and content of the programme to improve the service offered to individual pupils/students/trainees.

In the case of incoming products, e.g. supplies, these should be inspected prior to use and records of this inspection maintained. However, the inspection may be reduced if effective preventive techniques are employed, such as purchasing items form approved subcontractors where high confidence levels have been established, and products should be consistently supplied to specification.

Staff and employees

One of the most valuable assets of a university, college or training organisation is its staff. Procedures for staff appointments must therefore feature in the quality system and should include both teaching and support-staff, full-time, part-time and subcontract.

Part-time/Subcontract Teaching Staff should be monitored to establish whether they should be re-employed in the future, including classroom observation or student/trainee feedback where appropriate.

QUALITY SYSTEM REQUIREMENTS THAT USED ONLY IN BA LEVEL

Course developing

Software may be developed as a product available for the students. The following student related concerns may be relevant:

- the terminology to be used, is agreed by the relevant parties
- the customer has the capability and resources to meet contractual obligations
- the customer responsibilities in the provision of test data and related facilities
- handling of problems detected after acceptance, including claims, student complaints, and the responsibility for removal of nonconformities
- facilities, tools, software items and data, to be provided by the student, are identified and methods defined and documented to access their suitability for use
- replication and distribution requirements
- installation, maintenance and support requirements
- legal, security and confidentiality concerns
- guardianship of the master copy of the product

- methods of control for virus protection

other software related concerns:
- risk management
- configuration management
- integration
- test
- installation
- migration
- training
- maintenance
- re-use
- architectural specification
- detailed specification
- source code
- user guides

The items to be maintained and the period of time for which they should be maintained, should be specified:
- programs
- data and their source
- specifications
- document for user
- test plans

The measured product characteristics are:
- testability
- reliability
- maintainability
- availability
- process maturity
- number and type of defects in process outputs
- defect removal efficiency

Organisation

Everyone within an organisation has a responsibility for the quality of their own activities, the ultimate responsibility being with the Principal/chief executive. A member of the organisation must be appointed as a "management representative" and given clearly defined responsibility and authority to ensure the quality system is implemented and maintained.

Planning

Design activity for curriculum, course or programme development should be carried out to a plan which defines the responsibilities assigned to qualified personnel.

Design input requirements may require such techniques as performing a market or training needs analysis to establish goals for the programme or course being designed. The aim is to create a design specification detailing overall programme/course objectives, methodology, evaluation and assessment techniques, external or internal validation requirements; prior learning, planned outputs and any statutory or regulatory inputs. Evidence should be developed to confirm the design of the course or programme is relevant to the aims and objectives identified in design inputs and are relevant.

Design verification compares the design output with design input and could include:

- pilot courses/programmes
- external comments from examination bodies
- feedback from customers
- initial validation of new programmes/awards in higher education

A comparison of the finished design should be made against user requirements to ensure the needs of customers have been addressed during the design process. This would normally occur after a course or programme has been run.

Process Control

This requirement encompasses all activities relating to the delivery of service carried out on behalf of the customer covered by the scope of the quality management system. The following list gives examples of typical procedures which may be required:

- course planning and development
- student induction
- delivery of learning
- course monitoring
- course review and evaluation
- course materials and programmes
- timetabling
- registration/attendance recording procedures
- requirements for visuals, handouts, etc
- accommodation
- laboratory facilities
- workshop facilities
- library/learning resources
- externally run courses

Documented procedures and records should exist to confirm specific requirements for service delivery have not been met.

V. THE QUALITY ASSURANCE IN THE CONTEXT OF THE QUIS PROJECT

Process oriented system

1. Analysis

The task is to define exactly the target groups and their needs and on this basis to draft the purpose of the training. The needs analysis is a very complex phase, since it should actually address all dimensions of needs, from business to learner requirements, bearing in mind that education not only a single solution

1.1. Justify the requirements
Purpose is ensuring the needs the course must meet are identified. Tasks is identify the learner requirements, the performance requirements, and the business requirements

1.2 Organize and run the analysis
Purpose is to plan how much, from whom, and how to collect data related to identified performance and learner requirements.

1.3 Define the educational tasks.
The tasks must be clear, and specified. Which group of learners will be targeted. Sort and analyse data and create a summary document and obtain commitment on the course purpose

2. Design

The process of Design is to provide a planned structure to the learning event. During this phase, findings from Analysis are used to design a course

2.1 Design planning.
The provider shall prepare plans for each design activity. The plans shall describe or refer specially to these activities and define responsibility for the implementation.

2.2 Outline the contents.
The designer may decide approaches that are either subject oriented or learner centered.

2.3 Outline the delivery system.
A delivery system can take many formats, depending on methods and media that are used to present course materials. The design will adopt for either group learning or individual learning and choose for various media (lecturing, multimedia, e-learning etc.)

2.4 Outline the evaluation strategy.
Evaluation should measure whether learners meet the course objectives. It is therefore important that objectives should not only deal with subject matter in terms of knowledge.

2.5 Decide the quality criteria.
Monitoring system to all stages of the learning process. Quality systems, standards. Feedback from learners, teachers, developers.

3. Development

The development uses the course description, as the result of the Design stage, to shape the actual course. The development process consequently goes along similar part ways as the design process.

3.1 Organizational conditions.
The development of course material ought to be based on a project plan, which describes routines, finances and other resources, the delegation of responsibility among those involved, and time schedule for the work.

3.2 Target group.
The development and use of material must be based on an appraisal of the target group's needs, qualifications, knowledge and experience.

3.3 Select media and materials.
Determine the media and materials for use in lessons.

3.4 Develop the contents.
The process can be supported by consultation of the following resources: Existing materials, conventional materials, literature, and other resources.

4. Production
The output of previous stages is design, development course materials. These materials are the input of production page. The results (output) of production stage are the course materials ready for delivery

4.1 Assemble media and materials.
Purpose is to produce the final version of media and materials, according to design specifications. During production process results should be measured against the goals.

4.2 Reproduce course materials.
Copy course materials should be monitored that the copies meet course specifications and quality standards.

5. Delivery

The process of Delivery includes the final preparation and the actual running of the course

5.1 External conditions
Laws, regulations, standards for education government plans and certification schemes in the relevant field.

5.2 Organisational Conditions
For every study programme should be a description that specifies the goals , content, standard length of the study, learning material, teaching activities, learning activities, evaluation procedures, time constraints, requirements for previous study.

The educational institution should have staff with professional and pedagogical expertise that corresponds to the subject content and level of programme.
The fees must be reasonable relative to the benefits that students receive in the form of study materials and teaching.
It must be ensured that all of the parties have a common understanding ago all aspects of the programmes goal.

5.3 Students
It must be decide and measure the previous knowledge of the students.
Contracts and terms of study must be formulated in accordance with the costumer legislation.

5.4 Material

5.5 Teachers.
It must be specify the competence requirements for the teachers in all courses. The training institution ought to motivate the teachers to keep both professionally and pedagogically abreast of their field.

5.6 Communicate the course.
Tools need to be prepared that let learners know details of the course and their value to them, as well as possible pre-course learning activities.

5.7 Teaching, guidance, other support
The institution ought to make sure that the students receive the learning support they need, e.g. the possibility of telephone cone contact, etc. The institution should have a system for follow up of teachers work. The institution have to get functioning systems for follow up and support of its students regarding their performance during the programme.

6. Evaluation

Evaluation is the meaning or interpretation of data from the assessment in an institutional setting, the evaluators may be students, faculty, and accredited agencies. The results of an assessment process should provide information which can be used to determine whether or not intend outcomes are being achieved.

6.1 Students achievement of goals.
The institution should have a system for the evaluation and monitoring of the extent to which the student achieve the goals that were established for the individual courses.

6.2 Course completion.
The institution should have systems for registration and presentation of its results in the form of statistics regarding graduates, number of successful exam candidates, registering the relationship between recrurement to and competition of various types of programmes, rates and results of the courses.

6.3 Teaching results.
The institution should have systems for the evaluation, tests, examination and documentation of teaching results. Evaluation and documentation can be conducted continuously throughout the programme and a final examination. Diplomas, certificates should give correct documentation of the programme content and level, plus the student results.

Based on data on students' progression, results and viewpoints, the institution ought to evaluate the extent to which students' and institutional goals have been achieved, both generally and for the individual courses and programmes. In the event of departures from these goals, the institution ought to take corrective measures.

VI. TERMINOLOGY

Audit

A systematic way of checking that the policies, processes and procedures within a quality management system are being adhered to. Audits may be internal, carried out by staff from within the organisation, or external.

ISO 9000

An international quality standard which specifies requirements for certification against which a Quality Management system can be assessed. The assessment (or audit) is carried by an external company known as a certification body.

Quality Assessment

Quality Assessmentdenotes the totality of measures carried out consistently and systematically in order to insire that a product conforms with the requirements of a stated specification (EN 180000)

Quality Assurance

Quality assurance denotes all the planned and systematic activituies implemented within the quality system, and demonstrated as needed, to provide adequalte confidence that an entity will fulfill requirements for quality (ISO 8402).

Quality Circle

A group of colleagues in any field, who meet regularly to review and discuss examples of best practice, in order to ensure continuous improvement in the services and products they offer.

Quality Control

A procedure for checking work after it is done and then correcting it if faulty.

Quality Management

Quality management denotes all activities of the overall management function that determine the quality policy, objectives and responsibilities, and implement tzhem by means such us quality planning, quality control, quality assurance and quality improvement within the qwuality system (ISO 8402).

Quality Management System

A QMS is a way of formally ensuring that an organisation is consistently in control of the quality of the products or services that it supplies to its customers. It is formal because it consists of a system of controlled, documented processes and procedures which can be audited.

Quality Plan

Any document setting out specific quality practices, resources and sequence of activities relevant to a particular service, course or programme.

Quality Policy

Quality Policy is a meaningful statement drawn up by an organisation, to reflect their commitment to quality processes, procedures, services and products.

TQM

Total Quality Management focuses on achieving quality and can be defined as a philosophy and a set of guiding principles that intend to meet and exceed the needs and expectations of various external and internal customers

Standards

Standards are regulations giving requirements to achieve rationalization, quality assurance, safety, environmental protection, and im,provement of communication in industry, technology, science, administration and public.

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Author team of QUIS reports

Contributions to QUIS reports are produced by staff members at the partner institutions.
All of these persons have taken part in discussions and production leading to this and other reports.
Contact authors for this particular report are listed on the front page.

The activities in the QUIS project will be directed towards QUality in e-learning, Interoperability and reusability of e-learning material and development of Standards. The project will also look at cost beffectiveness in e-learning.

Quality in e-learning is important to be able to exchange both learning materials and learning practices across HEI's in Europe. To establish joint study programs it is essential that cooperating institutions accept each others Quality Assurance Systems (QAS).

Partner	Institution	Country	Staff members contributing
P1	TISIP Research Foundation	NO	Tor Atle Hjeltnes, Thorleif Hjeltnes, Geir Maribu, Arne B. Mikalsen
P2	Norwegian Technical & Natural science University, NTNU	NO	Line Kolås, Arvid Staupe
P3	Mid Sweden University, MIUN	SE	Bertil Andersson, Börje Hansson, Åke Malmberg
P4	Universita' La Sapienza, UoR	IT	Maria de Marsico, Andrea Sterbini, Marco Temperini, Emanuele Panizzi
P5	SZÁMALK Education and Information Technology Ltd., SEL	SEL	Lászlo Kómaroni

Other staff members may have been involved with activities related to the project, course development, dissemination, secretarial work etc, but are not directly involved with the content and authoring of these reports.

QUIS

Quality, Interoperability and Standars in e-learning

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