

Considerations on the Quality Management of e-Learning process

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Abstract — This article presents some features regarding quality control in e-Learning processes based on a brief analysis of some European projects, especially from “e-Learning Initiative” scheme. Some outstanding outputs of those projects are revealed. The authors experience in developing e-Learning subjects through such projects are shorthandy presented. Eventually, it is described a proposal for a project aiming at Quality Management improvement in international cooperation of higher education institutions.

Keywords — Quality Assurance, Quality Management, European Projects, “e-Learning Initiative”, Quality Observatory, EU-Asia Link Programme.

I. INTRODUCTION

CONCURRENTLY with the advent and progress of the globalisation process all enterprises, whatsoever their size, are confronted with a tough market in which “knowledge” supported by new technologies has become one of the main production impetus, alongside “capital” and “labour”. In particular, this is true for small and medium-sized enterprises (SMEs) where “knowledge” plays an important role for coping with the competition and quality requirements.

A natural consequence of this situation, the existing vocational training programmes had to be updated and adapted to respond to the nowadays market requirements in most enterprises. The crucial role of digital technologies in shifting vocational training from “just-in-case” to “just-in-time” to fulfil training requirements is undisputed. Therefore training and learning had to switch rapidly to the newly developed domain, called e-Learning, meaning “... *the use of new multimedia technologies and the Internet to improve the quality of learning by facilitating access to resources and services as well as remote exchanges and collaboration*” (EU eLearning Action Plan – 2001). The EU Lisbon, Stockholm and Barcelona Councils called for sustained action to integrate Information and

Communication Technologies (ICT) in education and training systems.

A materialisation of this general strategy was promoted by the European Commission Barcelona Declaration, of March 2002, where it was clearly underlined that: “*In order to raise the level of learning in Europe, the integration of ICT in the educational process is seen as an opportunity to advance the change process and to increase both quality and accessibility to learning processes*”.

An important report entitled “Implementation of Education & Training 2010” was elaborated in November 2003 by the European Commission, Directorate-General for Education and Culture, presenting the findings of the ICT Working Group for “concrete objectives for future education and training systems and implementing the related work programme”.

A remarkable progress in Europe has been made, especially in the development of ICT infrastructure in education/training, while observing a very high heterogeneity of policies that follow various political priorities, funding sources, educational goals (SMEs, Education Institutions, etc).

e-Learning through its flexibility and facility of access is considered to be a major enabler of lifelong learning as well a catalyst of change and reshaping. In this context, the “e-Learning Initiative” programme of the European Commission (<http://europa.eu.int/comm/education/learnin>g) strives to mobilise the educational and cultural communities, as well as the economic and social players in Europe, in order to speed up changes in the education and training systems for Europe’s shift to a knowledge-based society.

This work presents some features concerning the development of e-Learning, some approached projects related to quality assurance through e-Learning on the European arena and it is briefly discussed a proposal of a project of cooperation on the subject of quality management.

II. AN OVERVIEW OF E-LEARNING FEATURES

e-Learning has a lot of advantages compared to regular training: e-Learning products can be utilised at any time or location and, thus, in principle, are available to trainees all over the world. Therefore it was expected that e-Learning would increase its share not only in educational institutions but also in companies training activities. But performance and reputation of e-Learning have not lined up to the lofty expectations set by the early realisation of the enormous

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potential benefits of the “marriage” of learning and technology.

In the last years it seems that the quality standards of the e-Learning products are likely to decline and the use of e-Learning decreases. One problem could be the (non) human factor. Initially, e-Learning was seen mostly from the administrator’s perspective rather than from the student’s points of view by considering that not the learner but the technology used to be the centrepiece of e-Learning. e-Learning solutions tend to be seen as an opportunity to reduce costs by automating the learning process, cutting out teachers and staff by going directly to the learner, reducing inventories of books and libraries, and reducing classroom and building requirements.

Also, the attitude of individual managers who want to save money and buy general oriented ICT –based training systems that do not suit exactly the staff of the organisation needs is an aspect that needs to be taken into account. Learning infrastructures are not just about computers and networks. They include the ability to assess training needs and to respond to those needs, to develop training plans and strategies for staff development.

Another aspect related to e-Learning is that rather than using the dynamic and distributed nature of the technology to re-engineer the learning process, the most common strategy employed by educational institutions to date has been to replicate existing classroom and course design practices. In the absence of any consistent vision of what an e-Learning platform should be or do, the inherited paradigms also led to the patching together of existing technologies and systems, such as email, whiteboard and video streaming, to deliver the same kinds of functionalities as seen in the classroom. A recent trend within many organisations is to adopt sophisticated platforms developed by private e-Learning specialists. But technological advance has not been accompanied by improvements in the pedagogies the e-Learning platform facilitates. The focus is not on the needs of the learners. And that is an egregious mistake. The user got left with multiple systems, each with their own passwords, interfaces, and navigation, increasing their frustration (E-LEARNING FRAMEWORK, 2003). It is important that learning environments support the emergent standards for e-Learning materials and quality management in order to allow interoperability and facilitate localisation.

Furthermore, access to learning materials and their content is another major issue in the development and implementation of e-Learning in organisations. The European Commission notes in a recent document:

“... the development of the ‘digital’ economy and the wider use of Internet and computer and networking equipment has raised accessibility to multimedia to unprecedented levels, thus enhancing opportunities for producers and consumers. There is a general consensus that there is a lack of European educational multimedia content coming from institutional, professional and industrial sources in education, publishing and educational software. After an initial phase of enthusiasm,

often described as ‘hype’, there are growing doubts about the real demand for educational e-content, and about its relevance for improving learning” (EUROPEAN COMMISSION, 2003).

Results of examination of catalogues of e-Learning available in different European countries show that most materials deal with the use of standard software packages and networking technologies. Next on the list are learning materials for managers and for management activities followed by e-Learning materials for language learning. Beyond this the provision is very limited (ATWELL et al., 2003). This conclusion represents a serious drawback.

Another problem concerning learning materials is the debate on the issue of globalisation and localisation in software and learning materials. The task of translating materials into different languages is not only a technical problem but involves important cultural issues.

Some new research results indicate a shift in directions concerning the EU-funded e-Learning projects. For example, the results of a monitoring run on projects funded by the Leonardo da Vinci scheme reveals a changing orientation of the e-Learning projects.

Table 1: e-Learning generations.

Year	Type	Concept of Technology
1960s	Computer based training	Automation
1970s	Intelligent tutoring systems	Automation
1980s	Micro worlds tools for production	Toy, construction media
1990s	Computer supported Collaborative learning	Asynchronous tools communication and collaboration
2002	Virtual learning environments / Blended learning	Multi modal infrastructure synchronous and asynchronous tools

(Source: BIBB, 2003)

Even taking into account all new possibilities of ICT to help and motivate the learner and to better involve learners in the learning process, learning is still a very hard work. In her keynote speech “Dropping the e and keeping on learning” presented at the Leonardo da Vinci Conference in Dipoli, ANNE NEVGI made clear that in spite of the rapid advance of technology many traditional problems remained to be solved. One critical problem is the integration of ICT in such a way that it could support development of work tasks, rather than merely electronically cataloguing and regulating routine tasks.

In order to be successful, traditional learning delivery has to be blended more intelligently with e-Learning solutions, setting up a global learning strategy taking into account the individual and social working and learning situations of the learner (BIBB, 2003). This strategy can be confirmed by utilising adequate quality control methodologies.

Blended learning could be a solution also for vocational

training in SMEs because results of different research showed that such companies use e-Learning less than the big companies. To date, the greatest use of e-Learning has been pushed in the IT skills area, firstly to close the existing skills gap – and secondly to “reskill” (reshape) employees abilities as most employees are aware of the requirements of job market.

III. A BRIEF PRESENTATION OF SOME EU PROJECTS DEALING WITH QUALITY SUBJECT

By analysing the brochure “Pilot projects under the e-Learning Initiative” published by European Council in 2004 the following projects can be highlighted with regard to the considered topic in this work:

1) **Qual e-Learning**, coordinated by Group d’Interet Public Formation Continue et Insertion Professionnelle from Strasbourg with partners from Spain, France, Italy and Germany. The project aimed at contributing to a better definition of the general framework for e-Learning quality. Among its goals it is pointed out providing 200 key training personnel in the consortium partners having the task to evaluate the effectiveness of e-Learning methodologies in training and education. The main tool for investigation was a set of online questionnaires, approaching around 600 participants, both teachers and students (pupils) that use currently e-Learning or that are potential users of such technology. The group of questioned persons was extended to other training bodies, conceptors, promoters, platform editors, other experts on pedagogy and institutional management.

The initial step was followed by a more targeted refined analysis through direct and “virtual” interviews from 20 key users. The outcome of this gradual investigation was analysed and a list of the most effective practices was compiled for further discussion by an expert group. The ultimate goal was elaboration of a handbook prototype of best practices for evaluating e-Learning effectiveness.

Eventually, the found practices were tested in at least 30 pilot courses run by project members and their national networks. The results ascertained after running the pilot courses contributed to the final form of the handbook, printed in many copies and four languages and disseminated throughout the participating countries in the Consortium.

2) **SEEL** – Supporting Excellence in e-Learning

This project was led by the European Institute for e-Learning (EifEL) and its main goal was to measure the impact of quality assurance policies in e-Learning at all levels to assess their impact on local factors such as employment, innovation and training. The Consortium was very large, comprising 16 partners from France, United Kingdom, Italy, Spain, Sweden, Germany and Greece. The prime priority of this project concerned planning a regional benchmarking system to compare the e-Learning quality assurance schemes in different European countries. On the other hand, the project had to develop its own pilot quality assurance monitoring in several European countries. The aim of this twofold approach was to compare different

national practices, cultural issues and assessments, having in view a common approach to quality in different facets of e-Learning. The project results were disseminated in a series of online and traditional conferences and seminars. There were envisaged conceiving of a series of guidelines aiming at presentation of the project results. It is to be remarked the international conference “Quality in e-Learning, innovation and regional development” held in the framework of the project SEEL in 2003 at Lisbon, an event gathering speakers from academia, business, experts in e-Learning, international institutions.

The long term goal of the project was to create a network of resource centres to focus promoting excellence in e-Learning, which will help local and regional authorities design a high-quality e-Learning infrastructure.

3) **ELVE** - e-Learning Universities Experience

The coordination of the Consortium was ensured by CRUI (Conference of Italian University Rectors) foundation from Italy, the Consortium being formed of three partners from Italy, France and Finland.

The main objective of the project was to improve the quality of e-Learning activities engaged in university world. As specific goals there are mentioned: (1) an analysis of the experiences under way and already completed in the universities of the consortium countries; (2) a comparison of different experiences and an identification of the best practices on the basis of shared standards; (3) establishment of an observatory on e-Learning in university education and training.

The planned activities cover collection of data concerning specific examples of educational and training institutions in countries from the consortium, comparison of the collected data from different local contexts on the basis of homogeneous criteria. An important envisaged outcome was elaboration of a document treating the comparative analysis. Eventually, an Observatory on e-Learning in universities was foreseen in order to be consulted by those interested on the website of CRUI.

4) **SEEQUAL** – Sustainable Environment for the Evaluation of Quality in e-Learning.

This project was led by MENON Network EEIG, a European organisation active in the field of ICT in Education and e-Learning. The Consortium was formed of 10 partners from Belgium, France, United Kingdom and Greece.

The goal of the project was designed in order to encourage constructive dialogue between the diverse groups working in e-Learning domain for the enrichment of the subject as a whole.

It succeeded to bring together industry, education, e-Learning providers. The target of the carried out project was to set up a Forum on Quality for European e-Learning activities. This enables efficient means to share views, opinions, best practice among partners and improve their understanding of each other’s approaches. The project produced a series of quality guidelines and notes for good practice intended for different interest groups, including transnational information technology companies, teachers,

policy-makers and e-Learning experts. A final Conference revealed the outstanding results and recommendations for future research in the quality improvement for e-Learning platforms.

So far, there were featured some relevant European projects devoted to quality in e-Learning stemming from the “e-Learning Initiative” scheme. But, the range can be drastically expanded if considering other schemes like Leonardo da Vinci, Minerva, Grundtvig, etc.

It is beyond the scope of this paper to discuss a broader range of existing projects. In the next paragraph a special emphasis is given to a particular EU project referring to the Quality Control of e-Learning in Europe and setting up the EQO, the European Quality Observatory.

IV. THE EUROPEAN QUALITY OBSERVATORY (EQO) PROJECT

EQO project was coordinated by university of Duisburg-Essen, while the Consortium was formed of 5 partners from Germany, France, Belgium and Greece.

EQO succeeded to create a “European quality framework” that takes countries different approaches into account encouraging a fruitful transnational exchange of experience. It has the merit of elaborating an initial framework for quality standardisation. This was a difficult task having in view the diversity of approaches in different countries, so that it had to be found a common reference framework for description of this standardisation.

The project provided a central facility for developers, managers, administrators, decision-makers and end-users to find a suitable approach for their needs.

One major output of EQO is the development and implementation of a <<quality Internet database>>, where quality approaches are collected, analysed and presented to users. The partners created a “metamodel” to ensure that it is kept in a standardised form. The potential users of this database can submit their demands through a search tool designed to support them retrieve the relevant quality standard.

It is ascertained the flexible software created by the authors enabling users to access process models and product criteria specific to their situation. The obvious consequence is a direct support of improving the quality of the users’ e-Learning processes and products.

An outstanding outcome of the project was printing of the book << Panorama – Quality in e-Learning >> representing a guide for use and dissemination of quality approaches in European e-Learning through the EQO, authored by Ulf Daniel Ehlers et al (Ehlers, 2005).

In this material it is shown that Quality in e-Learning has a twofold significance: (1) e-Learning is associated in many discussions, papers and plans with an increase in the quality of educational opportunities, the so called “quality through e-Learning”; (2) the ways of improving the quality of e-Learning itself, the so called “quality for e-Learning”. For elaboration of the report that was published in the form of the book, there were surveyed more than 1700 people, who had different opinions on the concept of quality

development in European e-Learning. They revealed the opportunities and difficulties in the area of quality development.

The major finding of the endeavour was that the quality is improved by moving away from fixed concepts applied universally towards flexible processes of “negotiation”.

But such a solution requires a very high level of quality competence from those involved in the process. This represents a challenge for further development of finding the best scheme facing e-Learning evolution.

The report browsed the range of undertaken activities by partners: a primary conceptual framework, the survey, the quality competence, analysis of the results of the survey, identification of the quality competence in Europe reaching the special items of Quality Indicators and their implementation in practice. The tackling of Quality standards subject is a milestone of the report as there are discussed relation between quality assurance and quality management, the requirements deduced for the standards and decision on which standards meet the identified requirements. An important feature is a prognosis for future quality standards in e-Learning.

In the final chapter there is approached the European quality programme for e-Learning pointing out the idea of the responsibility of education policy for Quality development and the concept of open quality standards.

The authors proposed to develop as an independent academic discipline the Quality Research (including e-Learning context); quality research, as a separate discipline, must give prominence to the contribution to quality development of all related disciplines, such as the educational sciences, economics and information science.

V. AUTHORS EXPERIENCES WITH QUALITY APPROACHES FOR E-LEARNING THROUGH PROJECTS

In what follows three examples of European Projects, where the authors were partners of Consortia, concerning quality of e-Learning, are briefly described.

a) **ARIEL**

ARIEL – Analysing and Reporting the Implementation of Electronic Learning in Europe – is an international joint project funded by the European Commission in the framework of its e-Learning Initiative. The project investigates e-Learning supply for small and medium sized enterprises concerning didactic approaches, benefits and fields of application. Another target is the evaluation of the impact of past EU programmes in the field of electronic learning. On this basis ARIEL built scenarios of the future development of e-Learning in Europe. An important part of the project activities is the dissemination of the results to SMEs, providers of further education, regional economic development agencies and political actors in the countries involved. ARIEL was coordinated by IAT Gelsenkirchen with partners from Ireland, Italy, Hungary and Romania. ARIEL’s tasks included systematic gathering of relevant information concerning ongoing e-Learning activities in Europe, in-depth analysis of these activities and dissemination of information to targeted

audiences. ARIEL hereby focuses on e-Learning solutions and concepts for SMEs which aim at improving their work and supporting their integration into the European market. In addition to the monitoring of the general e-Learning trends there were elaborated special reports on certain sociological, pedagogical, quality, technical or economical key issues.

During the second phase of the project an evaluation scheme has been developed, e-Learning related material collected and e-Learning projects monitored. In this context the first tackled step was sifting of 842 projects which are documented in the database “elearningeuropa”. It was ascertained that the descriptions of the projects deviated clearly from each other with regard to the content and information depth. Therefore necessity for the additional in-depth research arose. For this purpose an online questionnaire had been developed, available in five languages.

The response rate to the online questionnaire was filled in by 114 project leaders. The results can be summarised as follows:

1. The project aims vary from the development of e-Learning Applications (51 entries) over the support of e-Learning processes (42 entries) to the implementation of e-Learning (46 entries). 27 projects stated other than the above named targets. Blended Learning is on the fourth place with 26 entries – this could be an indicator for the increasing relevance of these concepts.

2. 81 projects defined SMEs as major target group.

3. Asked for the topic debated by the project most participants named either “Professional Skills” (51), “Collaboration” (47) and/or “Technology” (47) as subject. Another 35 projects focused on “Intercultural learning” and only 25 projects on “Language Skills”.

4. Concerning the project results, for “e-Learning Concepts” there were 49 entries followed by “Vocational training” with 43 entries and by “Network” with 41 entries.

In order to validate the results and to get more detailed information on single projects – especially those targeting SMEs – expert interviews have been conducted.

In the final stage there were conceived scenarios which have been developed within the European project ARIEL – Analysing and Reporting the Implementation of Electronic Learning in Europe (Hamburg et al., 2005).

Scenario planning is a tool that can help organisations make a decision in the midst of uncertainty and that supplements traditional prognosis methods. A growing number of corporate executives are using scenario planning to make difficult decisions more effective.

Scenario planning derives from the observation that, given the impossibility of knowing precisely how the future will play out, a good decision or strategy to adopt is one that plays out well across several possible futures. To find that “robust” strategy, scenarios are created in plural, such that each scenario diverges markedly from the others. These sets of scenarios are specially constructed “stories” about the future, each one modelling a distinct, plausible world in which we might someday have to live and work.

There is no legal definition about what scenarios exactly are (as revealed by the citations above) nor about how they have to be constructed. Nevertheless, few attributes can often be found:

- scenarios should contain all relevant key factors of the problem sphere
- scenarios are creative-intuitive, e.g. a combination of single data and factors that have to be condensed to a plastic picture of the future
- scenarios are transparent, all steps, information and hypotheses leading to the scenario must be shown and explained
- scenarios are practical, they are a call to achieve a positive future by active participation
- scenarios are complex, they can not be reduced to a simple set of “if-then” relations
- scenarios do not need to be of high probability, but at least they must be possible

The ARIEL team built scenarios of the future development of e-Learning in Europe, particularly referring to SMEs.

The main aspect for the ARIEL scenario was “Can e-Learning support European SMEs to be successful and to integrate into the European market?”

With the year 2010 being ARIEL’s time horizon, the project is in concordance with the time horizon 2010 of the Lisbon strategy. As factors of influence ARIEL identified organisation of learning, technology, costs, reasons, users, certification and themes of e-Learning.

Issues referring to these factors have been grouped into five clusters by members of the ARIEL consortium: Vocational system, Cost-incentive structure, Technology, Content Quality and Business.

b) eCASME

eCASME was a Leonardo da Vinci project coordinated by University of Limerick (Ireland), with partners from Portugal, Romania, Sweden and Latvia. The abbreviation eCASME represents “eCapture of SME Training Needs and Specifications”. It was a pilot project whose main activities were: (1) conducting of a survey across the partner countries to collect information to help determine the common and diverse factors that characterise SMEs across the partnership, both regionally and sectorially; (2) conducting an analysis of existing TNA tools to rate the usefulness of the tools and to help define the initial prototype specification; (3) development of an initial prototype tool and its testing in each region and sector; (4) elaboration of the refined specification for this TNA tool; (5) testing by all partners of the final TNA tool; (6) performing an intense dissemination activity through workshops, brochures and newsletters.

The feedback received from SMEs has been very positive, contributing to the successful completion of the on-line TNA tool. Details on the project can be found at <http://www.cs.ucv.ro/cooperari/ecasme/ecasme.php>.

A major concern in running this project was devoted to Quality Assurance and Assessment. The main goal of

this activity was to ensure that the project carried out its work, generates deliverables and disseminates information on its activities and products in accordance to the modern quality practice. It was considered a continuous activity with more intensity at the inception of the project when quality systems are being put in place and toward the end of the project by applying the methodology of self assessment. The lead partner for this activity was appointed the partner from Latvia, whose task was to institute a system of self assessment for the project which could enable partners to contribute their assessment. It was estimated that this process should provide valuable information to improve the smooth running and effectiveness of eCASME performance. The self assessment process yielded an overall internal project assessment which was an important part of the final report. A special meeting on this subject was conducted at the Latvia partner, aiming at an eventual review of procedures used for quality assessment goal. Preliminarily there were agreed the procedures of assessment by all partners on all work packages. A shared on-line documentation repository was created to become accessible to all partners.

c) ViReC e-Initiative

the project “ViReC e-Initiative” – University Virtual Resource Centre based on a Distributed Learning Environment (DLE) represented a European dimension attempt for changing learning environment through ICT and ODL in higher education institutions. It was promoted and coordinated by University of Craiova, the Consortium being composed of 7 partners from 4 countries: Germany, Ireland, Greece and Romania. The project was conducted within MINERVA scheme between 2002 and 2005.

The main objective of the project consisted in setting up a qualitative learning environment in a network of European universities ensuring an open access to improved methods and educational resources, as well as the best practice applied at partners by outlining an innovative development of ICT-based educational products. The project was clearly oriented to development of innovative practices and services, having in view setting up a future virtual resource centre composed of the DLE, arising awareness of the impact of ODL and the user of ICT in education. Among several remarkable outputs, creation of virtual laboratories crossed with some real equipment handling is a challenging achievement. The major planned activities developed during the lifetime of the project were: (1) design and implementation of the DLE Portal; (2) design and implementation of the assessment section; (3) design and implementation of the registration section; (4) development of generic tool aimed at assembling and editing multipurpose multimedia materials; (5) development of multimedia textbooks and tutorials for Computer Engineering disciplines; (6) development of necessary tools for remote access of real equipment based laboratories; (7)

design and implementation of simulators for Computer Engineering disciplines; (8) design and implementation of the required tools for live courses; (9) evaluation and validation of the efficiency of ICT based learning process; (10) organising workshops and symposia; (11) project management and monitoring.

The quality of the e-Learning materials developed within the project was assessed through a questionnaire procedure, as decided both in the original application and the PMG meeting. The target group of students was chosen from the classes attending the pointed disciplines. They had to give answers on a multiple-choice questionnaire containing 24 questions. The answers were centralised generating useful outputs and allowing a real evaluation of the products created during lifetime of the project. The conclusions were analysed in the final report submitted to EU Commission.

VI. A PROPOSAL FOR EU & ASEAN PROJECT ON QUALITY MANAGEMENT

The proposal emerged from University of Duisburg-Essen that had established in-depth partnerships with universities from Malaysia and Indonesia, as well as University of Craiova. The objective of the proposed project called EAQMS consists in the development and implementation of the managerial structure and quality management system designed to institutionalise and further develop the achievements attained in the past cooperation between partners, focusing on student exchange and double degree programmes. On the other hand, the project EAQMS aims to serve as a model for quality based international cooperation between institutions of higher education in ASEAN and Europe in the field of engineering.

In the final stage of the project it is intended to test the model by integrating new partners to the initial partnership. Eventually an energetic dissemination action is foreseen emphasizing the outcomes of the implemented model. It is envisaged elaboration of a handbook on “Quality Management in International Cooperation”. Also, a series of workshops and lucrative meetings are planned having in view an efficient running of the project, as well as a proper dissemination.

Writing the application assumed a thorough analysis of the strengths and weaknesses observed in the past cooperation between ASEAN universities and the University of Duisburg-Essen for developing the Double Degree Programmes. It has been outlined lack of software tools for the quality assessment and management of international programmes. On the basis of the strengths – weaknesses analysis a management structure and quality management system for international cooperation in higher education (EAQMS) is to be developed.

In the first phase an internal improvement of the activities at the partners is foreseen, while in the second phase a model of generalisation on regional and national levels will be carried out.

The core goals of the project are attained through two

methodologies: (1) Administrative backbone, formed of two committees entitled to develop and manage the running of EAQMS, named “The Joint Committee on Management Issues” – MC – and “The Joint Working Committee on Executive Matters” – EC; (2) Source for primary assessment and measurement of indices for quality are delivered by databases and software tools linked between partners in order to allow the trace of the international students by performance and academic evolution, as well as job career.

Among the tasks of MC there are foreseen Quality Assurance, Software tools, framework of national and regional (EU, ASEAN) educational policies, etc.

Among the tasks of EC there are foreseen conducting surveys, data collection, elaboration of reviews, implementation of the Active Plan developed by MC, implementation of administrative software tools, organising the workshops and meetings, etc.

The set of software tools used for implementation of the project is developed at the promoter of the project, University of Duisburg-Essen, aiming at covering all needs of International programmes (like VDB, CONGA and PROFIS). These tools are to be adopted by the rest of the partners from the Consortium, including Craiova University, and used as support to create a solid ground for the further discussions and decisions of the committees.

The project EAQMS was proposed in the framework of Asia-Link Programmes, set up by the European Commission to promote regional and multilateral networking between higher education institutions in EU Member States and developing countries in Asia.

VII. CONCLUSION

This article approaches different aspects of the e-Learning processes as analysed in several layers of competence – in particular the quality assessment. It strove to exemplify through several run or in progress European Projects some of the conclusions and to reveal some of the major achievements in the field of quality in e-Learning processes. Two major issues are in the authors opinion to be deepened: the feedback from the labour force market and the role of blending learning as a substitute for the exclusive e-Learning.

Different legal regulations adopted in European countries related to the Quality Management are far to solve the paradigm of e-Learning, the final judge being, in our view, the jobs market.

REFERENCES

- [1] G. Attwell, L. Dirckinck-Holmfeld, P. Fabian, A. Karpati, P. Littig “E-Learning in Europe – Results and Recommendations Thematic Monitoring under the LEONARDO DA VINCI Programme. Report”. Impuls 010. Bonn, Oktober 2003.
- [2] D. Beer, I. Hamburg, C. Lindecke, J. Terstriep, “E-Learning: Kollaboration und veränderte Rollen im Lernprozess”, Gelsenkirchen, Inst. Arbeit und Technik, Projectbericht des Instituts Arbeit und Technik, Nr. 04, 2003.
- [3] D. Beer, T. Busse, I. Hamburg, U. Mill, H. Paul, “E-Learning in European SMEs: observations, analyses & forecasting”, proceedings of the ARIEL final conference, Brussels, 2006
- [4] BIBB (ed.), “E-Learning in Europe – results and recommendations”, Bonn, 2003.
- [5] CEDEFOP (ed.), “The Challenge of E-Learning in small enterprises”, Luxembourg, 2003.
- [6] EUROPEAN COMMISSION, “Open invitation to tender”, No DG EAC 21/02/2003, 2003
- [7] E-LEARNING FRAMEWORK TECHNICAL WHITE PAPER FEBRUARY, “White Paper E-Learning Framework on the Web”, sun.com, page 2, table of contents, introduction, <http://www.sun.com/products-n-solutions/edu/whitepapers/pdf/framework.pdf>, 2003
- [8] I. Hamburg, O. Cernian, H. Thij, “Blended learning and distributed learning environments”, 5th International Conference on New Educational Environments, Lucerne, Switzerland, May 26-28, 2003
- [9] I. Hamburg, Ch. Lindecke, “Blended learning – chance for vocational training in small and medium sized companies”, 6th International Conference on New Educational Environments, 27-30 September, 2004
- [10] I. Hamburg, Ch. Lindecke, “Lifelong learning, e-learning and business development in small and medium sized enterprises”, Proceedings of the EDEN 2005 Annual Conference, 20-23 June, 2005
- [11] I. Hamburg, O. Cernian, R. Ottofi, Z. Puklus, “European enlargement challenges for e-learning and SMEs”, Proceedings of the ARIEL final conference, 08.11.2005, Brussels.
- [12] B. Mosher, “Implementing a Blended Solution”, <http://www.elementk.com>, 2003
- [13] J. Ogilvy, P. Schwartz, “Plotting your scenarios”, 2005
- [14] G. Ringland, “Scenario planning; managing for the future”, Chichester: John Wiley & Sons Ltd., 1998
- [15] P.J.H. Schoemaker, “When and how to use scenario planning: a heuristic approach with illustration”, *Journal of Forecasting*, 10, 1991.
- [16] R. Wade, “What happens when you hear the term blended learning”, 2003
- [17] U. Ehlers, “Qualität im e-Learning aus Lernersicht Grundlagen, Empirie und Modellkonzeption, Subjektiver Qualität”, VS Verlag, Wiesbaden, 2004
- [18] U. Ehlers, L. Goertz, B. Hildebrandt, J.M. Pawlowski, “Quality in e-Learning, use and dissemination of quality approaches in European e-Learning”, a study by the European quality observatory, CEDEFOP Panorama series no. 116, 2005.
- [19] L. Harvey, D. Green, “Qualität Definieren: Fünf Unterschiedliche Ansätze, Zeitschrift für Pädagogik Qualität und Qualitätssicherung in Bildungsbereich – Schule”, *Sozialpädagogik Hochschule*, no. 41. special edition, 2000
- [20] I. Hamburg, O. Cernian, “The role of e-Learning and higher education institutions in development of competencies for SMEs in Europe”, *Advances in Electrical and Computer Engineering*, vol. 6 (13), no. 1 (25), 2006
- [21] O. Cernian, I. Hamburg, D. Mancas, “Key issues in the use of e-Learning in Europe”, Proc. of the 4th International Conference Internet, Education, Science (vol. 1), IES – 2004, Vinita, 2004
- [22] xxx, “e-Learning, Compendium of projects, A world of learning at your fingertips”, pilot projects under “e-Learning Initiative”, EU Commission, 2004
- [23] xxx, International Organisation for Standardisation, IEC, ISO/IEC FCD 19796-1, Information Technology – Quality Management, Assurance and Metrics, Part 1: General Approach, Geneva, <http://jtc1sc36.org/doc/36N0771.pdf>, 2004